APPENDIX C

SITE PHOTOGRAPHS

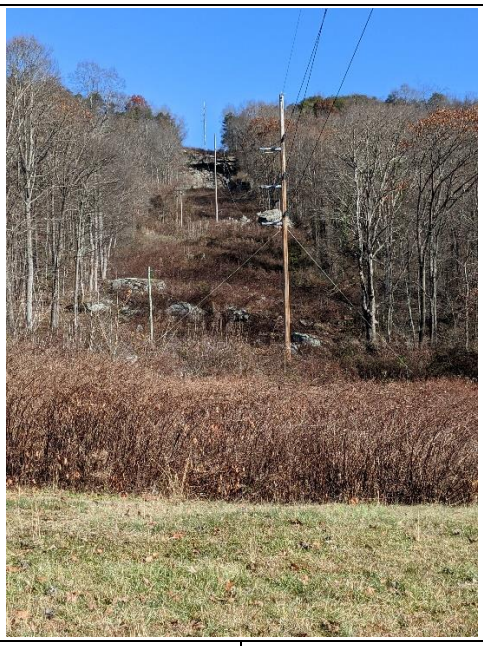
APPENDIX ID	APPENDIX TITLE
C.1	BACKGROUND PHOTOGRAPHIC LOG
C.2	SHAFFER EQUIPMENT COMPANY PROPERTY PHOTOGRAPHIC LOG
C.3	POSSIBLE TRANSFORMER AREA PHOTOGRAPHIC LOG
C.4	BRITT BATH HOUSE PHOTOGRAPHIC LOG
C.5	BERWIND GREEN HILL MINE DUMP AREA PHOTOGRAPHIC LOG
C.6	ROCKLICK ROAD PHOTOGRAPHIC LOG
C.7	NR&P SUPPLY HOUSE PHOTOGRAPHIC LOG
C.8	ARBUCKLE CREEK AND WETLAND PHOTOGRAPHIC LOG
C.9	RESIDENTIAL PHOTOGRAPHIC LOG
C.10	NEW RIVER PHOTOGRAPHIC LOG

APPENDIX C.1

BACKGROUND PHOTOGRAPHIC LOG

TETRA TECH

BACKGROUND PHOTOGRAPHIC LOG



Date: 11/25/2019	**View:** NE

Photo 1: View from SB303 sample location, looking uphill at the powerline.

Date: 11/25/2019	**View:** NW

Photo 2: DPT rig set up on sample SB303.

Date: 11/25/2019	**View: N**

Photo 3: View of large boulders at and just beneath surface throughout SB303 sample area.

Date: 11/25/2019	**View: NA**

Photo 4: View of soil cores from sample SB307.

BACKGROUND PHOTOGRAPHIC LOG

Date: 11/25/2019	View: S

Photo 5: DPT rig set up on originally proposed SB305 sample location. Repeated shallow refusal due to rocky mound.

Date: 11/25/2019	View: S

Photo 6: DPT rig set up approximately 10 feet from originally proposed SB305 sample location.

APPENDIX C.2

SHAFFER EQUIPMENT COMPANY PROPERTY PHOTOGRAPHIC LOG

TETRA TECH

SEC PROPERTY PHOTOGRAPHIC LOG

Date: 11/07/2019	**View:** N/A

Photo 1: View of the PID screening procedure.

Date: 11/07/2019	**View:** N/A

Photo 2: View of SB311 soil cores.

Date: 11/08/2019	**View:** N/A

Photo 3: View of SB317 soil cores.

Date: 11/08/2019	**View:** N/A

Photo 4: View of SB317 soil cores.

SEC PROPERTY PHOTOGRAPHIC LOG

Date: 11/08/2019	View: N/A

Photo 5: View of SB316 soil cores.

Date: 11/08/2019	View: N/A

Photo 6: View of SB316 soil cores.

Date: 11/15/2019	View: NW

Photo 7: View of SB366 boring location.

Date: 11/22/2019	View: W

Photo 8: View of SB323 sample area.

SEC PROPERTY PHOTOGRAPHIC LOG

Date: 11/22/2019	View: W
Photo 9: View SB323/SB324 sample area.	

Date: 11/21/2019	View: N
Photo 10: Tracking over a steep bank to access SB369.	

Date: 11/21/2019	View: N
Photo 11: Tracking over a steep bank to access SB369.	

Date: 11/21/2019	View: N
Photo 12: Tracking over a steep bank to access SB369.	

SEC PROPERTY PHOTOGRAPHIC LOG

Date: 11/22/2019	**View:** N/A

Photo 13: View of SB369 soil core.

Date: 11/21/2019	**View:** N

Photo 14: Tracking up the steep bank from SB369.

Date: 11/21/2019	**View: N**

Photo 15: Tracking back up the steep bank from SB369.

APPENDIX C.3

POSSIBLE TRANSFORMER AREA PHOTOGRAPHIC LOG

TETRA TECH

POSSIBLE TRANSFORMER AREA PHOTOGRAPHIC LOG

Date: 11/05/2019	**View:** SE

Photo 1: Closed off old mine opening on path to Possible Transformer Area.

Date: 11/05/2019	**View:** N/A

Photo 2: View of SB329 soil cores.

Date: 11/05/2019	**View:** N/A

Photo 3: View of SB333 soil cores.

Date: 11/05/2019	**View: W**

Photo 4: View of SB333 sample area.

POSSIBLE TRANSFORMER AREA PHOTOGRAPHIC LOG

Date: 11/11/2019	**View:** SW

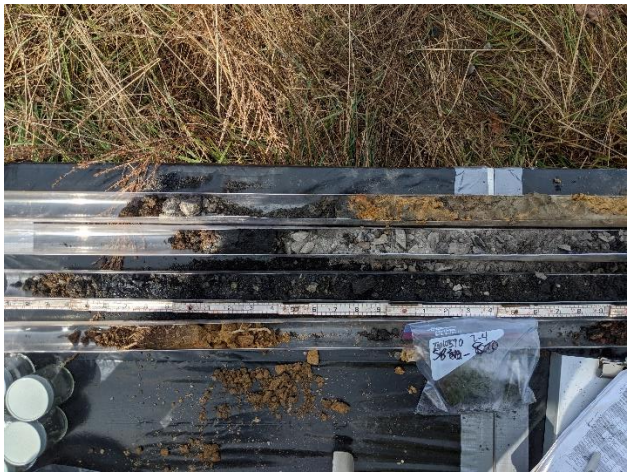
Photo 5: Tracking from SEC property to Possible Transformer Area.

Date: 11/11/2019	**View:** NE

Photo 6: Gate to Possible Transformer Area.

Date: 11/11/2019	**View: N**

Photo 7: DPT rig set up on SB370 sample location.



Date: 11/11/2019	**View: N/A**

Photo 8: View of SB370 soil cores.

POSSIBLE TRANSFORMER AREA PHOTOGRAPHIC LOG

Date: 11/11/2019	**View:** NW

Photo 9: View of SB373 sample area.

Date: 11/11/2019	**View:** N/A

Photo 10: View of SB368 soil cores.

Date: 11/11/2019	**View:** N/A

Photo 11: View of SB368 soil cores.

Date: 11/11/2019	**View:** N/A

Photo 12: View of SB336 0 to 5 feet bgs core.

POSSIBLE TRANSFORMER AREA PHOTOGRAPHIC LOG

Date: 11/11/2019	**View:** N/A

Photo 13: View of SB336 soil cores.

Date: 11/11/2019	**View:** N/A

Photo 14: View of SB336 soil cores.

Date: 11/11/2019	**View:** N/A

Photo 15: View of SB367 soil cores.

Date: 11/11/2019	**View:** N/A

Photo 16: View of SB367 soil cores.

POSSIBLE TRANSFORMER AREA PHOTOGRAPHIC LOG

Date: 11/11/2019	**View:** N/A

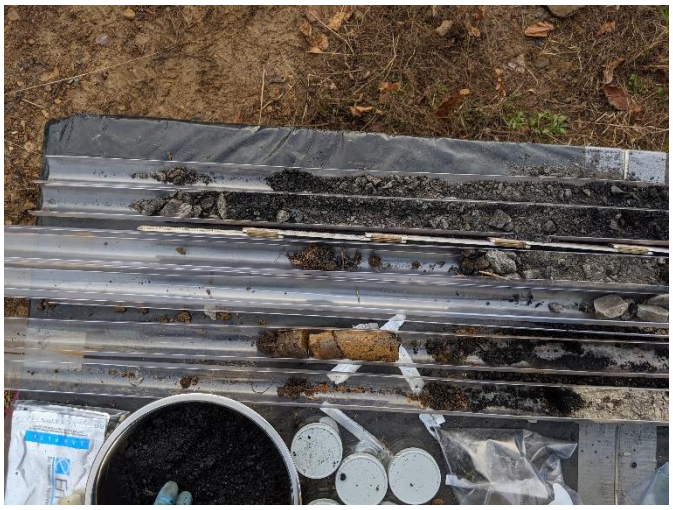
Photo 17: View of SB330 soil cores.

Date: 11/11/2019	**View:** N/A

Photo 18: View of SB330 soil cores.

Date: 11/11/2019	**View:** N/A

Photo 19: View of SB330 soil cores.



Date: 11/11/2019	**View:** N/A

Photo 20: View of SB330 soil cores.

POSSIBLE TRANSFORMER AREA PHOTOGRAPHIC LOG

Date: 11/11/2019	View: N/A

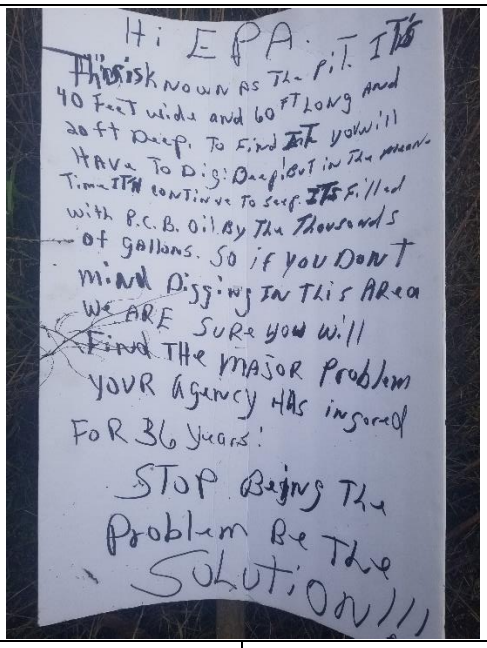
Photo 21: View of SB331 soil cores.

Date: 11/11/2019	View: N/A

Photo 22: View of SB331 soil cores.

Date: 11/11/2019	View: NE

Photo 23: View of SB370 sample location.



Date: 11/11/2019	View: E

Photo 24: Sign found in “Pit Area”.

APPENDIX C.4

BRITT BATH HOUSE PHOTOGRAPHIC LOG

TETRA TECH

BRITT BATH HOUSE PHOTOGRAPHIC LOG

Date: 11/06/2019	**View:** N/A

Photo 1: View of an opening down into possible old mine shaft. Bricks and a steel beam visible inside.

Date: 11/06/2019	**View:** N/A

Photo 2: View of soil cores, homogenization, and sample collection from sample SB338.

Date: 11/06/2019	**View:** SW

Photo 3: View of a small pool as sample location SW/SD340.

APPENDIX C.5

BERWIND GREEN HILL MINE DUMP AREA PHOTOGRAPHIC LOG

TETRA TECH

BERWIND GREEN HILL PHOTOGRAPHIC LOG

Date: 11/13/2019	**View:** E

Photo 1: DPT rig climbing steep path to Berwind Green Hill Mine Dump Area.

Date: 11/13/2019	**View:** W

Photo 2: View looking down steepest section of path, to the vehicles on the gravel road below.

Date: 11/13/2019	**View: N**

Photo 3: View of the middle portion of the path Berwind Green Hill Mine Dump Area.

Date: 11/13/2019	**View: NW**

Photo 4: DPT rig climbing another steep section of the path, about halfway to the top.

BERWIND GREEN HILL PHOTOGRAPHIC LOG

Date: 11/13/2019	View: NA

Photo 5: View of muddy ruts and washed out areas along the path.

Date: 11/13/2019	View: W

Photo 6: Sharp corner in the path, almost to the top, which had flooded and become very muddy.

Date: 11/13/2019	View: E

Photo 7: View of another flooded section of the path, at the edge of the open field at the top.

Date: 11/13/2019	View: S

Photo 8: View looking downhill of an alternative access route to seep for the DPT rig.

BERWIND GREEN HILL PHOTOGRAPHIC LOG

Date: 11/14/2019	**View:** NW

Photo 9: View of the open field at the top of Berwind Green Hill Mine Dump Area.

Date: 11/14/2019	**View:** N

Photo 10: View of the open field at the top of Berwind Green Hill Mine Dump Area.

Date: 11/14/2019	**View: S**

Photo 11: View of the DPT rig set up on sample SB352.

APPENDIX C.6

ROCKLICK ROAD PHOTOGRAPHIC LOG

TETRA TECH

ROCKLICK ROAD PHOTOGRAPHIC LOG

Date: 11/12/2019	**View:** N/A

Photo 1: DPT rig set up on SB361sample location.

Date: 11/12/2019	**View:** N/A

Photo 2: View of SB361 soil borings.

Date: 11/12/2019	**View:** N/A

Photo 3: View of SB360 soil borings.

Date: 11/12/2019	**View:** N/A

Photo 4: View of SB359 soil borings.

ROCKLICK ROAD PHOTOGRAPHIC LOG

Date: 11/12/2019	View:

Photo 5: DPT rig set up on SB358 sample location.

Date: 11/12/2019	View: N/A

Photo 6: View of SB358 soil borings.

Date: 11/12/2019	View: N/A

Photo 7: View of SB358 soil borings.

Date: 12/09/2019	View: N

Photo 8: View of SW/SD336 sample location.

ROCKLICK ROAD PHOTOGRAPHIC LOG

Date: 12/09/2019	**View:** N/A

Photo 9: View of SD336 sediment core.

Date: 12/09/2019	**View:** N

Photo 10: View of SW/SD335 sample location.

Date: 12/09/2019	**View: N/A**

Photo 11: View of SW/SD335 sediment core.

Date: 12/09/2019	**View:** W

Photo 12: View of SW/SD342 location.

ROCKLICK ROAD PHOTOGRAPHIC LOG

Date: 12/09/2019	**View:** W

Photo 13: View of SW/SD342 sample location.

Date: 12/09/2019	**View:** NW

Photo 14: View of SW/SD342 sample location.

Date: 12/09/2019	**View: E**

Photo 15: Large concrete plug (approximately 4-5' diameter) reported to have washed out of possible mine opening.

Date: 12/09/2019	**View: E**

Photo 16: View of the possible mine opening.

ROCKLICK ROAD PHOTOGRAPHIC LOG

Date: 12/09/2019	**View:** N/A

Photo 17: View of SW/SD342 sediment core.

Date: 12/09/2019	**View:** N/A

Photo 18: View of SW/SD342 sediment core.

Date: 12/09/2019	**View:** N/A

Photo 19: View of SW/SD343 sediment core.

Date: 12/09/2019	**View: SE**

Photo 20: Ditch along the side of Rocklick Road, SW/SD345 sample location.

ROCKLICK ROAD PHOTOGRAPHIC LOG

Date: 12/09/2019	**View:** N/A

Photo 21: View of SW/SD345 sediment core.

Date: 12/09/2019	**View:** NE

Photo 22: Ditch along the side of Rocklick Road, SW/SD346 sample location.

Date: 12/09/2019	**View:** N/A

Photo 23: View of SW/SD346 sediment core.

Date: 12/09/2019	**View: N/A**

Photo 24: View of SW/SD346 sediment core.

ROCKLICK ROAD PHOTOGRAPHIC LOG

Date: 12/09/2019	View: N

Photo 25: Marshy Area northwest of Rocklick Rd. SW/SD344 sample location.

Date: 12/09/2019	View: N/A

Photo 26: Marshy Area northwest of Rocklick Rd. SW/SD344 sample location.

APPENDIX C.7

NR&P SUPPLY HOUSE PHOTOGRAPHIC LOG

TETRA TECH

NR&P SUPPLY HOUSE PHOTOGRAPHIC LOG

Date: 11/12/2019	**View:** E

Photo 1: View of the NR&P Supply House area of. SB363, SB364, and SB365 sampling locations.

Date: 11/12/2019	**View:** SW

Photo 2: View of SB364 sample location.

Date: 11/12/2019	**View:** N/A

Photo 3: View of soil cores from SB364.

Date: 12/10/2019	**View:** SE

Photo 4: Drainage possibly coming from NR&P Supply House basement.

NR&P SUPPLY HOUSE PHOTOGRAPHIC LOG

Date: 12/10/2019	**View:** N

Photo 5: Drainage possibly coming from NR&P Supply House basement.

Date: 12/10/2019	**View:** S

Photo 6: View of an opening to a culvert under the road. Suspected drainage system comes from the NR&P Supply House basement.

Date: 02/26/2019	**View: S**

Photo 7: View looking into the culvert under the road, looking towards the NR&P Supply House.

Date: 02/26/2019	**View: S**

Photo 8: View of the opening to the culvert.

NR&P SUPPLY HOUSE PHOTOGRAPHIC LOG

Date: 02/26/2019	**View:** N/A

Photo 9: Boring from SD356, taken from drainage ditch at the culvert opening.

Date: 02/26/2019	**View:** N/A

Photo 10: View of the opening to NR&P Supply House basement.

Date: 02/26/2019	**View:** N/A

Photo 11: View looking down into NR&P Supply House basement. Flowing water observed.

Date: 02/26/2019	**View:** N/A

Photo 12: View of unknown pipe coming out of the ground in NR&P Supply House area.

APPENDIX C.8

ARBUCKLE CREEK AND WETLAND PHOTOGRAPHIC LOG

TETRA TECH

ARBUCKLE CREEK / WETLANDS PHOTOGRAPHIC LOG

Date: 12/03/2019	**View:** E

Photo 1: View of SW/SD330 sample location. Located down a steep bank.

Date: 12/03/2019	**View:** NW

Photo 2: View of SW/SD330 sample location.

Date: 12/03/2019	**View: E**

Photo 3: View of SW/SD330 sample location.

Date: 12/03/2019	**View: N/A**

Photo 4: Sediment from sample SD330.

ARBUCKLE CREEK / WETLANDS PHOTOGRAPHIC LOG

Date: 12/03/2019	**View:** NW

Photo 5: View of SW/SD329 sample location.

Date: 12/03/2019	**View:** NW

Photo 6: View of SW/SD329 sample location.

Date: 12/04/2019	**View: SE**

Photo 7: View of SW/SD355 sample location.

Date: 12/04/2019	**View: NW**

Photo 8: Arbuckle Creek confluence with small drainage ditch at SW/SD355 sample location.

ARBUCKLE CREEK / WETLANDS PHOTOGRAPHIC LOG

Date: 12/04/2019	**View:** SE

Photo 9: View of SD323 sample location.

Date: 12/04/2019	**View:** SE

Photo 10: View of SD323 sample location.

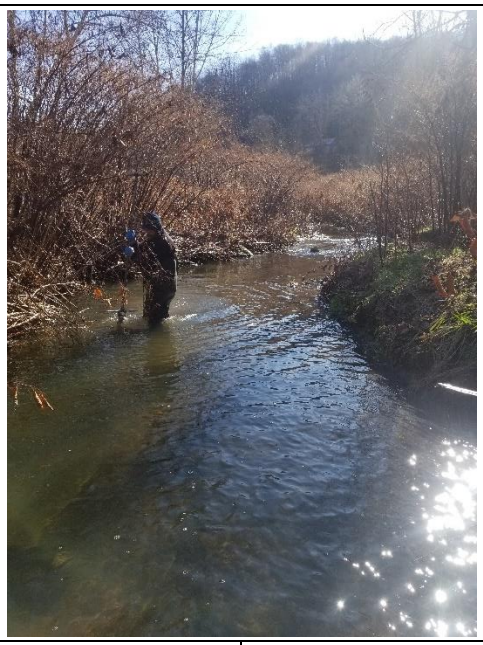
Date: 12/04/2019	**View: W**

Photo 11: View of SD324 sample location.

Date: 12/04/2019	**View: NE**

Photo 12: View of SD326 sample location.

ARBUCKLE CREEK / WETLANDS PHOTOGRAPHIC LOG



Date: 12/5/2019	View: S

Photo 13: View of SD321 sample location.

Date: 12/5/2019	View: E

Photo 14: Plastic sleeve removal from WildCo Sediment Sampler.

Date: 12/5/2019	View: N/A

Photo 15: Alternate sediment sampling method: Pushing plastic core into sediment by hand, then pulling it out while maintaining airtight seal on top of tube with gloved palm.

Date: 12/5/2019	View: N/A

Photo 16: View of sediment recovery.

ARBUCKLE CREEK / WETLANDS PHOTOGRAPHIC LOG

Date: 12/06/2019	**View:** SE

Photo 17: View of SW/SD302 sample location.

Date: 12/06/2019	**View:** W

Photo 18: View of SW/SD304 sample location.

Date: 12/06/2019	**View: SW**

Photo 19: View of SW/SD303 soil location.

Date: 12/06/2019	**View: N**

Photo 20: Filter method for dissolved metals samples.

Date: 12/06/2019	**View:** N/A

Photo 21: View of sleeve sampler draining through the filter into the sample container.

Date: 12/06/2019	**View:** S

Photo 22: Drainage ditch near capped area and sheet-pile of SEC Property emptying into Arbuckle Creek. SW/SD303 was moved upstream of this location.

Date: 12/06/2019	**View: S**

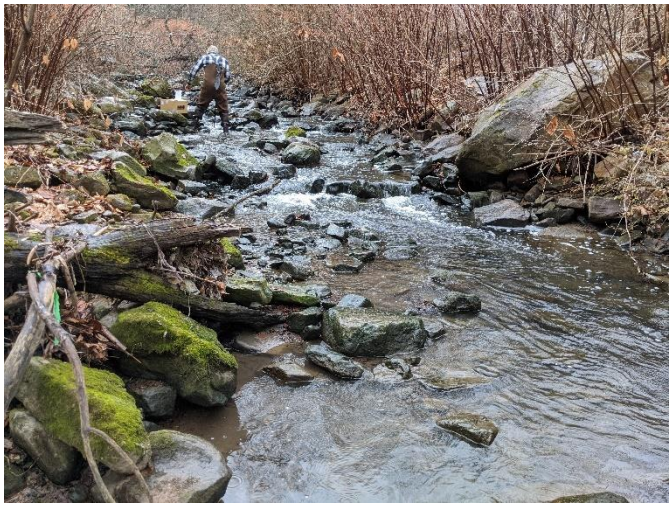
Photo 23: Drainage ditch near capped area and sheet-pile of SEC Property emptying into Arbuckle Creek. SW/SD303 was moved upstream of this location.

Date: 12/06/2019	**View: SW**

Photo 24: Gas line crossing stream near SW/SD303.

Date: 12/06/2019	View: SE

Photo 25: Proposed location for SW/SD302. Possible flood channel or old route of Arbuckle Creek before it was rerouted.

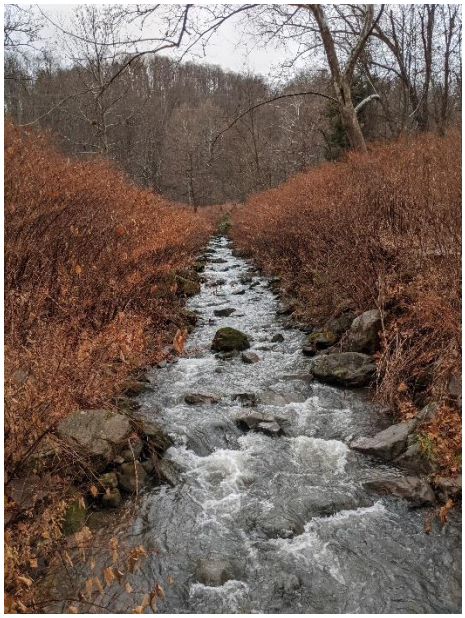


Date: 12/06/2019	View: NW

Photo 26: View of SW/SD301 sample location.

Date: 12/06/2019	View: N

Photo 27: View of steep rocky banks and slippery rocks at SW/SD301.



Date: 12/06/2019	View: W

Photo 28: View from Old Minden Road bridge looking upstream of Arbuckle Creek towards sample SW/SD300.

Date: 12/06/2019	View: N

Photo 29: Steep rocky bank access point to sample SW/SD300.

Date: 12/10/2019	View: S

Photo 30: Garbage discarded on steep hill above samples SW/SD331 and SW/SD332.

Date: 12/10/2019	View: S

Photo 31: Garbage discarded on steep hill above samples SW/SD331 and SW/SD332.

Date: 12/10/2019	View: W

Photo 32: Low spot in dirt road at samples SW/SD331 and SW/SD332.

ARBUCKLE CREEK / WETLANDS PHOTOGRAPHIC LOG

Date: 12/10/2019	View: SW

Photo 33: Garbage in Arbuckle Creek at sample SW/SD334.

Date: 12/10/2019	View: N

Photo 34: View of SW/SD315 sampling area.

Date: 12/10/2019	View: N/A

Photo 35: View of sediment sample SD315.

Date: 12/10/2019	View: NA

Photo 36: View of the SW/SD316 sampling area.

ARBUCKLE CREEK / WETLANDS PHOTOGRAPHIC LOG

Date: 12/10/2019	View: N

Photo 37: View of the SW/SD316 sampling area.

Date: 12/10/2019	View: N

Photo 38: Pile of ashes/garbage near the SW/SD314 sampling area.

Date: 12/10/2019	View: S

Photo 39: View of the SW/SD314 sampling area.

Date: 12/10/2019	View:

Photo 40: View of sediment sample SD317.

ARBUCKLE CREEK / WETLANDS PHOTOGRAPHIC LOG

Date: 12/11/2019	View: W

Photo 41: Large field/wetland area containing SW/SD310.

Date: 12/11/2019	View: SW

Photo 42: View of the SW/SD313 sampling area.

Date: 12/11/2019	View: N/A

Photo 43: View of sediment sample SD313.

Date: 12/11/2019	View: N/A

Photo 44: View of sediment sample SD313.

ARBUCKLE CREEK / WETLANDS PHOTOGRAPHIC LOG

Date: 12/11/2019	View: S

Photo 45: View of the SW/SD310 sample location.

Date: 12/11/2019	View: N/A

Photo 46: SW/SD310 sampling hole filled in with surface water.

Date: 12/11/2019	View: N/A

Photo 47: View of SW/SD311 sample location.

Date: 12/11/2019	View: N/A

Photo 48: View of SW/SD311 sample location.

Date: 12/12/2019	View: W

Photo 49: View of SW/SD306 sampling location.

Date: 12/12/2019	View: NA

Photo 50: Hole cut in the ice to collect SW306.

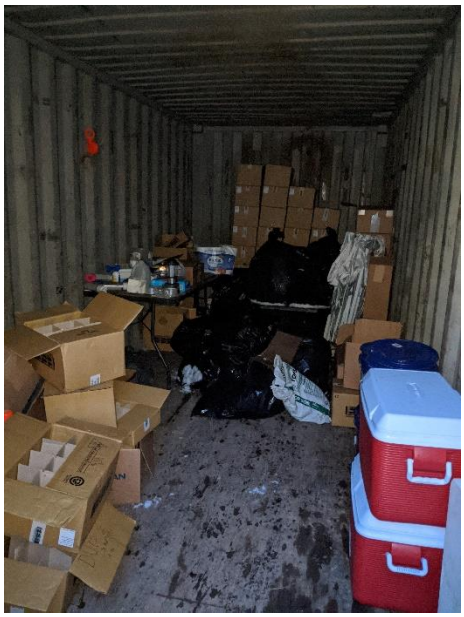
Date: 12/12/2019	View: SW

Photo 51: View of SW/SD340 sample location.

Date: 12/12/2019	View: N/A

Photo 52: Equipment and coolers loaded up for demonization.

ARBUCKLE CREEK / WETLANDS PHOTOGRAPHIC LOG

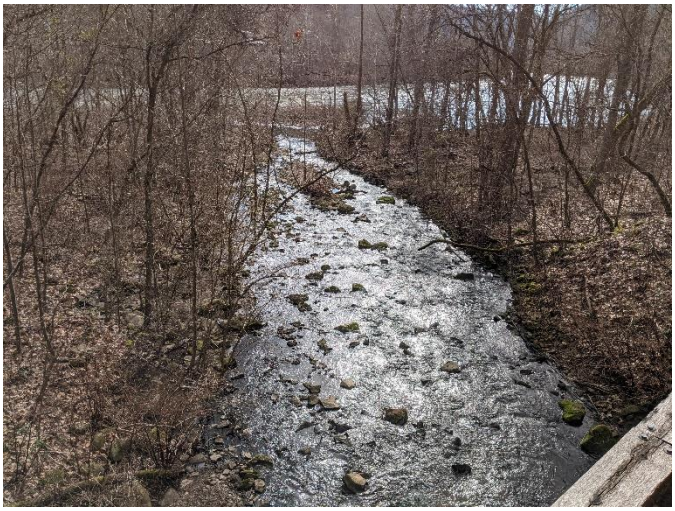


Date: 12/12/2019	View: N/A

Photo 53: Field supply storage area.

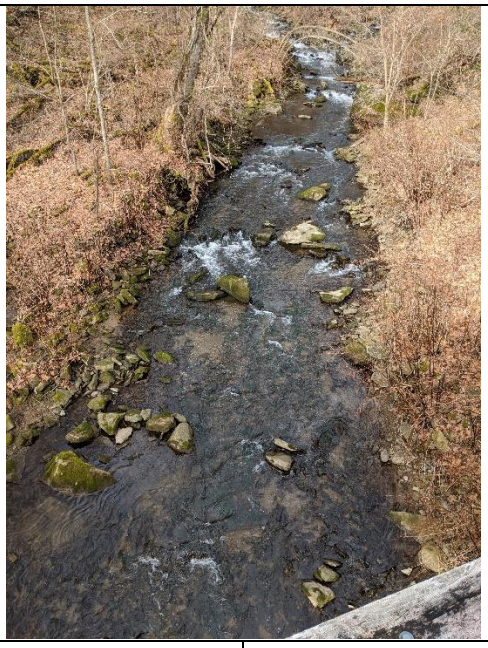
Date: 02/26/2020	View: SE

Photo 54: Confluence of Arbuckle Creek and the New River, viewed from the north N end of the hiking bridge.



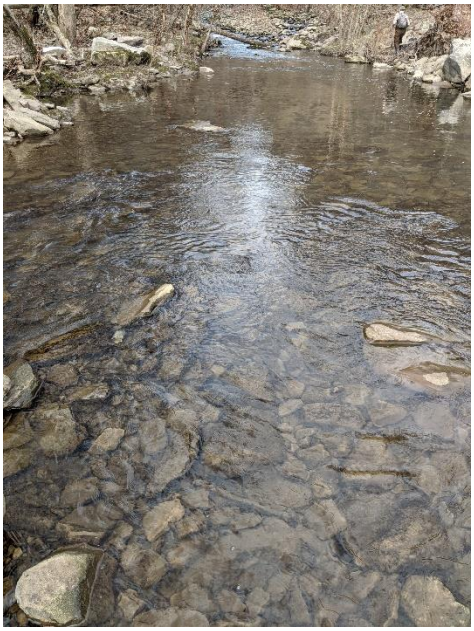
Date: 02/26/2020	View: E

Photo 55: Confluence of Arbuckle Creek and the New River, viewed from the hiking bridge.



Date: 02/26/2020	View: NW

Photo 56: Looking upstream Arbuckle Creek from the hiking bridge.



Date: 02/26/2020	View: NW

Photo 57: Originally proposed SW/SD339 sample location. View of all rocks, with no sediment deposits.

Date: 02/26/2020	View: S

Photo 58: Collecting GPS coordinates for new SW/SD339 sample location, approximately 40ft upstream from originally proposed location.

Date: 02/26/2020	View: S

Photo 59: New SW/SD339 sample location in sediment depositional area.

Date: 02/26/2020	View: N/A

Photo 60: View of sediment sample SD339.

ARBUCKLE CREEK / WETLANDS PHOTOGRAPHIC LOG

Date: 02/26/2020	View: N

Photo 61: View of SW/SD338 sample location.

Date: 02/26/2020	View: NE

Photo 62: View of SW/SD338 sample location.

Date: 02/26/2020	View: SW

Photo 63: View from the north end of the hiking bridge looking down the upstream-side hill, looking towards SW/SD338.

Date: 02/26/2020	View: E

Photo 64: View downstream from the hiking bridge.

Date: 02/26/2020	View: N

Photo 65: View from south end of the hiking bridge.

Date: 02/26/2020	View: W

Photo 66: Posted warning by hiking trail.

Date: 02/26/2020	View: E

Photo 67: View from on top Rend Trail looking back down Arbuckle Creek at the hiking bridge.

Date: 02/26/2020	View: W

Photo 68: View of SW/SD337 sample location.

ARBUCKLE CREEK / WETLANDS PHOTOGRAPHIC LOG

Date: 02/26/2020	**View:** W

Photo 69: View of small depositional area at SW/SD337.

APPENDIX C.9

RESIDENTIAL PHOTOGRAPHIC LOG

TETRA TECH

SHAFFER EQUIPMENT CO. RESIDENTIAL SAMPLING PHOTOGRAPHIC LOG

Date: 11/19/2019	**View:** SE

Photo 1: View of soil boring location area at Parcel 5 (R2).

Date: 11/19/2019	**View:** NA

Photo 2: View of representative soil 0 to 2 feet (top) and 2 to 4 feet (bottom) from Parcel 5 (R2).

Date: 11/18/2019	**View:** SE

Photo 3: View of soil boring location area and utility clearance at Parcel 9 (R1).

Date: 11/18/2019	**View:** NA

Photo 4: View of representative soil 0 to 2 feet (bottom) and 2 to 4 feet (top) from Parcel 9 (R1).

SHAFFER EQUIPMENT CO. RESIDENTIAL SAMPLING PHOTOGRAPHIC LOG

Date: 11/18/2019	**View:** NA

Photo 5: View of the wipe sample area in the kitchen (WP-1) of Parcel 9 (R1).

Date: 11/19/2019	**View:** SW

Photo 6: View soil boring location and Geoprobe 420M at Parcel 11 (R3).

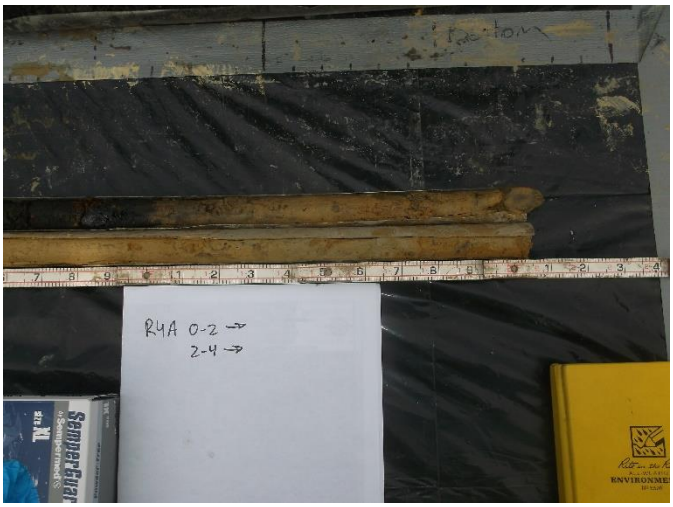
Date: 11/19/2019	**View:** NA

Photo 7: View of representative soil from Parcel 11 (R3).
2 to 4 feet below ground surface.

Date: 11/21/2019	**View:** NW

Photo 8: View soil boring location at Parcel 12 (R4).

SHAFFER EQUIPMENT CO. RESIDENTIAL SAMPLING PHOTOGRAPHIC LOG

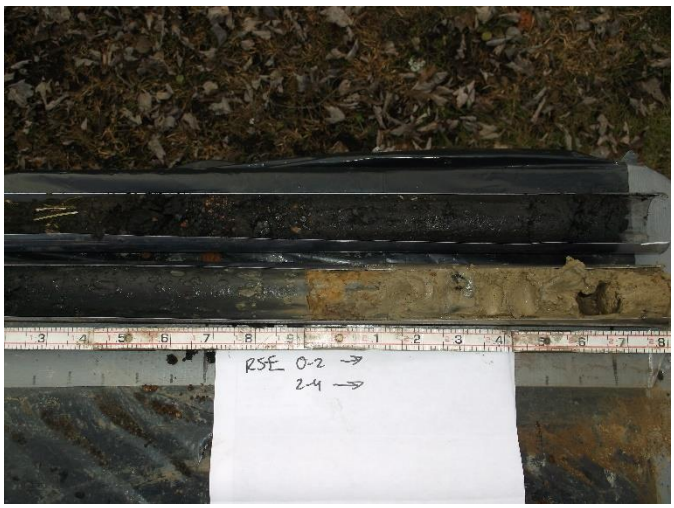


Date: 11/21/2019	**View:** NA

Photo 9: View of representative soil from Parcel 12 (R4).
0 to 2 and 2 to 4 feet below ground surface.

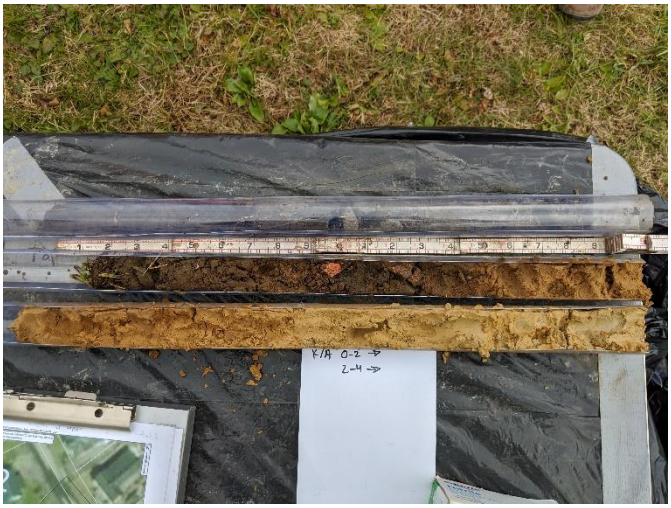
Date: 10/10/2019	**View:** SW

Photo 10: View soil boring location at Parcel 19 (R5).



Date: 11/19/2019	**View:** NA

Date: 10/10/2019	**View:** SW

Photo 11: View of representative soil from Parcel 19 (R5). 0 to 2 and 2 to 4 feet below ground surface.	**Photo 12:** View of Parcel 23 (R7).
	
Date: 11/20/2019 **View:** NA	**Date:** 11/21/2018 **View:** NW
Photo 13: View of representative soil from Parcel 23 (R7). 0 to 2 feet and 2 to 4 feet below ground surface.	**Photo 14:** View of soil boring locations on Parcel 27 (R11).
Date: 11/21/2019 **View:** NA	**Date:** 11/20/2019 **View:** E

SHAFFER EQUIPMENT CO. RESIDENTIAL SAMPLING PHOTOGRAPHIC LOG

Photo 15: View of representative soil from Parcel 27 (R11). 0 to 2 feet and 0 to 4 feet below ground surface.	**Photo 16:** View of soil boring locations on Parcel 34 (R8).
Date: 11/20/2019 **View:** NA	**Date:** 11/20/2019 **View:** S
Photo 17: View of representative soil from Parcel 34 (R8). 0 to 2 feet and 2 to 4 feet below ground surface.	**Photo 18:** View of soil boring location area on Parcel 35 (R6).
Date: 11/20/2019 **View:** NA	**Date:** 11/21/2019 **View:** NW

SHAFFER EQUIPMENT CO. RESIDENTIAL SAMPLING PHOTOGRAPHIC LOG

Photo 19: View of representative soil from Parcel 35 (R6).
0 to 2 feet and 2 to 4 feet below ground surface.

Date: 11/21/2019 | **View:** NA

Photo 20: View of soil boring locations on Parcel 143 (R10-1), northern portion of the parcel.

Date: 11/21/2019 | **View:** E

Photo 21: View of representative soil from Parcel 143 (R10-1), northern portion of the parcel.
Two 0 to 4 feet below ground surface.

Date: 11/21/2019 | **View:** NA

Photo 22: View of soil boring locations on Parcel 143 (R10-1), southern portion of the parcel.

Date: 10/10/2019 | **View:** W

Photo 23: View of representative soil from Parcel 143 (R10-2), southern portion of the parcel. Two 0 to 4 feet below ground surface.	

Photo 24: View of Parcel 231 (R9).	

Date: 11/20/2019	**View:** NA
Photo 25: View of representative soil from Parcel 231 (R9). 0 to 2 feet and 2 to 4 feet below ground surface.	

APPENDIX C.10

NEW RIVER PHOTOGRAPHIC LOG

TETRA TECH

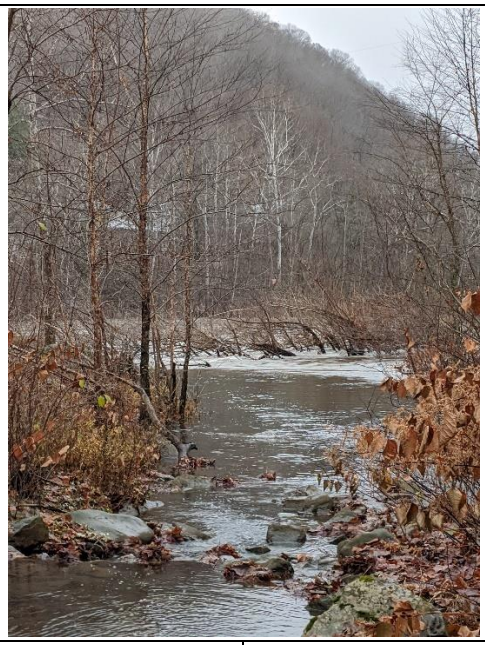
NEW RIVER PHOTOGRAPHIC LOG

Date: 12/03/2019	**View:** NE

Photo 1: Ace Adventures beach along New River, under water. Thurmond staff gauge at 13 feet.

Date: 12/03/2019	**View:** SE

Photo 2: Ace Adventures beach along New River, under water. Thurmond staff gauge at 13 feet.



Date: 12/03/2019	**View: E**

Photo 3: Arbuckle creek confluence with New River. Thurmond staff gauge at 13 feet.

Date: 12/03/2019	**View: E**

Photo 4: Ace Adventures beach along New River, under water. Thurmond staff gauge at 13 feet.

NEW RIVER PHOTOGRAPHIC LOG

Date: 02/24/2020	**View:** NE

Photo 5: View of SD353 sample location in New River.

Date: 02/24/2020	**View:** SW

Photo 6: Looking towards Ace Adventures beach from SD353 sample location in New River.

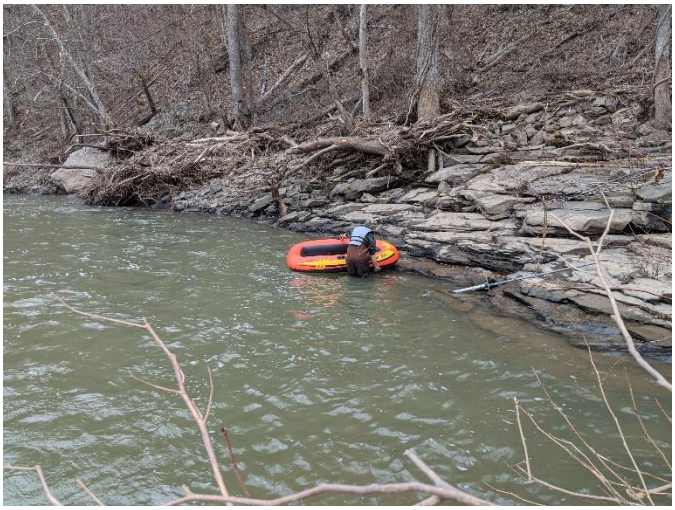
Date: 02/24/2020	**View: W**

Photo 7: Rough terrain and flood debris along shore between Ace Adventures beach and SD353 sample location in New River.

Date: 02/24/2020	**View: E**

Photo 8: View of SD353 sample location in New River.

NEW RIVER PHOTOGRAPHIC LOG



Date: 02/24/2020	**View:** W

Photo 9: View of SD353 sample location in New River.

Date: 02/24/2020	**View:** SW

Photo 10: Looking across inlet from SD353 sample location to Ace Adventures beach in New River.

Date: 02/24/2020	**View:** N/A

Photo 11: Sediment core from SD351 in New River.

Date: 02/24/2020	**View: NE**

Photo 12: View of fast-moving water immediately offshore near SD350 in New River.

NEW RIVER PHOTOGRAPHIC LOG

Date: 02/24/2020	**View:** NW

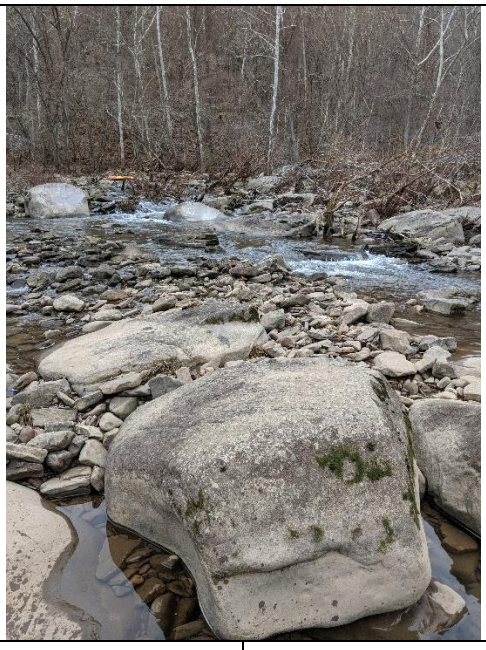
Photo 13: Rock bar at confluence of Arbuckle Creek and New River (SD350).

Date: 02/24/2020	**View:** S

Photo 14: Rock bar at confluence of Arbuckle Creek and New River (SD350).

Date: 02/24/2020	**View: S**

Photo 15: View of calmer water upstream of the Arbuckle Creek and New River confluence.



Date: 02/24/2020	**View: NW**

Photo 16: Looking upstream Arbuckle Creek from rock bar at confluence (SD350).

NEW RIVER PHOTOGRAPHIC LOG

Date: 02/24/2020	View: S

Photo 17: Rock bar at New River and Arbuckle Creek confluence.

Date: 02/24/2020	View: S

Photo 18: Looking down at SD353 sample location, across to Ace Adventures beach. View from trail to SD354.

Date: 02/24/2020	View: S

Photo 19: View of SD354 sample location in New River.

Date: 02/24/2020	View: E

Photo 20: View of SD354 sample location in New River.

NEW RIVER PHOTOGRAPHIC LOG

Date: 02/24/2020	View: SE

Photo 21: Calm portion of New River at SD354 sample location.

Date: 02/24/2020	View: E

Photo 22: View of the sandy area by SD354 in New River.

Date: 02/24/2020	View: N/A

Photo 23: Sediment core from SD354 in New River.

Date: 02/24/2020	View: E

Photo 24: View of SD354 sample location in New River.

NEW RIVER PHOTOGRAPHIC LOG

Date: 02/24/2020	**View:** N/A

Photo 25: Inflatable raft used to carry equipment and as a workstation.

Date: 02/24/2020	**View:** NW

Photo 26: View of preparation to remove sediment core from WildCo Sediment Sampler.

Date: 02/25/2020	**View: SW**

Photo 27: View looking upstream Dunloup Creek at the proposed SD349 sample location.

Date: 02/25/2020	**View: W**

Photo 28: View looking across Dunloup Creek at the proposed SD349 sample location.

NEW RIVER PHOTOGRAPHIC LOG

Date: 02/25/2020	**View:** NE

Photo 29: View looking downstream Dunloup Creek at proposed SD349 sample location.

Date: 02/25/2020	**View:** N

Photo 30: View from SD348 sample location.

Date: 02/25/2020	**View: SE**

Photo 31: View of SD348 sample location in New River.

APPENDIX D

INVESTIGATION-DERIVED WASTE DOCUMENTATION

McCUTCHEON Enterprises, Inc.
250 Park Road
Apollo, PA 15613
Complete Waste Management

Profile Number □□□□□□□□□□□□
Customer Number □□□□□□

WASTE PROFILE

SECTION A – GENERAL INFORMATION

1. Generator:USEPA Region III,
   Address:1650 Arch Street
   City/State:Philadelphia, PA Zip:19103
   County:Philadelphia SIC:
   Municipality:City of Philadelphia TEL: 215-814-3402
   Tech Contact:Stepan Nevshehirlian Fax:

2. Billing Broker:Tetra Tech Inc.
   Address: 661 Anderson Drive, Building 7
   City/State:Pittsburgh, PA Zip15220
   Billing Contact:[redacted] TEL:4[redacted]
   FAX:

SECTION B – WASTE DESCRIPTION

1. Waste Name:IDW Waste Drilling Residuals RWC 801

2. Physical Appearance: ☐Liquid ☒Solids ☐Sludge (pumpable)

   Color:brown/black Odor:none ☒None ☐Slight ☐Strong

3. Number of solid or liquid phases of separation: solid
   Describe each phase and estimate volume (%) of each: 100%

4. Annual volume of waste to be shipped to MEI: 6 IDW (soil) drums

5. Shipment term: ☐On going ☐Temporary ☒One time disposal

6. Waste to be shipped in: ☐Bulk ☒Drums (55 gallon)

7. Anticipated date of first waste shipment 4/30/2020 and volume: 6 IDW (soil) drums

8. Shipment Frequency:Event

SECTION C – CHEMICAL ANALYSIS

1. Waste sample type: ☐ Grab ☒ Composite ☐ Other_____

   Provide a detailed description of the sampling method and a diagram of the sample collection area.
   samples were collected from the drums onsite as a composite for testing (lab# 30357305)

   Diagram of sample collection area:

2. List the results of the analysis of the waste below: Please attach laboratory report

3. Check below if results are in PPM or PPB and note if results are by TCLP vs. Totals.

4. Please analyze for the following parameters indicated by (✔), or contact MEI to perform analysis for you.

PARAMETER	METHOD PREFERENCE	TEST RESULT ☐ PPM ☐ PPB	RANGE (TYPICAL)	PARAMETER	METHOD PREFERENCE	TEST RESULT ☐PPM ☐PPB Check if by TCLP ☐	RANGE (TYPICAL)
☐pH	150.1/9040			☐Arsenic	6010/7060		
☐Oil and Grease	413.1/9070			☐Barium	6010/7080		
☐ PCB	608/8080			☐Cadmium	6010/7130		
☐ TVS	160.4			☐Chromium	6010/7190		
☐ TSS	160.2			☐Lead	6010/7420		
☐ Total Solids	160.3			☐ Mercury	7470		
☐ Flash Point	1010			☐ Selenium	6010/7740		
☐ TCLP	1311	//////////	//////////	☐ Silver	6010/7760		
☐ COD	410.1/410.2			☐RCRA Volatile Organics	8260		
☐ Cyanide	9010			☐RCRA Semi-Vol Organics	8270		
☐ Sulfide	9030			☐			
☐ Spec. Gravity	D1298-99			☐			
☐ BOD 05	SM5210B			☐			

5. Is the waste a hazardous waste as defined in 40 CFR 261? ☐ Yes ☒ No
   IF THE WASTE IS HAZARDOUS IT CANNOT BE DISPOSED AT MEI

6. Is the waste subject to any specific Federal pre-treatment standards? ☐ Yes ☒ No
   If yes, identify industrial category and subpart. Attach copy of PSES/PSNS if available.

   _____

SECTION D – PROCESS DESCRIPTION AND SCHEMATIC

1. Give a detailed description of the manufacturing or waste generating process and a description (if applicable) of waste treatment and stabilization including treatment/stabilization monitoring:

Shaffer Equipment Site in Minden, WV

2. Please attach any MSDS sheets if available.

3. Draw a schematic of the manufacturing or waste generating process here or attach:

4. Additional comments or information:

SECTION E – CERTIFICATION OF GENERATOR

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

PRINT

COMPANY Tetra Tech Inc

AUTHORIZED REPRESENTATIVE [redacted]

TITLE Project Manager

SIGNATURE [redacted] DATE 4 / 17 / 2020

Generator/Broker Special Waste Processing Warranty Statement

Please initial statement 1, 2 & 3. Consultants, Brokers or other parties may initial and sign on behalf of the generator only if a notarized letter of authorization from the generator permits such party to sign documents on their behalf and legally binds the generator in submission with the Waste Profile (WP).

1. I hereby warrant that the waste described in the attached waste processing application (WP) is not a listed hazardous waste pertinent to 40 CFR 261 and 25 PA Code 261. Furthermore, the described waste is not a mixture of a listed hazardous waste or residue derived from the treatment of a listed hazardous waste (or if it is a residue of a listed hazardous waste, it has been stabilized and meets the requirements of this waste profile) nor is the described waste an excluded hazardous waste unless it meets the conditions of the Waste Analysis and Classification Plan.
2. I hereby specifically warrant that (in lieu of analytical testing and therefore based upon my knowledge of the waste stream and manufacturing process described in the attached waste processing application, WP) the parameters specified in the application and those parameters listed below are not equal to or greater than the allowable levels indicated on the approved Residual Waste Permit for the receiving facility.
3. I hereby certify that (in lieu of analytical testing and therefore based upon my knowledge of the waste stream and manufacturing process described in the attached waste processing application, WP) any parameter of the waste (listed in MEI's Table R-4 of the Residual Waste Permit Waste Analysis Plan) does not exceed the Table R-4 limit for that parameter unless it meets the conditions of the Waste Analysis and Classification Plan.

Acceptable Facility Limits (AFL) for Residual Waste (Except Waste Oil)

PARAMETER	CONCENTRATION	UNITS
Ignitability – FlashPoint	>140	°F
Corrosivity – pH	>2 / <12.5	
Reactive Cyanide	<250.0	mg/l
Reactive Sulfide	<250.0	mg/l
PCB	<0.2	mg/l
Toxicity – TCLP		
Metals Group		
D004 – Arsenic	<5.0	mg/l
D005 – Barium	<100.0	mg/l
D006 – Cadmium	<1.0	mg/l
D007 – Chromium	<5.0	mg/l
D008 – Lead	<5.0	mg/l
D009 – Mercury	<0.2	mg/l
D010 – Selenium	<1.0	mg/l
D011 – Silver	<5.0	mg/l
Copper	<250.0	mg/l
Iron	<100.000.0	mg/l
Managanese	<25.000.0	mg/l
Nickel	<250.0	mg/l
Zinc	<1,000.0	mg/l
Pesticides & Herbicides Group:		
D012 – Endrin	<0.02	mg/l
D013 – Lindane	<0.4	mg/l
D014 – Methoxychlor	<10.0	mg/l
D015 – Toxaphene	<0.5	mg/l
D016 – 2,4-D	<10.0	mg/l
D017 – 2,4,5 – TP	<1.0	mg/l
D020 – Chlordane	<0.03	mg/l
D031 – Heptachlor	<0.008	mg/l

PARAMETER	CONCENTRATION	UNITS
Organics Group		
D018 – Benzene	<0.5	mg/l
D019 – Carbon Tetrachloride	<0.5	mg/l
D021 – Chlorobenzene	<100.0	mg/l
D022 – Chloroform	<6.0	mg/l
D023 – o-Cresol	<200.0	mg/l
D024 – m-Cresol	<200.0	mg/l
D025 – p-Cresol	<200.0	mg/l
D026 – Cresol	<200.0	mg/l
D027 – 1,4 Dichlorobenzene	<7.5	mg/l
D028 – 1,2 Dichloroethane	<0.5	mg/l
D029 – 1,1 Dichloroethylene	<0.7	mg/l
D030 - 2.4 Dinitrotoluene	<0.13	mg/l
D032 – Hexachlorobenzene	<0.13	mg/l
D033 – Hexachloro – 1,3 – butadiene	<0.5	mg/l
D034 – Hexachloroethane	<3.0	mg/l
D035 – Methyl Ethyl Ketone	<200.0	mg/l
D036 – Nitrobenzene	<2.0	mg/l
D037 – Pentachlorophenol	<100.0	mg/l
D038 – Pyridine	<5.0	mg/l
D039 – Tetrachloroethylene	<0.7	mg/l
D040 – Trichloroethylene	<0.5	mg/l
D041 – 2,4,5 – Trichlorophenol	<400.0	mg/l
D042 – 2,4,6 – Trichlorophenol	<2.0	mg/l
D043 – Vinyl Chloride	<0.2	mg/l
Ethylbenzene	<10.0	mg/l
Toluene	<100.0	mg/l
Xylene	<100.0	mg/l

Please check one: __Generator ✓Broker

Print Name: [redacted] Title: Project Manager

Signature: [redacted] Date: 04/17/2020

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

April 16, 2020

[redacted]
McCutcheon Enterprises, Inc.
250 Park Road
Apollo, PA 15613

RE: Project: Tetra Tech Mindon
Pace Project No.: 30357305

Dear [redacted]:

Enclosed are the analytical results for sample(s) received by the laboratory on April 02, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Long Island
- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

[redacted]

[redacted]
Project Manager

Enclosures

cc: General Account, McCutcheon Enterprises, Inc.

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Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: Tetra Tech Mindon
Pace Project No.: 30357305

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Ala[redacted]: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Ce[redacted]
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace[redacted]and
575 Broad Hollow Rd, Melville, NY 11747
Ne[redacted]#: 10478 Primary Accrediting Body
Ne[redacted]#: NY152
Pe[redacted]cation #: 68-00350
Connecticut Certification #: PH-0435
Maryland Certification #: 208
Rhode Island Certification #: LAO00340
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: Tetra Tech Mindon
Pace Project No.: 30357305

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30357305001	MEHD 11979	EPA 6010B	CTS	10	PASI-PA
		EPA 7470A	KAS	1	PASI-PA
		EPA 8270D	EAC	18	PASI-PA
		EPA 8260B	JEW	14	PASI-PA
		ASTM D2974-87	TJW	1	PASI-PA
		EPA 1010	RTB	1	PASI-PA
		EPA 160.4	AK1	1	PASI-PA
		EPA 9045C	AJM	1	PASI-PA
		EPA 9095B	RTB	1	PASI-PA
		EPA 9014	PAS	1	PASI-PA
		SM 4500S2F-2011	PAS	1	PASI-PA
		EPA 9056A	BP1	1	PASI-MV

PASI-MV = Pace Analytical Services - Long Island
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: Tetra Tech Mindon
Pace Project No.: 30357305

Sample: MEI ID 11979 **Lab ID: 30357305001** Collected: 04/02/20 10:26 Received: 04/02/20 16:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010B Preparation Method: EPA 3005A Leachate Method/Date: EPA 1311; 04/06/20 13:09 Initial pH: 8.63; Final pH: 5.08 Pace Analytical Services - Greensburg							
Arsenic	ND	mg/L	0.025	1	04/08/20 16:01	04/09/20 10:27	7440-38-2	
Barium	**1.3**	mg/L	0.050	1	04/08/20 16:01	04/09/20 10:27	7440-39-3	
Cadmium	ND	mg/L	0.015	1	04/08/20 16:01	04/09/20 10:27	7440-43-9	
Chromium	ND	mg/L	0.025	1	04/08/20 16:01	04/09/20 10:27	7440-47-3	
Copper	ND	mg/L	0.010	1	04/08/20 16:01	04/09/20 10:27	7440-50-8	
Lead	ND	mg/L	0.025	1	04/08/20 16:01	04/09/20 10:27	7439-92-1	
Nickel	ND	mg/L	0.020	1	04/08/20 16:01	04/09/20 10:27	7440-02-0	
Selenium	ND	mg/L	0.040	1	04/08/20 16:01	04/09/20 10:27	7782-49-2	
Silver	ND	mg/L	0.030	1	04/08/20 16:01	04/09/20 10:27	7440-22-4	
Zinc	**0.19**	mg/L	0.025	1	04/08/20 16:01	04/09/20 10:27	7440-66-6	
7470 Mercury, TCLP	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Leachate Method/Date: EPA 1311; 04/06/20 13:09 Initial pH: 8.63; Final pH: 5.08 Pace Analytical Services - Greensburg							
Mercury	ND	ug/L	1.0	1	04/07/20 19:15	04/08/20 15:42	7439-97-6	
8270D MSSV TCLP Solid Phase	Analytical Method: EPA 8270D Preparation Method: EPA 3535A Leachate Method/Date: EPA 1311; 04/06/20 13:09 Initial pH: 8.63; Final pH: 5.08 Pace Analytical Services - Greensburg							
1,4-Dichlorobenzene	ND	ug/L	500	1	04/13/20 12:30	04/15/20 14:35	106-46-7	
2,4-Dinitrotoluene	ND	ug/L	100	1	04/13/20 12:30	04/15/20 14:35	121-14-2	
Hexachloro-1,3-butadiene	ND	ug/L	100	1	04/13/20 12:30	04/15/20 14:35	87-68-3	
Hexa	ND	ug/L	100	1	04/13/20 12:30	04/15/20 14:35	118-74-1	
Hexa	ND	ug/L	200	1	04/13/20 12:30	04/15/20 14:35	67-72-1	
2-Meth	ND	ug/L	2000	1	04/13/20 12:30	04/15/20 14:35	95-48-7	
3&4	ND	ug/L	2000	1	04/13/20 12:30	04/15/20 14:35		CH
Nitro	ND	ug/L	100	1	04/13/20 12:30	04/15/20 14:35	98-95-3	
Penta	ND	ug/L	5000	1	04/13/20 12:30	04/15/20 14:35	87-86-5	
Pyridine	ND	ug/L	250	1	04/13/20 12:30	04/15/20 14:35	110-86-1	
2,4,5-Trichlorophenol	ND	ug/L	5000	1	04/13/20 12:30	04/15/20 14:35	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	100	1	04/13/20 12:30	04/15/20 14:35	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	73	%.	62-115	1	04/13/20 12:30	04/15/20 14:35	4165-60-0	
2-Fluorobiphenyl (S)	62	%.	57-90	1	04/13/20 12:30	04/15/20 14:35	321-60-8	
Terphenyl-d14 (S)	33	%.	10-110	1	04/13/20 12:30	04/15/20 14:35	1718-51-0	
Phenol-d6 (S)	76	%.	65-109	1	04/13/20 12:30	04/15/20 14:35	13127-88-3	
2-Fluorophenol (S)	77	%.	60-120	1	04/13/20 12:30	04/15/20 14:35	367-12-4	
2,4,6-Tribromophenol (S)	77	%.	49-123	1	04/13/20 12:30	04/15/20 14:35	118-79-6	
8260B MSV TCLP	Analytical Method: EPA 8260B Leachate Method/Date: EPA 1311; 04/06/20 08:55 Pace Analytical Services - Greensburg							
Benzene	ND	ug/L	50.0	10		04/09/20 08:56	71-43-2	
2-Butanone (MEK)	ND	ug/L	100	10		04/09/20 08:56	78-93-3	

REPORT OF LABORATORY ANALYSIS

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(724)850-5600

ANALYTICAL RESULTS

Project: Tetra Tech Mindon
Pace Project No.: 30357305

Sample: MEI ID 11979 **Lab ID: 30357305001** Collected: 04/02/20 10:26 Received: 04/02/20 16:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV TCLP	Analytical Method: EPA 8260B Leachate Method/Date: EPA 1311; 04/06/20 08:55							
	Pace Analytical Services - Greensburg							
Carbon tetrachloride	ND	ug/L	50.0	10		04/09/20 08:56	56-23-5	
Chlorobenzene	ND	ug/L	50.0	10		04/09/20 08:56	108-90-7	
Chloroform	ND	ug/L	50.0	10		04/09/20 08:56	67-66-3	
1,2-Dichloroethane	ND	ug/L	50.0	10		04/09/20 08:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	50.0	10		04/09/20 08:56	75-35-4	
Tetrachloroethene	ND	ug/L	50.0	10		04/09/20 08:56	127-18-4	
Trichloroethene	ND	ug/L	50.0	10		04/09/20 08:56	79-01-6	
Vinyl chloride	ND	ug/L	50.0	10		04/09/20 08:56	75-01-4	
Surrogates								
1,2-Dichlo[redacted]d4 (S)	102	%.	70-130	10		04/09/20 08:56	17060-07-0	
Toluene-d8 (S)	98	%.	70-130	10		04/09/20 08:56	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	70-130	10		04/09/20 08:56	460-00-4	
Dibromofluoromethane (S)	101	%.	70-130	10		04/09/20 08:56	1868-53-7	
Percent Moisture	Analytical Method: ASTM D2974-87							
	Pace Analytical Services - Greensburg							
Percent Moisture	**11.6**	%	0.10	1		04/14/20 13:15		D6
1010 Flashpoint,Closed Cup	Analytical Method: EPA 1010							
	Pace Analytical Services - Greensburg							
Flashpoint	**>200**	deg F	60.0	1		04/02/20 21:07		
160.4 Total Volatile Solids	Analytical Method: EPA 160.4							
	Pace Analytical Services - Greensburg							
Tota[redacted]	ND	% (w/w)	9.9	1		04/06/20 09:21		
9045[redacted]	Analytical Method: EPA 9045C							
	Pace Analytical Services - Greensburg							
pH i[redacted]grees C	**7.4**	Std. Units	2.0	1		04/05/20 11:15		H3
9095 Paint Filter Liquid Test	Analytical Method: EPA 9095B							
	Pace Analytical Services - Greensburg							
Free Liquids	**PASS**			1		04/02/20 21:50		
733C S Reactive Cyanide	Analytical Method: EPA 9014 Preparation Method: SW-846 7.3.3.2							
	Pace Analytical Services - Greensburg							
Cyanide, Reactive	ND	mg/kg	1.1	1	04/03/20 17:05	04/03/20 18:29		
734S Reactive Sulfide	Analytical Method: SM 4500S2F-2011 Preparation Method: SW-846 7.3.4.2							
	Pace Analytical Services - Greensburg							
Sulfide, Reactive	ND	mg/kg	11.2	1	04/03/20 17:05	04/03/20 17:08		

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ANALYTICAL RESULTS

Project: Tetra Tech Mindon
Pace Project No.: 30357305

Sample: MEI ID 11979 **Lab ID: 30357305001** Collected: 04/02/20 10:26 Received: 04/02/20 16:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
[redacted]								
9056 IC Anions 48hr	Analytical Method: EPA 9056A Preparation Method: EPA 9056A Pace Analytical Services - Long Island							
Sulfate	**172**	mg/kg	56.2	1	04/06/20 22:14	04/07/20 09:37	14808-79-8	

[redacted]

[redacted]

[redacted]

[redacted]

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QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

QC Batch: 391424
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury TCLP
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30357305001

METHOD BLANK: 1895121 Matrix: Water
Associated Lab Samples: 30357305001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	1.0	04/08/20 15:28	

METHOD BLANK: 1894139 Matrix: Water
Associated Lab Samples: 30357305001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	1.0	04/08/20 15:32	

LABORATORY CONTROL SAMPLE: 1895122

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	1	.99J	99	80-120	

MATRIX SPIKE SAMPLE: 1895124

Parameter	Units	30357432001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mer	ug/L	ND	2.5	2.6	100	75-125	

MAT 1895126

Parameter	Units	30357046013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	2.5	2.5	99	75-125	

SAMPLE DUPLICATE: 1895123

Parameter	Units	30357432001 Result	Dup Result	RPD	Qualifiers
Mercury	ug/L	ND	ND		

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QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

SAMPLE DUPLICATE: 1895125

Parameter	Units	30357046013 Result	Dup Result	RPD	Qualifiers
Mer[redacted]	ug/L	ND	ND		

[redacted]

[redacted]

[redacted]

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QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

QC Batch: 391633
QC Batch Method: EPA 3005A
Analysis Method: EPA 6010B
Analysis Description: 6010 MET TCLP
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30357305001

METHOD BLANK: 1895921 Matrix: Water
Associated Lab Samples: 30357305001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.025	04/09/20 09:54	
Barium	mg/L	ND	0.050	04/09/20 09:54	
Cadmium	mg/L	ND	0.015	04/09/20 09:54	
Chromium	mg/L	ND	0.025	04/09/20 09:54	
Copper	mg/L	ND	0.010	04/09/20 09:54	
Lead	mg/L	ND	0.025	04/09/20 09:54	
Nickel	mg/L	ND	0.020	04/09/20 09:54	
Selenium	mg/L	ND	0.040	04/09/20 09:54	
Silver	mg/L	ND	0.030	04/09/20 09:54	
Zinc	mg/L	ND	0.025	04/09/20 09:54	

METHOD BLANK: 1894139 Matrix: Water
Associated Lab Samples: 30357305001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.025	04/09/20 09:58	
Barium	mg/L	ND	0.050	04/09/20 09:58	
Cadmium	mg/L	ND	0.015	04/09/20 09:58	
Chr	mg/L	ND	0.025	04/09/20 09:58	
Cop	mg/L	ND	0.010	04/09/20 09:58	
Lead	mg/L	ND	0.025	04/09/20 09:58	
Nick	mg/L	ND	0.020	04/09/20 09:58	
Sele	mg/L	ND	0.040	04/09/20 09:58	
Silv	mg/L	ND	0.030	04/09/20 09:58	
Zinc	mg/L	ND	0.025	04/09/20 09:58	

LABORATORY CONTROL SAMPLE: 1895922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.5	0.49	98	80-120	
Barium	mg/L	0.5	0.50	101	80-120	
Cadmium	mg/L	0.5	0.50	100	80-120	
Chromium	mg/L	0.5	0.48	96	80-120	
Copper	mg/L	0.5	0.50	101	80-120	
Lead	mg/L	0.5	0.48	95	80-120	
Nickel	mg/L	0.5	0.50	100	80-120	
Selenium	mg/L	0.5	0.50	100	80-120	

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QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

LABORATORY CONTROL SAMPLE: 1895922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Silv[redacted]	mg/L	0.25	0.24	97	80-120	
Zinc	mg/L	0.5	0.48	96	80-120	

MATRIX SPIKE SAMPLE: 1895924

Parameter	Units	30357046007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	ND	0.5	0.53	105	75-125	
Barium	mg/L	1.2	0.5	1.7	102	75-125	
Cadmium	mg/L	ND	0.5	0.50	101	75-125	
Chromium	mg/L	ND	0.5	0.49	98	75-125	
Copper	mg/L	ND	0.5	0.51	101	75-125	
Lead [redacted]	mg/L	ND	0.5	0.50	98	75-125	
Nickel	mg/L	ND	0.5	0.47	90	75-125	
Selenium	mg/L	ND	0.5	0.51	102	75-125	
Silver	mg/L	ND	0.25	0.28	112	75-125	
Zinc	mg/L	0.032	0.5	0.51	96	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1895926 1895927

Parameter	Units	30357046013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Arsenic	mg/L	ND	0.5	0.5	0.52	0.51	104	102	75-125	2	
Barium	mg/L	1.0	0.5	0.5	1.5	1.5	105	100	75-125	2	
Cad[redacted]	mg/L	ND	0.5	0.5	0.50	0.50	100	99	75-125	1	
Chr[redacted]	mg/L	ND	0.5	0.5	0.47	0.47	95	94	75-125	1	
Copper	mg/L	ND	0.5	0.5	0.50	0.50	100	99	75-125	1	
Lea[redacted]	mg/L	ND	0.5	0.5	0.48	0.48	96	95	75-125	2	
Nick[redacted]	mg/L	ND	0.5	0.5	0.46	0.45	89	88	75-125	1	
Sele[redacted]	mg/L	ND	0.5	0.5	0.51	0.50	101	100	75-125	1	
Silver	mg/L	ND	0.25	0.25	0.26	0.28	104	113	75-125	9	
Zinc	mg/L	0.16	0.5	0.5	0.63	0.62	93	91	75-125	2	

SAMPLE DUPLICATE: 1895923

Parameter	Units	30357046007 Result	Dup Result	RPD	Qualifiers
Arsenic	mg/L	ND	ND		
Barium	mg/L	1.2	1.2	2	
Cadmium	mg/L	ND	ND		
Chromium	mg/L	ND	ND		
Copper	mg/L	ND	.0098J		
Lead	mg/L	ND	ND		
Nickel	mg/L	ND	.013J		

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QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

SAMPLE DUPLICATE: 1895923

Parameter	Units	30357046007 Result	Dup Result	RPD	Qualifiers
Sele[redacted]	mg/L	ND	ND		
Silver	mg/L	ND	ND		
Zinc	mg/L	0.032	0.033	2	

SAMPLE DUPLICATE: 1895925

Parameter	Units	30357046013 Result	Dup Result	RPD	Qualifiers
Arsenic	mg/L	ND	ND		
Barium	mg/L	1.0	1.0	1	
Cadmium	mg/L	ND	ND		
Chromium	mg/L	ND	ND		
Copper [redacted]	mg/L	ND	ND		
Lead	mg/L	ND	ND		
Nickel	mg/L	ND	.013J		
Selenium	mg/L	ND	ND		
Silver	mg/L	ND	ND		
Zinc	mg/L	0.16	0.16	1	

[redacted]

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QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

QC Batch: 391365
QC Batch Method: EPA 8260B
Analysis Method: EPA 8260B
Analysis Description: 8260B MSV TCLP
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30357305001

METHOD BLANK: 1894140 Matrix: Solid
Associated Lab Samples: 30357305001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	50.0	04/09/20 06:10	
1,2-Dichloroethane	ug/L	ND	50.0	04/09/20 06:10	
2-Butanone (MEK)	ug/L	ND	100	04/09/20 06:10	
Benzene	ug/L	ND	50.0	04/09/20 06:10	
Carbon tetrachloride	ug/L	ND	50.0	04/09/20 06:10	
Chlorobenzene	ug/L	ND	50.0	04/09/20 06:10	
Chlorofor[redacted]	ug/L	ND	50.0	04/09/20 06:10	
Tetrachloroethene	ug/L	ND	50.0	04/09/20 06:10	
Trichloroethene	ug/L	ND	50.0	04/09/20 06:10	
Vinyl chloride	ug/L	ND	50.0	04/09/20 06:10	
1,2-Dichloroethane-d4 (S)	%.	107	70-130	04/09/20 06:10	
4-Bromofluorobenzene (S)	%.	99	70-130	04/09/20 06:10	
Dibromofluoromethane (S)	%.	103	70-130	04/09/20 06:10	
Toluene-d8 (S)	%.	99	70-130	04/09/20 06:10	

LABORATORY CONTROL SAMPLE: 1894791

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-[redacted]	ug/L	20	13.0	65	49-111	
1,2-[redacted]	ug/L	20	17.5	88	62-112	
2-Butanone (MEK)	ug/L	20	17.7	88	52-111	
Ben[redacted]	ug/L	20	17.2	86	51-123	
Car[redacted]	ug/L	20	14.8	74	53-115	
Chl[redacted]	ug/L	20	17.2	86	63-119	
Chloroform	ug/L	20	16.8	84	57-115	
Tetrachloroethene	ug/L	20	15.9	79	57-124	
Trichloroethene	ug/L	20	15.7	79	61-115	
Vinyl chloride	ug/L	20	20.2	101	61-120	
1,2-Dichloroethane-d4 (S)	%.			99	70-130	
4-Bromofluorobenzene (S)	%.			100	70-130	
Dibromofluoromethane (S)	%.			103	70-130	
Toluene-d8 (S)	%.			99	70-130	

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QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1894788 1894789

[redacted]	Units	30357304001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	50.0 U	200	200	168	138	84	69	10-112	19	
1,2-Dichloroethane	ug/L	50.0 U	200	200	191	160	96	80	32-111	18	
2-Butanone (MEK)	ug/L	100 U	200	200	157	136	79	68	10-153	15	
Benzene	ug/L	50.0 U	200	200	201	169	100	84	29-120	17	
Carbon tetrachloride	ug/L	50.0 U	200	200	191	160	96	80	27-118	18	
Chlorobenzene	ug/L	50.0 U	200	200	193	169	97	84	10-139	13	
Chloroform	ug/L	50.0 U	200	200	189	156	94	78	31-118	19	
Tetrachloroethene	ug/L	50.0 U	200	200	194	167	97	83	10-144	15	
Trichloroethene	ug/L	50.0 U	200	200	197	162	99	81	10-170	20	
Vinyl chloride	ug/L	50.0 U	200	200	171	141	86	70	10-175	20	
1,2-Dichloroethane-d4 (S)	%.						96	102	70-130		
4-Bromof[redacted]ene (S)	%.						100	103	70-130		
Dibromofluoromethane (S)	%.						100	97	70-130		
Toluene-d8 (S)	%.						99	100	70-130		

MATRIX SPIKE SAMPLE: 1894790

Parameter	Units	30357106001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	ND	200	157	78	10-112	
1,2-Dichloroethane	ug/L	ND	200	175	88	32-111	
2-Butanone (MEK)	ug/L	ND	200	180	71	10-153	
Benzene	ug/L	ND	200	188	94	29-120	
Carbon tetrachloride	ug/L	ND	200	170	85	27-118	
Chlorobenzene	ug/L	ND	200	188	94	10-139	
Chl[redacted]	ug/L	ND	200	176	88	31-118	
Tetr[redacted]	ug/L	ND	200	189	95	10-144	
Trichloroethene	ug/L	ND	200	184	92	10-170	
Viny[redacted]	ug/L	ND	200	160	80	10-175	
1,2-[redacted]	%.				93	70-130	
4-B[redacted]ne (S)	%.				101	70-130	
Dibromofluoromethane (S)	%.				98	70-130	
Toluene-d8 (S)	%.				99	70-130	

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QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

QC Batch: 391952
QC Batch Method: EPA 3535A
Analysis Method: EPA 8270D
Analysis Description: 8270D TCLP MSSV
Laboratory: Pace Analytical Services - Greensburg
Ass[redacted]s: 30357305001

METHOD BLANK: 1896255 Matrix: Water
Associated Lab Samples: 30357305001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	ND	500	04/14/20 15:05	
2,4,5-Trichlorophenol	ug/L	ND	5000	04/14/20 15:05	
2,4,6-Trichlorophenol	ug/L	ND	100	04/14/20 15:05	
2,4-Dinitrotoluene	ug/L	ND	100	04/14/20 15:05	
2-Methylphenol(o-Cresol)	ug/L	ND	2000	04/14/20 15:05	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	2000	04/14/20 15:05	
Hexachlo[redacted]adiene	ug/L	ND	100	04/14/20 15:05	
Hexachlorobenzene	ug/L	ND	100	04/14/20 15:05	
Hexachloroethane	ug/L	ND	200	04/14/20 15:05	
Nitrobenzene	ug/L	ND	100	04/14/20 15:05	
Pentachlorophenol	ug/L	ND	5000	04/14/20 15:05	
Pyridine	ug/L	ND	250	04/14/20 15:05	
2,4,6-Tribromophenol (S)	%.	73	49-123	04/14/20 15:05	
2-Fluorobiphenyl (S)	%.	63	57-90	04/14/20 15:05	
2-Fluorophenol (S)	%.	81	60-120	04/14/20 15:05	
Nitrobenzene-d5 (S)	%.	78	62-115	04/14/20 15:05	
Phenol-d6 (S)	%.	77	65-109	04/14/20 15:05	
Terphenyl-d14 (S)	%.	56	10-110	04/14/20 15:05	

LAB[redacted]E: 1897827

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-[redacted]	ug/L	500	255J	51	37-85	
2,4,[redacted]	ug/L	500	420J	84	71-106	
2,4,6-Trichlorophenol	ug/L	500	373	75	64-104	
2,4-Dinitrotoluene	ug/L	500	352	70	44-101	
2-Methylphenol(o-Cresol)	ug/L	500	375J	75	73-100	
3&4-Methylphenol(m&p Cresol)	ug/L	1000	791J	79	73-104	
Hexachloro-1,3-butadiene	ug/L	500	255	51	35-88	
Hexachlorobenzene	ug/L	500	219	44	39-81	
Hexachloroethane	ug/L	500	263	53	34-92	
Nitrobenzene	ug/L	500	402	80	70-103	
Pentachlorophenol	ug/L	500	372J	74	40-113	
Pyridine	ug/L	500	154J	31	18-57	
2,4,6-Tribromophenol (S)	%.			75	49-123	
2-Fluorobiphenyl (S)	%.			67	57-90	
2-Fluorophenol (S)	%.			86	60-120	
Nitrobenzene-d5 (S)	%.			81	62-115	
Phenol-d6 (S)	%.			78	65-109	

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REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

LABORATORY CONTROL SAMPLE: 1897827

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Terp[redacted]	%.			59	10-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1897828 1897829

Parameter	Units	30357957001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,4-Dichlorobenzene	ug/L	ND	500	500	241J	230J	48	46	38-84		
2,4,5-Trichlorophenol	ug/L	ND	500	500	387J	414J	77	83	70-108		
2,4,6-Trichlorophenol	ug/L	ND	500	500	381	359	76	72	63-106	6	
2,4-Dinitrotoluene	ug/L	ND	500	500	321	313	64	63	39-104	2	
2-Methylphenol(o-Cresol)	ug/L	ND	500	500	372J	376J	74	75	72-100		
3&4-Meth[redacted]m&p Cresol)	ug/L	ND	1000	1000	792J	814J	79	81	72-105		
Hexachloro-1,3-butadiene	ug/L	ND	500	500	237	230	47	46	36-89	3	
Hexachlorobenzene	ug/L	ND	500	500	189	203	38	41	23-92	7	
Hexachloroethane	ug/L	ND	500	500	241	234	48	47	36-92	3	
Nitrobenzene	ug/L	ND	500	500	385	392	77	78	69-105	2	
Pentachlorophenol	ug/L	ND	500	500	372J	359J	74	72	34-123		
Pyridine	ug/L	ND	500	500	207J	190J	41	38	10-75		
2,4,6-Tribromophenol (S)	%.						73	74	49-123		
2-Fluorobiphenyl (S)	%.						65	68	57-90		
2-Fluorophenol (S)	%.						79	77	60-120		
Nitrobenzene-d5 (S)	%.						78	82	62-115		
Phenol-d6 (S)	%.						77	80	65-109		
Terphenyl-d14 (S)	%.						50	54	10-110		

[redacted]

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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

QC Batch: 392180
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Laboratory: Pace Analytical Services - Greensburg

Ass[redacted]s: 30357305001

SAMPLE DUPLICATE: 1898869

Parameter	Units	30357271007 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	11.2	11.5	2	

SAMPLE DUPLICATE: 1898870

Parameter	Units	30357305001 Result	Dup Result	RPD	Qualifiers
Percent Moisture[redacted]	%	11.6	14.3	21	D6

[redacted]

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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

QC Batch: 390725
QC Batch Method: EPA 1010
Analysis Method: EPA 1010
Analysis Description: 1010 Flash Point, Closed Cup
Laboratory: Pace Analytical Services - Greensburg

Ass[redacted]s: 30357305001

METHOD BLANK: 1891981 Matrix: Water
Associated Lab Samples: 30357305001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Flashpoint	deg F	>200	60.0	04/02/20 19:08	

SAMPLE DUPLICATE: 1892841

Parameter	Units	30356982001 Result	Dup Result	RPD	Qualifiers
Flashpoint	deg F	>200	>200		

[redacted]

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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

QC Batch: 391157
QC Batch Method: EPA 160.4
Analysis Method: EPA 160.4
Analysis Description: 160.4 Total Volatile Solids
Laboratory: Pace Analytical Services - Greensburg
Ass[redacted]s: 30357305001

METHOD BLANK: 1894092 Matrix: Solid
Associated Lab Samples: 30357305001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Volatile Solids	% (w/w)	ND	9.9	04/06/20 09:15	

SAMPLE DUPLICATE: 1894091

Parameter	Units	30357317001 Result	Dup Result	RPD	Qualifiers
[redacted]					
Total Volatile Solids	% (w/w)	77.1	77.5	1	

[redacted]

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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

QC Batch: 391131
QC Batch Method: EPA 9045C
Analysis Method: EPA 9045C
Analysis Description: 9045 pH
Laboratory: Pace Analytical Services - Greensburg

Ass[redacted]s: 30357305001

SAMPLE DUPLICATE: 1894018

Parameter	Units	30357478001 Result	Dup Result	RPD	Qualifiers
pH in water at 25 degrees C	Std. Units	7.3	7.3	0	H3

[redacted]

[redacted]

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QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

QC Batch: 390724
QC Batch Method: EPA 9095B
Analysis Method: EPA 9095B
Analysis Description: 9095 PAINT FILTER LIQUID TEST
Laboratory: Pace Analytical Services - Greensburg

Ass[redacted]s: 30357305001

SAMPLE DUPLICATE: 1891979

Parameter	Units	30356786001 Result	Dup Result	RPD	Qualifiers
Free Liquids		FAIL	FAIL		

[redacted]

[redacted]

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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

QC Batch: 390525
QC Batch Method: SW-846 7.3.3.2
Analysis Method: EPA 9014
Analysis Description: 733C Reactive Cyanide
Laboratory: Pace Analytical Services - Greensburg

Ass[redacted]s: 30357305001

METHOD BLANK: 1891201 Matrix: Solid
Associated Lab Samples: 30357305001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide, Reactive	mg/kg	ND	1.0	04/03/20 18:15	

LABORATORY CONTROL SAMPLE: 1891202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	99.9	ND	0	0-8	

SAMPLE DUPLICATE: 1892964

Parameter	Units	30357101001 Result	Dup Result	RPD	Qualifiers
Cyanide, Reactive	mg/kg	ND	ND		

[redacted]

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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

QC Batch: 390524
QC Batch Method: SW-846 7.3.4.2
Analysis Method: SM 4500S2F-2011
Analysis Description: 734S Reactive Sulfide
Laboratory: Pace Analytical Services - Greensburg
Ass[redacted]s: 30357305001

METHOD BLANK: 1891199 Matrix: Solid
Associated Lab Samples: 30357305001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide, Reactive	mg/kg	ND	10	04/03/20 17:08	

LABORATORY CONTROL SAMPLE: 1891200

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	200	40.0	20	0-52	

SAMPLE DUPLICATE: 1892961

Parameter	Units	30357101001 Result	Dup Result	RPD	Qualifiers
Sulfide, Reactive	mg/kg	ND	ND		

[redacted]

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(724)850-5600

QUALITY CONTROL DATA

Project: Tetra Tech Mindon
Pace Project No.: 30357305

QC Batch: 155969
QC Batch Method: EPA 9056A
Analysis Method: EPA 9056A
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Long Island
Ass[redacted]s: 30357305001

METHOD BLANK: 750829 Matrix: Solid
Associated Lab Samples: 30357305001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/kg	ND	50.0	04/07/20 05:59	

LABORATORY CONTROL SAMPLE: 750830

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
[redacted]						
Sulfate	mg/kg	100	90.9	91	90-110	

MATRIX SPIKE SAMPLE: 751015

Parameter	Units	70127015001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/kg	<241	482	545	90	90-110	

SAMPLE DUPLICATE: 751014

Parameter	Units	70127015001 Result	Dup Result	RPD	Qualifiers
Sulf[redacted]	mg/kg	<241	118J		

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Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: Tetra Tech Mindon
Pace Project No.: 30357305

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

[redacted]d at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS[redacted]rix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

[redacted]The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased

[redacted]etween the sample and sample duplicate exceeded laboratory control limits.

[redacted]ample was received or analysis requested beyond the recognized method holding time.

[redacted]

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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Tetra Tech Mindon
Pace Project No.: 30357305

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30357305001	**MEI ID 11979**	EPA 3005A	391633	EPA 6010B	391648
30357305001	**MEI ID 11979**	EPA 7470A	391424	EPA 7470A	391459
30357305001	**MEI ID 11979**	EPA 3535A	391952	EPA 8270D	392094
30357305001	**MEI ID 11979**	EPA 8260B	391365		
30357305001	**MEI ID 11979**	ASTM D2974-87	392180		
30357305001	**MEI ID 11979**	EPA 1010	390725		
30357305001	**MEI ID 11979**	EPA 160.4	391157		
30357305001	**MEI ID 11979**	EPA 9045C	391131		
30357305001	**MEI ID 11979**	EPA 9095B	390724		
30357305	**MEI ID 11979**	SW-846 7.3.3.2	390525	EPA 9014	391093
30357305001	**MEI ID 11979**	SW-846 7.3.4.2	390524	SM 4500S2F-2011	391092
30357305001	**MEI ID 11979**	EPA 9056A	155969	EPA 9056A	155971

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: McCutcheon Enterprises, Inc.	Report To: [redacted]	Attention: [redacted]
Address: 250 Park Road	Copy To: [redacted]	Company Name: McCutcheon Enterprises Inc.
Apollo, PA 15613	[redacted]	Address: 250 Park Rd. Apollo, PA 15613
Email To: [redacted]	Purchase Order No.: ~~041908~~ 041210 642218-01	Pace Quote Reference:
Phone: [redacted]3 Fax 724-568-2571	Project Name: Tetra Tech Mindon	Pace Project Manager:
Requested Due Date/TAT: 10-DAY TURN	Project Number: 39-1724/261625	Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER_____

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☐ NC ☐ OH ☐ SC ☐ WI ☒ OTHER PA

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	Section D SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Filtered (Y/N)	Requested: pH, Total Sulfate	R. Cyanide, R. Sulfide	TCLP 11 RCRA Metals	TCLP Semi-VOA	TCLP VOCs, Flashpoint	Total Volatile Solids	Free Liquids, Corrosivity	Specific Gravity	Residual Chlorine (Y/N)	Pace Project No. Lab I.D.
1	MEI ID 11979	SL	G	XXXXXXXX	XXXXX	4/1/20	10:26		2	X									X	X	X	X	X	X	X	n	001
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

WO# : 30357305

30357305

Additional Comments:

For liquid, pull 7 full liter bottles.
For solid, pull 3 full liter bottles.
For liner, pull 10 full liter bottles.

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[redacted]					

SAMPLE CONDITIONS

	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
2.6	(Y/N)	(Y/N)	(Y/N)
Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: McCutcheon Project # 30357305

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace Other _____

Label PM
LIMS Login TR

Tracking #: N/A

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Thermometer Used IC Type of Ice: (Wet) Blue None

Cooler Temperature Observed Temp 2.9 °C Correction Factor: -0.3 °C Final Temp: 2.6 °C

Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot# N/A	Date and Initials of person examining contents: DLC 4-2-20
Chain of Custody Present:	✓			1.	
Chain of Custody Filled Out:	✓			2.	
Chain of Custody Relinquished:	✓			3.	
Sampler Name & Signature on COC:	✓			4.	
Sample Labels match COC: -Includes date/time/ID Matrix: SL	✓			5.	
Samples Arrived within Hold Time:	✓			6.	
Short Hold Time Analysis (<72hr remaining):		✓		7.	
Rush Turn Around Time Requested:		✓		8.	
Sufficient Volume:	✓			9.	
Correct Containers Used: -Pace Containers Used:	✓ ✓			10.	
Containers Intact:	✓			11.	
Orthophosphate field filtered			✓	12.	
Hex Cr Aqueous sample field filtered			✓	13.	
Organic Samples checked for dechlorination:			✓	14.	
Filtered volume received for Dissolved tests			✓	15.	
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, (Non-aqueous matrix)			✓	16.	
All containers meet method preservation requirements.	✓			Initial when completed DG	Date/time of preservation
				Lot # of added preservative	
Headspace in VOA Vials (>6mm):			✓	17.	
Trip Blank Present:		✓		18.	
Trip Blank Custody Seals Present			✓		
Rad Samples Screened < 0.5 mrem/hr			✓	Initial when completed: DLC	Date:

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Chain of Custody

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☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: PA
Cert. Needed: ☑ Yes ☐ No
Owner Received Date: 4/2/2020 **Results Requested By:** 4/16/2020

Workorder: 30357305 **Workorder Name:** Tetra Tech Mindon

Report To	Subcontract To
[redacted] Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3,4 Greensburg, PA 15601 Phone (724)850-5617	Pace Analytical Melville 575 Broad Hollow Road Melville, NY 11747 Phone (631)694-3040

Requested Analysis

WO# : 70127039

70127039

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	9056 Sulfate	LAB USE ONLY
1	MEI ID 11979	PS	4/2/2020 10:26	30357305001	Solid	1	X	
2								
3								
4								
5								

Transfers					Comments
1	[redacted]				ves
2					
3					

Cooler Temperature on Receipt 4.2 °C **Custody Seal** Y or (N) **Received on Ice** (Y) or N **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 1

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Company: McCutcheon Enterprises, Inc.	Report To: [redacted]	Attention: [redacted]
Address: 250 Park Road	Copy To: [redacted]	Company Name: McCutcheon Enterprises Inc.
Apollo, PA 15613	[redacted]	Address: 250 Park Rd. Apollo, PA 15613
Email To: [redacted]	Purchase Order No.: ~~041908~~ 04/21/20 042020-01	Pace Quote Reference:
Phone [redacted] Fax 724-568-2571	Project Name: Tetra Tech Mindon	Pace Project Manager:
Requested Due Date/TAT: 10-NATURAL	Project Number: 39-1724/261625	Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER_____

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☐ NC ☐ OH ☐ SC ☐ WI ☒ OTHER PA

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested: pH, Total Sulfide	R. Cyanide, R. Sulfide	TCLP 11 RCRA Metals	TCLP Semi-VOA	TCLP VOCs, Flashpoint	Total Volatile Solids	Free Liquids, Corrosivity	Specific Gravity	Residual Chlorine (Y/N)	Pace Project No. Lab I.D.
1	MEI ID 11979	SL	G	XXXXXXXX	XXXXX	4/1/20	10:20		2	X								X	X	X	X	X	X	X	n	CE1
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

WO# : 30357305
WO# : 70127039
PM: NML Due Date: 04/16/20
CLIENT: PACE-PA

Additional Comments:

For liquid, pull 7 full liter bottles.
For solid, pull 3 full liter bottles.
For liner, pull 10 full liter bottles.

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[redacted]					

SAMPLE CONDITIONS

	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
2.6	(Y/N)	(Y/N)	(Y/N)
Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact

e-File(ALLQ020rev.3,31Mar05))22Jun2005

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: McCutcheon

Project # 30357305

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace Other _____

Label NA

LIMS Login NA

Tracking #: N/A

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Thermometer Used IC Type of Ice: (Wet) Blue None

Cooler Temperature Observed Temp 2.9 °C Correction Factor: -0.3 °C Final Temp: 2.6 °C

Temp should be above freezing to 6°C

pH paper Lot# N/A

Date and Initials of person examining contents: NL 4-2-20

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:	✓			4.
Sample Labels match COC: -Includes date/time/ID Matrix: SL	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used:	✓ ✓			10.
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix			✓	16.
All containers meet method preservation requirements.	✓			Initial when completed DG Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:		✓		18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr			✓	Initial when completed: DC Date:

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pace Analytical

Sample Condition Upon Receipt

Client Name: Pr

WO# : 70127039

PM: NML Due Date: 04/16/20

CLIENT: PACE-PA

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 1461 2058 6747

Custody Seal on Cooler/Box Present: ☐ Yes ☐ No Seals intact: ☐ Yes ☐ No Temperature Blank Present: ☐ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ Ziploc ☐ None ☐ Other Type of Ice: Wet Blue None

Thermometer Used: TH091 Correction Factor: +0.2 ☐ Samples on ice, cooling process has begun

Cooler Temperature (°C): Cooler Temperature Corrected (°C): Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample) Date and Initials of person examining contents:

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1.
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☑Yes	☐No		3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No		6.
Rush Turn Around Time Requested:	☐Yes	☑No		7.
Sufficient Volume: (Triple volume provided for MS/MSD)	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9.
-Pace Containers Used:	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10.
Filtered volume received for Dissolved tests	☑Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	☑Yes	☐No		12.
-Includes date/time/ID/Analysis Matrix (SL) WT OIL				
All containers needing preservation have been checked	☐Yes	☐No	☑N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot #				Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☐Yes	☐No	☑N/A	Initial when completed: / Lot # of added preservative: / Date/Time preservative added
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
KI starch test strips Lot #				
Residual chlorine strips Lot #				Positive for Res. Chlorine? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

F-LI-C-002-rev.02

Pace Analytical®
www.pacelabs.com

Ship To:
Pace Analytical Melville
575 Broad Hollow Road
Melville, NY 11747
Phone (631)694-3040

INTER_LABORATORY WORK ORDER # 30357305
(To be completed by sending lab)

Sending Project No:	30357305
Receiving Project No:	
Check Box for Consolidated Invoice:	☐
Date Prepared:	04/03/20
REQUESTED COMPLETION DATE:	**4/16/2020**

Sending Region	IR30-Pittsburgh	Sending Project Mgr.	[redacted]
Receiving Region	IR70-Melville	External Client	McCutcheon Enterprises Inc.
State of Sample Origin	PA	QC Deliverable	STD REPORT

All questions should be addressed to sending project manager.

Requested Reportable Units _____ Report Wet or Dry Weight? Dry Weight Cert. Needed _____

WORK REQUESTED						
Method Description	**Container Type**	**Quantity of containers**	**Preservative**	**Quantity of Samples**	**Unit Price**	**Amount**
9056 Sulfate	WGFU		Unpreserved	1	$25.00	$25.00
					TOTAL	$25.00

Special Requirements: _____

Receiving Region Department	**Acctg. Code**	**Totals from above**	**Revenue Allocation**	
			Receiving Region (80%)	**Client Services Dept. Sending Region (20%)**
Wet Chemistry	21	$25.00	$20.00	$5.00
* Custom Revenue Allocation	**TOTAL**	$25.00	$20.00	$5.00

FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO

Chain of Custody Included: ☑ Yes ☐ No Return Samples to Sending Region: ☐ Yes ☑ No

Matrix: ☐ Drinking Water ☑ Soil ☐ Water ☐ Air ☐ Other (identify) _____

CONFIRMATION OF WORK COMPLETED

Date Completed: _____ Receiving Project Manager: _____

DISPOSITION of FORM

Original sent to the receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.

Rev # 3 on 2020-05-04 05:07:47.320

JOB WORK ORDER

JWO0262157

Q124319

McCUTCHEON Enterprises, Inc.
Complete Waste Management Solutions
Rentals, Sales & Hydraulics

McCUTCHEON ENTERPRISES, INCORPORATED
250 Park Road, APOLLO, PENNSYLVANIA 15613
PH: (724) 568-3623 FAX: (724) 568-2571
www.completewastemgmt.com

Bill To:	Tetra Tech NUS Inc	Location:	Shaffer Equipment
6317	661 Anderson Drive	19	Old Minden Road
	Pittsburgh, , PA 15220		Minden ,WV

Originator:	AMANDAZ	Customer Contact:	[redacted]
Operation Sol.	505-Ted	Contact Phone:	[redacted]
Salesperson:	[redacted]	Site Contact:	Same
JWO Date of Svc.:	5/1/2020	Site Phone:	
Time of Service:	1000 A	MEI Project #:	391724TRA 39-1724
Type of Material:		Customer PO #:	Sa-7953116
County:	NA - Non PA	Manifest #:	MC091509 Y
Pay Type:	Regular	Dest. Disp. Facility:	McCutcheon Ent. Biosolids
RCCR:		Paperwork Req:	Non-Haz Manifest

Radio#	DropPULive	Box#	Lat	Long	Drop Pickup Time

Work Required :

Number of Septic Gallons:
Number of Drums Picked Up: 6

Provide personnel and equipment to pick up drummed waste at the site and transporto MEI for proper disposal.

Radio#	StageName	Time Stamp	Duration
573	At MEI Apollo	5/1/2020 4:45 AM	16 m
573	Left MEI Apollo	5/1/2020 5:01 AM	4 h 8 m
573	At Customer Site	5/1/2020 9:09 AM	18 m
573	Left Customer Site	5/1/2020 9:28 AM	50 m
573	On Lunch	5/1/2020 10:17 AM	31 m
573	Left Customer Site	5/1/2020 10:49 AM	3 h 34 m
573	At MEI BioSolids	5/1/2020 2:23 PM	14 m
573	Left MEI BioSolids	5/1/2020 2:37 PM	0 m
573	At MEI Apollo Yard	5/1/2020 2:37 PM	18 m
573	Complete JWO	5/1/2020 2:55 PM	0 m

Radio#	Description	Total Time	Lunch	Breakdown	Suspend	Layover	NetJWO
573	[redacted]	10 h 10 m	31 m				9 h 39 m

Resource ID	Equipment	Time
BV11	12' Van	
DRU1		

[redacted]

Customer Name: [redacted] Date: 5/1/2020 2:49 PM

E-Mail JWO TO : [redacted]

Ticket #: 162943

Bill To: N

None

McCutcheon Ent., Inc.
250 Park Road, Apollo, PA 15
724-568-3623

ORIGINAL MANUAL

Scale In: Out: 0

DATE: 5/1/2020

IN: 03:53:27 PM

OUT: 03:53:27 PM

Bio Facility Operator: mikep#5012

Customer: N

None

Hauler: BV7

Truck: N

Container:

JWO#: JWO0262157

Manifest#: MC091509

GROSS Lbs: 14,000

TARE Lbs: 12,220

NET Lbs: 1,780

ADJUSTED Lbs: 1,780

Tons: 0.89

MATERIAL CODE/DESCRIPTION:	QUANTITY	MEASURE	RATE	AMOUNT
801 - Drilling fluids residual (ot	0.89	tons	-	$0.00
Fees:				
TAX: N None			$0.00	$0.00

USEPA [redacted]

Product Total: $0.00

Total Fees: $0.00

Total Taxes: $0.00

Signatur

White Copy - Customer

All others void - Customer do not accept

McCutcheon Enterprises, Inc.
250 Park Road
Apollo, PA 15613
(724)568-3623 Fax (724)568-2571
www.completewastemgmt.com

00189846

Non Hazardous Waste Manifest

1. Generator's US EPA ID No. | Manifest Document No. 091509 | 2. Page 1 of 1 | JWo0262157

3. Generator's Name and Mailing Address
USEPA Region III
1650 Arch Street
4. Generator's Phone ( ) 215 814-3402

MC091509
B. State Generator's ID

5. Transporter 1 Company Name: McCutcheon Enterprises Inc | 6. US EPA ID Number: PAD013821684 | C. State Trans. ID

7. Transporter 2 Company Name | 8. US EPA ID Number | D. Transporter's Phone ( ) 724-568-3623 | E. State Trans. ID

9. Designated Facility Name and Site Address
McCutcheon Ent. Biosolids Treatment Facility
250 Park Road
Apollo, PA 15613
10. US EPA ID Number: PAD013821684 | F. Transporter's Phone ( ) 724-568-3623 | G. State Facility's ID | H. Facility's Phone ( )

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID-Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	L Waste No.
a.	Non-Oil and Gas Well Drilling Waste-includes drilling fluids, residuals, and drill cuttings from monitoring well and drinking water well construction.	006	DM	EST 1600	P	8 0 1
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
a. 042020-00006371
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
(6) DRUMS 0.89 TONS

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

I hereby certify that the above-named material is not hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

[redacted]

Month Day Year: 9 01 20

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Month Day Year: 9 01 20

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest except as noted in Item 19.

[redacted]

Month Day Year: 5 1 20

GIBLE ON ALL COPIES

APPENDIX E

REPRESENTATIVE BACKGROUND CONCENTRATIONS

TECHNICAL MEMORANDUM

DERIVATION OF REPRESENTATIVE BACKGROUND CONCENTRATIONS
SHAFFER EQUIPMENT ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

1.0 INTRODUCTION

This appendix presents the evaluation performed to calculate representative background concentrations for the background soil samples collected at the Shaffer Equipment/Arbuckle Creek Area site located in Minden, West Virginia. Ten surface soil samples each were collected from 0 to 0.5 foot and 0.5 to 2 feet below ground surface (bgs), with one field duplicate sample collected from each interval. Seven subsurface soil samples and one field duplicate sample were collected from 2 to 4 feet bgs. It is noted that refusal was encountered at sample locations SB03, SB04, and SB05. Therefore, subsurface soil samples were not collected at these locations. The background samples were analyzed for Target Compound List (TCL) semivolatile organic compounds (SVOCs), TCL SVOCs by Select Ion Monitoring (SIM), TCL Pesticides, TCL polychlorinated biphenyls (PCBs) (aka Aroclors) and PCB congeners, TCL dioxins/furans, and Target Analyte List (TAL) Inorganics. The evaluation consisted of three steps: identification of outliers in the combined soil data sets, comparison of surface soil and subsurface soil datasets to determine if they are statistically significantly different, and calculation of representative background concentrations. The evaluation was prepared following current guidance using U.S. Environmental Protection Agency (USEPA) ProUCL software, a statistical software package that provides varied statistical methods and graphical tools to address environmental sampling and statistical issues.

1.1 DATA MANAGEMENT

A brief discussion of how qualified data and data associated with field duplicates were handled prior to calculating the representative concentrations is presented in this section.

Data with “J” and “Z” qualifiers (indicators that the datum is an estimated value) were treated as positively detected concentrations. In accordance with USEPA guidance, the full detection limit (limit of detection [LOD]), was used to represent non-detected or “U” qualified values (USEPA, 2015). If a chemical was not detected in an environmental medium (i.e., all results were non-detects), a meaningful representative background concentration could not be calculated. In this case, no representative concentration was developed for the chemical.

Field duplicate sample results were counted as one sample in the calculation of representative background concentrations. If both results for a compound in the pair were positively detected, the arithmetic average of the two results was used to represent the sample pair. If the chemical was not detected in either sample, one-half the arithmetic average of the non-detected results was used to

represent the sample pair. In general, if a chemical was not detected in one sample of the pair but was detected in the other sample of the pair, the arithmetic average of one-half the detection limit (LOD) for the non-detected result and the positive result was used to represent the sample pair. However, if the numerical value of the detection limit (LOD for the non-detected result) was greater than the positive detection, then the positive result only was used to represent the concentration in the sample pair.

1.2 OUTLIER ANALYSIS

As a first step in the evaluation, analytical results reported for the background samples were evaluated to determine if any outliers were present in the soil dataset. The outlier analysis was conducted on the combined data sets of surface and subsurface soil.

USEPA's ProUCL software Version 5.1.002 was used to identify potential outliers. This tool uses the Dixon Test for datasets with less than 25 samples and the Rosner Test for datasets with more than 25 samples. If the highest positive detection was determined to be an outlier, that datum was removed and then the given dataset was re-tested for the presence of additional potential outliers. This iterative evaluation of the dataset continued until test results indicated that no potential outliers were present in a dataset. Dixon and Rosner tests were conducted by ProUCL at a 5 percent level of significance; results of the outlier tests are presented in Table 1. ProUCL outputs for the outlier tests are included in Attachment 1.

The null hypothesis for the outlier analysis is that the suspected outlier is still part of the data set. If the test statistic is greater than the critical value at a level of significance of 0.05, then the null hypothesis is rejected. The conclusion is that there is less than a 5 percent probability that identifying the value as an outlier is erroneous.

Q-Q plots were also created with ProUCL and visually inspected for the presence of potential outliers. These plots were prepared to further confirm the results of the outlier tests. Also, because ProUCL software will not perform outlier tests when there are less than three detected concentrations in a dataset, the Q-Q plots were used to identify potential outliers in these cases. Q-Q plots are presented in Attachment 1.

For datasets with both detect and non-detected results, ProUCL can run the outlier tests for either the dataset containing the detected values only or for the dataset containing both detect and non-detect values. In this evaluation, the outlier tests were run for detected values only. Professional judgment was then used to decide if a particular data point was, in fact, an outlier based on both the Q-Q plot and the results of the outlier tests.

Analytical results identified as potential "statistical outliers" based on the Dixon or Rosner tests and/or the Q-Q plots were then further evaluated. A "statistical outlier" is a datum that appears to be inconsistent

with all or most of the other values in a dataset based on some assumed or apparent pattern of these points. The various outlier tests found in the statistical literature are all devoted to identifying "statistical outliers." However, these initial tests and plots should be used as a screening tool. Statistical outliers should not be automatically discarded, but rather further evaluated to determine whether such values should be considered true outliers for a dataset being evaluated.

1.3 COMPARISON OF SURFACE SOIL AND SUBSURFACE SOIL DATA SETS

After outliers were identified and removed from the datasets, the surface soil and subsurface soil datasets for a chemical were compared to determine if the datasets were comparable. If the surface soil and subsurface soil datasets for a chemical were comparable, the datasets for a chemical would be combined into one dataset. If the surface soil and subsurface datasets were not comparable, the datasets would not be combined.

The two-sample hypothesis approach is used when the surface soil parameters (e.g., mean/median, shape, distribution) are being compared with the subsurface soil parameters (e.g., mean/median, shape, distribution). The two-sample Wilcoxon-Mann-Whitney (WMW) test, and Tarone-Ware (TW) test were used to determine if the surface soil data were statistically different from the subsurface soil data. The WMW test and TW test are nonparametric tests and do not require the distribution of the evaluated datasets to be known. The WMW test requires all nondetect values to have the same detection limits whereas the TW test can be used for datasets with multiple detection limits. A five percent significance level ($\rho = 0.05$) was used for all hypothesis tests. The following null and alternative hypotheses were used for each hypothesis test:

H_o: Surface Soil Concentration = Subsurface Soil Concentration

H_A: Surface Soil Concentration ≠ Subsurface Soil Concentration

These tests start with an initial assumption (null hypothesis) that surface soil and subsurface soil concentrations have the same distribution. Statistical tests were performed that attempt to refute the null hypothesis and determine cases where surface soil and subsurface soil concentrations have different distributions. For each statistical test, the chance of making an incorrect decision that surface soil and subsurface soil concentrations were not equal (i.e., false positive result) was set equal to a probability level (alpha) of 0.05. This is interpreted as a 5 percent chance of a test outcome wrongly concluding that surface soil dataset is significantly different than the subsurface soil data set when in fact both data sets belong to a common underlying population. The results of these statistical tests are summarized in Table 2. ProUCL outputs for the statistical hypothesis tests are presented in Attachment 2.

It is always desirable to supplement the test statistics and test conclusions with graphical displays. Q-Q plots are useful for visually comparing two data sets in a single graph. If the surface soil and subsurface

soil data set distributions were identical, the plotted values would lie on a straight line with similar concentration ranges and slopes. Deviations from this line show the differences between the two distributions. If the surface soil and subsurface soil data set distributions are similar, then the scattering of the two data sets will be mixed. If there is grouping of the two data sets, then data sets are most likely different. The Q-Q plots are presented in Attachment 2.

1.4 CALCULATION OF REPRESENTATIVE BACKGROUND CONCENTRATIONS

Background concentrations were determined following USEPA *Guidance for Comparing Background and Chemical Concentrations in Soil for CERCLA Sites* (USEPA, 2002) and the methodologies presented in the ProUCL guidance (USEPA, 2015). The distribution of the dataset for each chemical (normal, gamma, lognormal, or non-parametric) was identified first using several tests (Shapiro-Wilk W-test, Lilliefors test, etc.). The representative concentration was selected from those calculated by ProUCL software based on the data distribution. The 95 percent upper tolerance level (UTL) was selected as the background concentration.

If the results of the dataset comparison for a chemical indicated the concentrations of a chemical in surface soil and subsurface soil were from the same distributions, an UTL was calculated for the combined surface soil and subsurface soil dataset. If the results of the data comparison for a chemical indicated the concentrations of a chemical in surface and subsurface soil were not from the same distribution, then separate UTLs were calculated for surface soil and subsurface soil.

ProUCL is unable to accurately determine a data distribution or calculate meaningful and reliable statistics for datasets with less than four detected values. Therefore, a background concentration was not calculated for datasets that contained less than four detected values.

The estimated background concentrations are presented in Table 3. The ProUCL outputs for the estimated background concentrations are included in Attachment 3 of this appendix.

REFERENCES

USEPA (U.S. Environmental Protection Agency), 2002. Guidance for Comparing Background and Chemical Concentrations in Soil for CERCLA Sites. EPA 540-R-01-003. Office of Emergency and Remedial Response. Washington, DC. September.

U.S. EPA, 2015. ProUCL Version 5.1.002 User Guide. Statistical Software for Environmental Applications for Data Sets with and without Nondetect Observations. EPA/600/R-07/041. Office of Research and Development. Washington DC. October

Table 1
Outliers Removed from Background Data
Shaffer Equipment/Arbuckle Creek Area Site
Minden, West Virginia

Chemical	Result	Sample
Volatiles (ug/kg)		
Methylene chloride	8.2	SB309-20191125-0624
Semivolatiles (ug/kg)		
Benzo(b)fluoranthene	560	SB304-20191125-0006
Bis(2-ethylhexyl)phthalate	110	SB300-20191125-0006
Chrysene	400	SB304-20191125-0006
Fluoranthene	910	SB304-20191125-0006
Pyrene	820	SB304-20191125-0006
Semivolatile-SIM (ug/kg)		
2-Methylnaphthalene	130	SB309-20191125-0624
	100	SB309-20191125-0006
	49	SB305-20191125-0006
	40	SB308-20191125-0006
Acenaphthylene	61	SB304-20191125-0006
	60	SB309-20191125-0624
	35	SB307-20191125-0006
Benzo(a)anthracene	380	SB304-20191125-0006
	240	SB309-20191125-0624
Benzo(a)pyrene	410	SB304-20191125-0006
	250	SB309-20191125-0624
	200	SB307-20191125-0006
Benzo(b)fluoranthene	530	SB304-20191125-0006
	390	SB309-20191125-0624
Benzo(g,h,i)perylene	270	SB304-20191125-0006
Benzo(k)fluoranthene	220	SB304-20191125-0006
	150	SB309-20191125-0624
	100	SB307-20191125-0006
Chrysene	390	SB304-20191125-0006
	300	SB309-20191125-0624
Dibenzo(a,h)anthracene	59	SB304-20191125-0006
Fluoranthene	780	SB304-20191125-0006
Indeno(1,2,3-cd)pyrene	230	SB304-20191125-0006
	130	SB309-20191125-0624
	110	SB307-20191125-0006
Naphthalene	110	SB309-20191125-0624
	84	SB309-20191125-0006
	33	SB305-20191125-0006
	28	SB308-20191125-0006
Pyrene	820	SB304-20191125-0006
Dioxin/Furan (ng/kg)		
1,2,3,4,6,7,8-HpCDD	88	SB308-20191125-0006
1,2,3,6,7,8-HxCDD	11	SB308-20191125-0006
	4	SB308-20191125-0624
OCDD	1850	SB309-20191125-2448-D
Total HxCDD	160	SB308-20191125-0006
Total PeCDD	130	SB308-20191125-0006
	38	SB308-20191125-0624
Total TCDD	110	SB308-20191125-0006
	37	SB308-20191125-0624
Pesticides (ug/kg)		
4,4'-DDT	11	SB305-20191125-0006

Table 1
Outliers Removed from Background Data
Shaffer Equipment/Arbuckle Creek Area Site
Minden, West Virginia

Chemical	Result	Sample
PCB Congeners (ng/kg)		
Total DiCB	890	SB308-20191125-0006
	590	SB309-20191125-0006
Total HpCB	35000	SB308-20191125-0006
	11000	SB300-20191125-0006
	5600	SB308-20191125-0624
Total HxCB	46000	SB308-20191125-0006
	14000	SB300-20191125-0006
	10000	SB308-20191125-0624
	9400	SB301-20191125-0006
Total NoCB	6000	SB308-20191125-0624
Total OcCB	9800	SB308-20191125-0006
	3000	SB300-20191125-0006
	2800	SB308-20191125-0624
	2100	SB305-20191125-0006
TOTAL PCBs	120000	SB308-20191125-0006
	40000	SB308-20191125-0624
Total PeCB	17000	SB308-20191125-0006
	11000	SB301-20191125-0006
	5800	SB308-20191125-0624
	4500	SB305-20191125-0006
Total TeCB	5200	SB308-20191125-0006
	2500	SB301-20191125-0006
	1800	SB308-20191125-0624
	1100	SB305-20191125-0006
	780	SB309-20191125-0006
	680	SB304-20191125-0006
Total TrCB	1900	SB308-20191125-0006
	610	SB308-20191125-0624
Inorganics (mg/kg)		
Calcium	41000	SB309-20191125-0624
	17500	SB309-20191125-2448-D
	4600	SB308-20191125-0006
	3600	SB309-20191125-0006
Chromium	31.9	SB308-20191125-0006
Copper	414	SB302-20191125-0006
Iron	89300	SB309-20191125-0624
Lead	358	SB308-20191125-0624
	299	SB305-20191125-0006
Manganese	1540	SB302-20191125-0006
Thallium	0.21	SB306-20191125-0006-D
Zinc	309	SB302-20191125-0006

Table 2
Hypothesis Testing Results
Shaffer Equipment/Arbuckle Creek Area Site
Minden, West Virginia

Chemical	Surface Soil			Subsurface Soil			Hypothesis Test	p-Value	Conclusion
	Frequency of Detection	Mean of Detections	Range of Detections	Frequency of Detection	Mean of Detections	Range of Detections			
Volatiles (ug/kg)									
2-Butanone	2/20	5	4.2 - 5.8 J	1/7	5.3	5.3	Tarone-Ware		Surface equals Subsurface
Acetone	4/20	38.1	4.4 J - 72	0/7	ND	ND	Graphical	--	Surface equals Subsurface
m,p-Xylene	2/19	2.455	0.91 J - 4 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Methylcyclohexane	2/20	9.1	7.2 J - 11 J+	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Methylene chloride	2/19	3.35	3 J - 3.7 J	2/7	3.25	2.9 J - 3.6	Tarone-Ware	0.443	Surface equals Subsurface
o-xylene	1/19	1.9	1.9 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Toluene	3/20	2.9	1.1 J - 5.7 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Semivolatiles (ug/kg)									
2-Methylnaphthalene	3/20	100.7	52 J - 130 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Acenaphthylene	2/20	61	56 J - 66 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Acetophenone	1/20	62	62 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Anthracene	2-20	55	41 J - 69 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Benzaldehyde	4/20	47.25	42 J - 52 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Benzo(a)anthracene	8/20	158.9	43 J - 390	1/7	63	63	Tarone-Ware	0.315	Surface equals Subsurface
Benzo(a)pyrene	9/20	150.9	44 J - 410	1/7	71	71	Tarone-Ware	0.384	Surface equals Subsurface
Benzo(b)fluoranthene	9/19	159.2	51 J - 410	1/7	110	110	Tarone-Ware	0.518	Surface equals Subsurface
Benzo(g,h,i)perylene	7/20	131.9	54 J - 300	1/7	41	41 J	Tarone-Ware	0.159	Surface equals Subsurface
Benzo(k)fluoranthene	4/20	108.3	53 J - 170	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Bis(2-ethylhexyl)phthalate	1/19	201	210 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Butylbenzylphthalate	1/20	65	65 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Chrysene	9/19	128.3	53 J - 290	1/7	87	87	Tarone-Ware	0.415	Surface equals Subsurface
Dibenzo(a,h)anthracene	2/20	62	52 J - 72 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Dibenzofuran	1/20	42	42 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Dimethylphthalate	20/20	173.6	83 J - 330	7/7	202.1	110 - 380	Tarone-Ware	0.861	Surface equals Subsurface
Fluoranthene	10/19	209.1	58 - 500	1/7	61	61	Tarone-Ware	0.202	Surface equals Subsurface
Indeno(1,2,3-cd)pyrene	6/20	120.3	55 J - 250	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Naphthalene	2/20	109	98 J - 120 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Phenanthrene	9/20	148.6	46 J - 320	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Phenol	19/20	129.7	41 J - 210 J	6/7	135.2	41 - 180	Tarone-Ware	0.737	Surface equals Subsurface
Pyrene	10/19	190.1	60 J - 430	1/7	57	57 J	Tarone-Ware	0.0657	Surface equals Subsurface
Semivolatile-SIM (ug/kg)									
2-Methylnaphthalene	12/16	6.3	0.85 - 18	3/7	3.877	0.83 - 8.4	Tarone-Ware	0.121	Surface equals Subsurface
Acenaphthene	9/20	3.6	1.6 J - 8.5	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Acenaphthylene	15/17	7.25	0.94 J - 19	4/7	3.83	0.88 J - 10.35	Tarone-Ware	0.0755	Surface equals Subsurface
Anthracene	16/20	13.91	0.82 J - 57	3/7	2.72	0.92 - 5.75	Tarone-Ware	0.125	Surface equals Subsurface
Benzo(a)anthracene	17/17	35.24	0.76 J - 140	4/7	12.9	0.79 - 40.5	Tarone-Ware	0.0489	Surface does not equal Subsurface
Benzo(a)pyrene	18/18	42.8	1.2 J - 200	3/7	16.07	4 - 39.5	Tarone-Ware	0.0326	Surface does not equal Subsurface
Benzo(b)fluoranthene	18/18	62.32	1.9 J - 260	4/7	20.95	1.5 J - 68	Tarone-Ware	0.0122	Surface does not equal Subsurface
Benzo(g,h,i)perylene	19/19	35.72	1.2 J - 140	4/7	7.028	0.81 J - 21.4	Tarone-Ware	0.0415	Surface does not equal Subsurface
Benzo(k)fluoranthene	16/17	18.05	1.6 J - 56	3/7	8.833	1.7 - 21.8	Tarone-Ware	0.0991	Surface equals Subsurface
Chrysene	18/18	54.49	1.1 J - 210	4/7	17.85	1.7 - 51.5	Tarone-Ware	0.0257	Surface does not equal Subsurface
Dibenzo(a,h)anthracene	15/19	12.11	0.995 J - 42	3/7	3.227	0.93 J - 7.65	Tarone-Ware	0.0578	Surface equals Subsurface
Fluoranthene	19/19	104.1	0.76 J - 460 J	4/7	14.13	1.4 - 35.5	Tarone-Ware	0.0115	Surface does not equal Subsurface
Fluorene	13/20	6.175	0.82 J - 18	2/7	1.065	0.83 - 1.3	Tarone-Ware	0.0437	Surface does not equal Subsurface

Table 2
Hypothesis Testing Results
Shaffer Equipment/Arbuckle Creek Area Site
Minden, West Virginia

Chemical	Surface Soil			Subsurface Soil			Hypothesis Test	p-Value	Conclusion
	Frequency of Detection	Mean of Detections	Range of Detections	Frequency of Detection	Mean of Detections	Range of Detections			
Indeno(1,2,3-cd)pyrene	17/17	19.24	1.1 J - 68	3/7	8.617	2.2 - 21.05	Tarone-Ware	0.129	Surface equals Subsurface
Naphthalene	13/16	4.788	0.75 J - 13	2/7	4.4	1.4 - 7.4	Tarone-Ware	0.308	Surface equals Subsurface
Pentachlorophenol	1/20	0.91	0.91	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Phenanthrene	20/20	74.26	0.98 J- 290	4/7	7.95	1.7 - 16	Tarone-Ware	0.0135	Surface does not equal Subsurface
Pyrene	19/19	106.6	0.84 J - 460 J	4/7	16	1.5 - 40.5	Tarone-Ware	0.0134	Surface does not equal Subsurface
Dioxin/Furan (ng/kg)									
1,2,3,4,6,7,8-HpCDD	9/9	19.72	1.9 J - 43	4/4	6.45	2.6 - 13.5	Wilcoxon-Mann-Whitney	0.19	Surface equals Subsurface
1,2,3,4,6,7,8-HpCDF	9/10	12.1	2.4 J - 25	1/4	3.8	3.8	Tarone-Ware	0.0439	Surface does not equal Subsurface
1,2,3,4,7,8-HxCDD	2/10	3	1.5 J - 4.5 J	0/4	ND	ND	Graphical	--	Surface equals Subsurface
1,2,3,4,7,8-HxCDF	4/10	3.45	2.3 J - 3.5 J	0/4	ND	ND	Graphical	--	Surface equals Subsurface
1,2,3,6,7,8-HxCDD	3/8	1.967	1.8 J - 2.2 J	0/4	ND	ND	Graphical	--	Surface equals Subsurface
1,2,3,6,7,8-HxCDF	4/10	2.75	2.3 J - 3.5 J	0/4	ND	ND	Graphical	--	Surface equals Subsurface
1,2,3,7,8,9-HxCDD	2/10	4.55	2.6 J - 6.5	0/4	ND	ND	Graphical	--	Surface equals Subsurface
1,2,3,7,8-PeCDD	1/10	4.7	4.7 J - 4.7 J	0/4	ND	ND	Graphical	--	Surface equals Subsurface
1,2,3,7,8-PeCDF	4/10	2.4	1.6 J - 3.5 J	0/4	ND	ND	Graphical	--	Surface equals Subsurface
2,3,4,6,7,8-HxCDF	6/10	2.517	1 J - 3.9	0/4	ND	ND	Graphical	--	Surface equals Subsurface
2,3,4,7,8-PeCDF	7/10	3.197	0.98 J - 6.9	0/4	ND	ND	Graphical	--	Surface equals Subsurface
2,3,7,8-TCDD	5/10	0.446	0.29 Z - 0.71 J	0/4	ND	ND	Graphical	--	Surface equals Subsurface
2,3,7,8-TCDF	10/10	2.112	0.56 J - 4.6	2/4	0.82	0.54 - 1.1	Tarone-Ware	0.0216	Surface does not equal Subsurface
OCDD	10/10	401.9	78 - 750	3/3	301	63 - 530	Wilcoxon-Mann-Whitney	0.554	Surface equals Subsurface
OCDF	8/10	15.4	2.2 J -36	0/4	ND	ND	Graphical	--	Surface equals Subsurface
Total HpCDD	10/10	55.63	3.4 J - 170 J	4/4	11.85	5.4 - 23.5	Wilcoxon-Mann-Whitney	0.103	Surface equals Subsurface
Total HpCDF	9/10	21.09	2.4 J - 45 J	1/4	3.8	3.8	Tarone-Ware	0.0439	Surface does not equal Subsurface
Total HxCDD	8/9	16.89	2.9 J - 45 J	1/4	1.7	1.7 J	Tarone-Ware	0.0173	Surface does not equal Subsurface
Total HxCDF	9/10	20.34	1 J - 54 J	1/4	3.2	3.2 J	Tarone-Ware	0.0328	Surface does not equal Subsurface
Total PeCDD	6/8	6.85	2.3 J - 12 J	0/4	ND	ND	Graphical	--	Surface equals Subsurface
Total PeCDF	9/10	30.91	1.1 J - 89 J	1/4	6	6 J	Tarone-Ware	0.0328	Surface does not equal Subsurface
Total TCDD	8/10	7.335	0.9 J - 17 J	2/4	1.058	0.515 - 1.6 J	Tarone-Ware	0.0157	Surface does not equal Subsurface
Total TCDF	10/10	32.87	2 J - 70 J	2/4	7.7	2.4 - 13 J	Tarone-Ware	0.0362	Surface does not equal Subsurface
Pesticides (ug/kg)									
4,4'-DDD	14/20	1.986	0.435 J - 5	2/7	0.463	0.39 J - 0.535	Tarone-Ware	0.0645	Surface equals Subsurface
4,4'-DDE	7/20	1.396	0.185 - 3.9 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
4,4'-DDT	5/19	1.176	0.24 J - 2.7 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Endosulfan II	1/20	1.2	1.2 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Endosulfan Sulfate	2/19	1.2	1.1 J - 1.3 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Endrin	5/17	0.378	0.25 J - 0.56 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
gamma-BHC (Lindane)	15/20	1.34	0.21 J - 3.9	1/7	0.45	0.45 J	Tarone-Ware	0.239	Surface equals Subsurface
PCB Aroclors (ug/kg)									
Aroclor-1260	2/20	15.5	11 - 20	0/7	ND	ND	Graphical	--	Surface equals Subsurface

Table 2
Hypothesis Testing Results
Shaffer Equipment/Arbuckle Creek Area Site
Minden, West Virginia

Chemical	Surface Soil			Subsurface Soil			Hypothesis Test	p-Value	Conclusion
	Frequency of Detection	Mean of Detections	Range of Detections	Frequency of Detection	Mean of Detections	Range of Detections			
PCB Congeners (ng/kg)									
Total DiCB	16/16	88.63	3.5 J - 335 J	4/4	15.16	2.8 J - 34 J	Wilcoxon-Mann-Whitney	0.238	Surface equals Subsurface
Total HpCB	17/17	1088	87 J - 3200 J	7/7	862.6	28 J - 3500 J	Wilcoxon-Mann-Whitney	0.266	Surface equals Subsurface
Total HxCB	16/16	1652	91 J - 6400 J	7/7	952	36 J - 6400 J	Wilcoxon-Mann-Whitney	0.193	Surface equals Subsurface
Total MoCB	19/19	52.29	1.4 J - 210 J	5/5	5.976	0.49 J - 11 J	Wilcoxon-Mann-Whitney	0.0466	Surface does not equal Subsurface
Total NoCB	19/19	732.7	30 J - 4200 J	7/7	126	2.2 J - 420 J	Wilcoxon-Mann-Whitney	0.00718	Surface does not equal Subsurface
Total OcCB	16/16	363.6	37 J - 930 J	7/7	240.9	7.6 J - 1000 J	Wilcoxon-Mann-Whitney	0.242	Surface equals Subsurface
TOTAL PCBs	18/18	8616	370 J - 32000 J	7/7	2561	100 J - 10000 J	Wilcoxon-Mann-Whitney	0.0845	Surface equals Subsurface
Total PeCB	16/16	763.6	35 - 2800	7/7	223.4	13 - 850	Wilcoxon-Mann-Whitney	0.0661	Surface equals Subsurface
Total TeCB	14/14	112.6	7.5 - 430 J	7/7	37.13	3.1 - 120 J	Wilcoxon-Mann-Whitney	0.0675	Surface equals Subsurface
Total TrCB	17/17	105.5	1.9 - 350 J	7/7	21.06	0.33 J - 75 J	Wilcoxon-Mann-Whitney	0.0222	Surface does not equal Subsurface
Inorganics (mg/kg)									
Aluminum	20/20	7886	1770 J - 13700 J	7/7	8513	4480 J - 13000 J	Wilcoxon-Mann-Whitney	0.719	Surface equals Subsurface
Antimony	4/20	1.75	1.3 - 2.4 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Arsenic	20/20	10.27	3.3 - 21	7/7	6.014	3.9 - 8.6	Wilcoxon-Mann-Whitney	0.0201	Surface does not equal Subsurface
Barium	20/20	87.45	35.2 - 183	7/7	59.81	27.2 - 95.4	Wilcoxon-Mann-Whitney	0.128	Surface equals Subsurface
Beryllium	20/20	0.714	0.32 - 1.3	7/7	0.492	0.25 J - 0.89	Wilcoxon-Mann-Whitney	0.0862	Surface equals Subsurface
Cadmium	16/20	0.4	0.08 J - 1.1	3/7	0.158	0.098 - 0.215	Tarone-Ware	0.28	Surface equals Subsurface
Calcium	17/17	853.1	231 J - 1900	6/6	337.7	161 - 718	Wilcoxon-Mann-Whitney	0.019	Surface does not equal Subsurface
Chromium	19/19	13.57	7.1 - 23.9	7/7	12.64	4.8 - 22.8	Wilcoxon-Mann-Whitney	0.623	Surface equals Subsurface
Cobalt	20/20	8.565	3.1 - 20.8	7/7	11.71	3.7 - 20.7	Wilcoxon-Mann-Whitney	0.361	Surface equals Subsurface
Copper	19/19	31.93	3.5 - 93.4 J	7/7	22.51	5.1 - 65.2	Wilcoxon-Mann-Whitney	0.37	Surface equals Subsurface
Cyanide	1/20	0.86	0.86 J	0/7	ND	ND	Graphical	--	Surface equals Subsurface
Iron	19/19	18075	6950 - 28100	7/7	18299	6500 - 38900	Wilcoxon-Mann-Whitney	0.707	Surface equals Subsurface
Lead	18/18	79.06	13.6 - 194	7/7	31.52	8.5 - 70.45	Wilcoxon-Mann-Whitney	0.0368	Surface does not equal Subsurface
Magnesium	20/20	928.5	237 J - 2290	7/7	666.4	245 - 1840	Wilcoxon-Mann-Whitney	0.175	Surface equals Subsurface
Manganese	19/19	387.9	123 - 897	7/7	473.4	170 - 1030	Wilcoxon-Mann-Whitney	0.707	Surface equals Subsurface
Mercury	11/20	0.0874	0.02 J - 0.19	3/7	0.0297	0.02 2 -0.04	Tarone-Ware	0.174	Surface equals Subsurface
Nickel	20/20	11.87	3.8 - 25.7	7/7	8.85	3.8 - 17.05	Wilcoxon-Mann-Whitney	0.293	Surface equals Subsurface
Potassium	17/20	1188	594 - 1750	6/7	844.5	467 - 1190	Tarone-Ware	0.167	Surface equals Subsurface
Selenium	20/20	0.809	0.31 J - 1.5 J	7/7	0.543	0.3 J - 0.78 J	Wilcoxon-Mann-Whitney	0.0269	Surface does not equal Subsurface
Silver	10/20	0.129	0.056 J - 0.26 J	1/7	0.064	0.064 J - 0.064 J	Tarone-Ware	0.303	Surface equals Subsurface
Thallium	8/19	0.0716	0.034 J - 0.091 J	3/7	0.0577	0.036 J - 0.081 J	Tarone-Ware	0.435	Surface equals Subsurface
Vanadium	20/20	14.54	2.3 J - 28.85	7/7	16.19	7 J - 25.4	Wilcoxon-Mann-Whitney	0.599	Surface equals Subsurface
Zinc	19/19	78.43	19.5 - 180	7/7	35.24	19.3 - 67.15	Wilcoxon-Mann-Whitney	0.0129	Surface does not equal Subsurface

Notes:
Null Hypothesis H_o, for all parameters: Surface soil mean is equal to subsurface soil mean (Two Sided Test).
A five percent significance level (p = 0.05) was used for all hypothesis tests.
mg/kg = milligrams per kilogram.
ND = Not detected.
ng/kg = nanograms per kilogram
ug/kg = micrograms per kilogram.

Data Qualifiers:
J = The result is an estimated quantity.
J+ = The result is an estimated quantity, but the results may be biased high.
Z = The isomer was identified with an ion ratio outside the 15% theoretical ion abundance ration; the associated numerical value is reported as the Estimated Maximum Possible Concentration (EMPC) and is considered estimated.

Table 3
Estimated Background Concentrations in Soil
Shaffer Equipment/Arbuckle Creek Area Site
Minden, West Virginia

Chemical	Frequency of Detection	Range of Concentrations	Location of Maximum Detected Concentration	Distribution of Data	Background Concentration	Comments
Volatiles (ug/kg)						
2-Butanone	3/27	4.2 - 5.8 J	SB301-20191125-0006	Undefined	NC	Only three detected concentrations.
Acetone	4/27	4.4 J - 72	SB309-20191125-0624	Normal	45	Data set follows normal, lognormal, and gamma distribution. GOF normal R > gamma and lognormal Rs.
m,p-Xylene	2/26	0.91 J - 4 J	SB309-20191125-0624	Undefined	NC	Only two detected concentrations.
Methylcyclohexane	2/27	7.2 J - 11 J+	SB309-20191125-0624	Undefined	NC	Only two detected concentrations.
Methylene chloride	4/26	2.9 J - 3.7 J	SB305-20191125-0624	Normal	4.1	Data set follows normal, lognormal, and gamma distribution. GOF normal R > gamma and lognormal Rs.
o-xylene	1/26	1.9 J	SB309-20191125-0624	Undefined	NC	Only one detected concentration.
Toluene	3/27	1.1 J - 5.7 J	SB309-20191125-0624	Undefined	NC	Only three detected concentrations
Semivolatiles (ug/kg)						
2-Methylnaphthalene	3/27	52 J - 130 J	SB309-20191125-0624	Undefined	NC	Only three detected concentrations
Acenaphthylene	2/27	56 J - 66 J	SB309-20191125-0624	Undefined	NC	Only two detected concentrations.
Acetophenone	1/27	62J	SB304-20191125-0624	Undefined	NC	Only one detected concentration.
Anthracene	2/27	41 J - 69 J	SB304-20191125-0624	Undefined	NC	Only two detected concentrations.
Benzaldehyde	4/27	42 J - 52 J	SB309-20191125-0006	Normal	55.61	Data set follows normal, lognormal, and gamma distribution. GOF normal R > gamma and lognormal Rs.
Benzo(a)anthracene	9/27	43 J - 390	SB304-20191125-0006	Gamma	300	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
Benzo(a)pyrene	10/27	44 J - 410	SB304-20191125-0006	Gamma	299	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
Benzo(b)fluoranthene	10/26	51 J - 410	SB309-20191125-0624	Lognormal	340	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R > gamma and normal Rs.
Benzo(g,h,i)perylene	8/27	41 J - 300	SB304-20191125-0006	Lognormal	292	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R > gamma and normal Rs.
Benzo(k)fluoranthene	4/27	53 J - 170	SB304-20191125-0006	Normal	146.5	Data set follows normal, lognormal, and gamma distribution. GOF normal R > gamma and lognormal Rs.
Bis(2-ethylhexyl)phthalate	1/26	210 J	SB305-20191125-0006	Undefined	NC	Only one detected concentration.
Butylbenzylphthalate	1/27	65 J	SB300-20191125-0006	Undefined	NC	Only one detected concentration.
Chrysene	10/26	53 J - 290	SB309-20191125-0624	Lognormal	245	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R > gamma and normal Rs.
Dibenzo(a,h)anthracene	2/27	52 J - 72 J	SB304-20191125-0006	Undefined	NC	Only two detected concentrations.
Dibenzofuran	1/27	42 J	SB309-20191125-0624	Undefined	NC	Only one detected concentration.
Dimethylphthalate	27/27	83 J - 380	SB300-20191125-2448	Lognormal	408	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R.
Fluoranthene	11/26	58 J - 500	SB307-20191125-0006	Gamma	535	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
Indeno(1,2,3-cd)pyrene	6/27	55 J - 250	SB304-20191125-0006	Gamma	220	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
Naphthalene	2/27	98 J - 120 J	SB309-20191125-0624	Undefined	NC	Only two detected concentrations.
Phenanthrene	9/27	46 J - 320	SB304-20191125-0006	Gamma	284	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
Phenol	25/27	41 J - 210 J	SB305-20191125-0006	Normal	233	Data set follows normal, lognormal, and gamma distribution. GOF normal R > gamma and lognormal Rs.
Pyrene	11/26	57 J - 430	SB307-20191125-0006	Gamma	445	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
Semivolatile-SIM (ug/kg)						
2-Methylnaphthalene	15/23	0.83 J - 18	SB308-20191125-0624	Gamma	18	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
Acenaphthene	9/27	1.6 J - 8.5	SB304-20191125-0006	Gamma	6.4	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.

Table 3
Estimated Background Concentrations in Soil
Shaffer Equipment/Arbuckle Creek Area Site
Minden, West Virginia

Chemical	Frequency of Detection	Range of Concentrations	Location of Maximum Detected Concentration	Distribution of Data	Background Concentration	Comments
Acenaphthylene	19/24	0.88 J - 19	SB308-20191125-0624	Undefined	19	Nonparametric UTL
Anthracene	19/27	0.82 J - 57	SB304-20191125-0006	Gamma	46	Data set follows lognormal and gamma distribution. GOF gamma R > lognormal R.
Benzo(a)anthracene - surface soil	17/17	0.76 J - 140	SB308-20191125-0624	Gamma	221	Data set follows gamma and lognormal distribution. GOF lognormal R > gamma R. Gamma UTL represent more reasonable estimate than lognormal UTLs.
Benzo(a)anthracene - subsurface soil	4/7	0.79 J - 40.5	SB309-20191125-2448-D	Gamma	87	Data set follows gamma and lognormal distribution. GOF lognormal R > gamma R. Gamma UTL represent more reasonable estimate than lognormal UTLs.
Benzo(a)pyrene - surface soil	18/18	1.2 J - 200	SB307-20191125-0006	Gamma	271	Data set follows lognormal and gamma distribution. GOF gamma R > lognormal R.
Benzo(a)pyrene - subsurface soil	3/7	4 - 39.5	SB309-20191125-2448-D	Undefined	NC	Only three detected concentrations.
Benzo(b)fluoranthene - surface soil	18/18	1.9 J - 260	SB307-20191125-0006	Gamma	387	Data set follows lognormal and gamma distribution. GOF gamma R > lognormal R.
Benzo(b)fluoranthene - subsurface soil	4/7	1.5 - 68	SB309-20191125-2448-D	Gamma	139	Data set follows lognormal and gamma distribution. GOF gamma R > lognormal R.
Benzo(g,h,i)perylene - surface soil	19/19	1.2 J - 140	SB307-20191125-0006	Gamma	223	Data set follows lognormal and gamma distribution. GOF gamma R > lognormal R.
Benzo(g,h,i)perylene - subsurface soil	4/7	0.81 - 21.4	SB309-20191125-2448-D	Gamma	40	Data set follows lognormal and gamma distribution. GOF gamma R > lognormal R.
Benzo(k)fluoranthene	19/24	1.6 J - 56	SB308-20191125-0006	Gamma	69	Data set follows lognormal and gamma distribution. GOF gamma R > lognormal R.
Chrysene - surface soil	18/18	1.1 J - 210	SB307-20191125-0006	Gamma	327	Data set follows lognormal and gamma distribution. GOF gamma R > lognormal R.
Chrysene - subsurface soil	4/7	1.7 J - 51.5	SB309-20191125-2448-D	Gamma	111	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal R, = lognormal R. Gamma UTL represent more reasonable estimate than lognormal UTL.
Dibenzo(a,h)anthracene	18/26	0.93 J - 42	SB309-20191125-0624	Gamma	42	Data set follows gamma distribution.
Fluoranthene - surface soil	19/19	0.76 J - 460 J	SB307-20191125-0006	Gamma	667	Data set follows lognormal and gamma distribution. GOF gamma R > lognormal R.
Fluoranthene - subsurface soil	4/7	1.4 - 35.5	SB309-20191125-2448-D	Gamma	83	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
Fluorene - surface soil	13/20	0.82 J - 18	SB304-20191125-0006	Gamma	20	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
Fluorene - subsurface soil	2/7	0.83 J - 1.3 J	SB309-20191125-2448	Undefined	NC	Only two detected concentrations.
Indeno(1,2,3-cd)pyrene	20/24	1.1 J - 68	SB308-20191125-0624	Undefined	68	Nonparametric UTL
Naphthalene	15/23	0.75 J - 13	SB308-20191125-0624	Lognormal	19	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R.
Pentachlorophenol	1/27	0.91	SB306-20191125-0006-D	Undefined	NC	Only one detected concentration
Phenanthrene - surface soil	20/20	0.98 J - 290	SB304-20191125-0006	Gamma	450	Data set follows lognormal and gamma distribution. GOF lognormal R = gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Phenanthrene - subsurface soil	4/7	1.7 - 16	SB309-20191125-2448-D	Gamma	35	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
Pyrene - surface soil	19/19	0.84 J - 460 J	SB307-20191125-0006	Gamma	677	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Pyrene - subsurface soil	4/7	1.5 - 40.5	SB309-20191125-2448-D	Gamma	96	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.

Table 3
Estimated Background Concentrations in Soil
Shaffer Equipment/Arbuckle Creek Area Site
Minden, West Virginia

Chemical	Frequency of Detection	Range of Concentrations	Location of Maximum Detected Concentration	Distribution of Data	Background Concentration	Comments
Dioxin/Furan (ng/kg)						
1,2,3,4,6,7,8-HpCDD	13/13	1.9 J - 43	SB308-20191125-0624	Gamma	85	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
1,2,3,4,6,7,8-HpCDF - surface soil	9/10	2.4 J - 25	SB308-20191125-0006	Normal	35	Data set follows normal, lognormal, and gamma distribution. GOF normal R > gamma and lognormal Rs.
1,2,3,4,6,7,8-HpCDF - subsurface soil	1/4	3.8 J	SB308-20191125-2448	Undefined	NC	Only one detected concentration.
1,2,3,4,7,8-HxCDD	2/14	1.5 J - 4.5 J	SB308-20191125-0006	Undefined	NC	Only two detected concentrations.
1,2,3,4,7,8-HxCDF	4/14	2.3 J - 5.5	SB308-20191125-0006	Gamma	5.1	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
1,2,3,6,7,8-HxCDD	3/12	1.8 J - 2.2 J	SB302-20191125-0006	Undefined	NC	Only three detected concentrations.
1,2,3,6,7,8-HxCDF	4/14	2.3 J - 3.5 J	SB308-20191125-0006	Gamma	3.5	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
1,2,3,7,8,9-HxCDD	2/14	2.6 J - 6.5	SB308-20191125-0006	Undefined	NC	Only two detected concentrations.
1,2,3,7,8-PeCDD	1/10	4.7 J	SB308-20191125-0006	Undefined	NC	Only one detected concentration.
1,2,3,7,8-PeCDF	4/14	1.6 J - 3.5 J	SB308-20191125-0006	Gamma	3.24	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
2,3,4,6,7,8-HxCDF	6/14	1 J - 3.9	SB302-20191125-0006	Normal	4.4	Data set follows normal, lognormal, and gamma distribution. GOF normal R > gamma and lognormal Rs.
2,3,4,7,8-PeCDF	7/14	0.98 J - 6.9	SB305-20191125-0006	Gamma	8	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
2,3,7,8-TCDD	5/14	0.29 Z - 0.71J	SB308-20191125-0006	Gamma	0.73	Data set follows lognormal and gamma distribution. GOF lognormal R = gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
2,3,7,8-TCDF - surface soil	10/10	0.56 J - 4.6	SB308-20191125-0006	Gamma	10	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
2,3,7,8-TCDF - subsurface soil	2/4	0.54 J - 1.1	SB308-20191125-2448	Undefined	NC	Only two detected concentrations.
OCDD	13/13	63 - 750	SB308-20191125-0006	Normal	1017	Data set follows normal, lognormal, and gamma distribution. GOF normal R > gamma and lognormal Rs.
OCDF	8/14	2.2 J - 36	SB308-20191125-0006	Normal	38	Data set follows normal, lognormal, and gamma distribution. GOF normal R = gamma R > lognormal R. Normal UTL represents more reasonable estimate than gamma UTL.
Total HpCDD	14/14	3.4J - 170 J	SB308-20191125-0006	Gamma	256	Data set follows lognormal and gamma distribution. GOF gamma R > lognormal R.
Total HpCDF - surface soil	9/10	2.4 J - 45 J	SB308-20191125-0006	Normal	65	Data set follows normal, lognormal, and gamma distribution. GOF normal R > gamma and lognormal Rs.
Total HpCDF - subsurface soil	1/4	3.8 J	SB308-20191125-2448	Undefined	NC	Only one detected concentration.
Total HxCDD - surface soil	8/9	2.9 J - 45 J	SB308-20191125-0624	Gamma	96	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
Total HxCDD - subsurface soil	1/4	1.7 J	SB302-20191125-2448	Undefined	NC	Only one detected concentration.
Total HxCDF - surface soil	9/10	1 J - 54 J	SB305-20191125-0006	Gamma	133	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R > gamma, normal Rs. Gamma UTL represents more reasonable estimate than lognormal UTL.
Total HxCDF - subsurface soil	1/4	3.2 J	SB308-20191125-2448	Undefined	NC	Only one detected concentration.
Total PeCDD	6/12	2.3 J - 1 2 J	SB302-20191125-0006	Normal	14.4	Data set follows normal, lognormal, and gamma distribution. GOF normal R > gamma and lognormal Rs.

Table 3
Estimated Background Concentrations in Soil
Shaffer Equipment/Arbuckle Creek Area Site
Minden, West Virginia

Chemical	Frequency of Detection	Range of Concentrations	Location of Maximum Detected Concentration	Distribution of Data	Background Concentration	Comments
Total PeCDF - surface soil	9/10	1.1 J - 89 J	SB305-20191125-0006	Gamma	257	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
Total PeCDF - subsurface soil	1/4	6 J	SB308-20191125-2448	Undefined	NC	Only one detected concentration.
Total TCDD - surface soil	8/8	0.9 J - 17 J	SB305-20191125-0006	Normal	27.6	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R > gamma, normal Rs. Normal UTL represents more reasonable estimate than lognormal UTL.
Total TCDD - subsurface soil	2/4	0.515 - 1.6 J	SB308-20191125-2448	Undefined	NC	Only two detected concentrations.
Total TCDF - surface soil	10/10	2 J - 70 J	SB308-20191125-0006	Normal	115	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R > gamma, normal Rs. Normal UTL represents more reasonable estimate than lognormal UTL.
Total TCDF - subsurface soil	2/4	2.4 - 13 J	SB308-20191125-2448	Undefined	NC	Only two detected concentrations.
Pesticides (ug/kg)						
4,4'-DDD	16/27	0.39 J - 5	SB309-20191125-0624	Gamma	5.3	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
4,4'-DDE	7/27	0.185 - 3.9 J	SB301-20191125-0006	Gamma	5	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R > gamma, normal Rs. Gamma UTL represents more reasonable estimate than lognormal UTL.
4,4'-DDT	5/26	0.24 J - 2.7 J	SB301-20191125-0006	Gamma	4.3	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
Endosulfan II	1/27	1.2 J	SB309-20191125-0624	Undefined	NC	Only one detected concentration.
Endosulfan Sulfate	2/26	1.1 J - 1.3 J	SB300-20191125-0006	Undefined	NC	Only two detected concentrations.
Endrin	5/24	0.25 J - 0.56 J	SB308-20191125-0624	Gamma	0.7	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
gamma-BHC (Lindane)	16/27	0.21 J - 3.9	SB309-20191125-0624	Gamma	3.6	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > normal and lognormal Rs.
PCB Aroclors (ug/kg)						
Aroclor-1260	2/27	11 J - 20 J	SB308-20191125-0006	Undefined	NC	Only two detected concentrations
PCB Congeners (ng/kg)						
Total DiCB	20/20	2.8 J - 335 J	SB306-20191125-0006-D	Gamma	468	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R > gamma, normal Rs. Gamma UTL represents more reasonable estimate than lognormal UTL.
Total HpCB	24/24	28 J - 3500 J	SB308-20191125-2448	Gamma	5074	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Total HxCB	23/23	36 J - 6400 J	SB305-20191125-0006	Gamma	7472	Data set follows lognormal and gamma distribution. GOF gamma R > lognormal R.
Total MoCB - surface soil	19/19	1.4 J - 210 J	SB308-20191125-0006	Gamma	320	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Total MoCB - subsurface soil	5/5	0.49 J - 11 J	SB307-20191125-2448	Normal	27	Data set follows normal, lognormal, and gamma distribution. GOF normal R > gamma and lognormal Rs.
Total NoCB - surface soil	19/19	30 J - 4200 J	SB305-20191125-0006	Gamma	4477	Data set follows lognormal and gamma distribution. GOF lognormal R = gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Total NoCB - subsurface soil	7/7	2.2 J - 420 J	SB308-20191125-2448	Gamma	1988	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.

Table 3
Estimated Background Concentrations in Soil
Shaffer Equipment/Arbuckle Creek Area Site
Minden, West Virginia

Chemical	Frequency of Detection	Range of Concentrations	Location of Maximum Detected Concentration	Distribution of Data	Background Concentration	Comments
Total OcCB	23/23	7.6 J - 1000 J	SB308-20191125-2448	Gamma	1567	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
TOTAL PCBs	25/25	100 J - 32000 J	SB300-20191125-0006	Gamma	37042	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Total PeCB	23/23	13 J - 2800 J	SB300-20191125-0006	Gamma	3270	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Total TeCB	21/21	3.1 - 430 J	SB306-20191125-0006-D	Gamma	470	Data set follows lognormal and gamma distribution. GOF lognormal R = gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Total TrCB - surface soil	17/17	1.9 - 350 J	SB306-20191125-0006-D	Gamma	643	Data set follows lognormal and gamma distribution. GOF lognormal R = gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Total TrCB - subsurface soil	7/7	0.33 J - 75 J	SB307-20191125-2448	Gamma	289	Data set follows lognormal and gamma distribution. GOF lognormal R = gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Inorganics (mg/kg)						
Aluminum	27/27	1770 J - 13700 J	SB301-20191125-0624-D	Normal	14587	Data set follows normal, lognormal, and gamma distribution. GOF normal R > gamma and lognormal Rs.
Antimony	4/27	1.3 - 2.4 J	SB309-20191125-0624	Lognormal	1.7	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R > gamma and normal Rs.
Arsenic - surface soil	20/20	3.3 - 21	SB308-20191125-0006	Gamma	25	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R = gamma R > normal R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Arsenic - subsurface soil	7/7	3.9 - 8.6	SB309-20191125-2448-D	Gamma	13	Data set follows normal, lognormal, and gamma distribution. GOF normal R = gamma R > lognormal R. Gamma UTL represents more reasonable estimate than normal UTL.
Barium	27/27	27.2 - 183	SB308-20191125-0006	Lognormal	228	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R.
Beryllium	27/27	0.25 J - 1.3	SB308-20191125-0006	Lognormal	1.7	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R > gamma R.
Cadmium	19/27	0.08 J - 1.1	SB302-20191125-0006	Lognormal	1.3	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R.
Calcium - surface soil	17/17	231 J - 1900	SB308-20191125-0624	Gamma	2908	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > lognormal and normal Rs.
Calcium - subsurface soil	6/6	161 J - 718	SB307-20191125-2448	Gamma	1601	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > lognormal and normal Rs.
Chromium	26/26	4.8 - 23.9	SB303-20191125-0624	Gamma	27	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R = gamma R > normal R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Cobalt	27/27	3.1 - 20.8	SB303-20191125-0006	Gamma	24	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.

Table 3
Estimated Background Concentrations in Soil
Shaffer Equipment/Arbuckle Creek Area Site
Minden, West Virginia

Chemical	Frequency of Detection	Range of Concentrations	Location of Maximum Detected Concentration	Distribution of Data	Background Concentration	Comments
Copper	26/26	3.5 - 93.4 J	SB309-20191125-0624	Gamma	104	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Cyanide	1/27	0.86 J	SB307-20191125-0006	Undefined	NC	Only one detected concentration
Iron	26/26	6500 - 38900	SB302-20191125-2448	Gamma	39865	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > lognormal and normal Rs.
Lead - surface soil	18/18	13.6 - 194	SB308-20191125-0006	Gamma	315	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R > gamma and normal Rs. Gamma UTL represents more reasonable estimate than lognormal UTL.
Lead - subsurface soil	7/7	8.5 - 70.45	SB309-20191125-2448-D	Gamma	190	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R = gamma R > normal R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Magnesium	27/27	237 J - 2290	SB309-20191125-0624	Lognormal	3018	Data set follows lognormal distribution.
Manganese	26/26	123 - 1030	SB302-20191125-2448	Lognormal	1282	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R.
Mercury	14/27	0.02 J - 0.19	SB308-20191125-0624	Lognormal	0.22	Data set follows lognormal distribution.
Nickel	27/27	3.8 - 25.7	SB303-20191125-0006	Gamma	30	Data set follows lognormal and gamma distribution. GOF lognormal R > gamma R. Gamma UTL represents more reasonable estimate than lognormal UTL.
Potassium	23/27	467 - 1750	SB308-20191125-0006	Normal	1935	Data set follows normal, lognormal, and gamma distribution. GOF normal R > lognormal and gamma Rs.
Selenium - surface soil	20/20	0.31 J - 1.5 J	SB308-20191125-0006	Gamma	1.8	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > lognormal and normal Rs.
Selenium - subsurface soil	7/7	0.3 J - 0.78 J	SB308-20191125-2448	Normal	1.1	Data set follows normal, lognormal, and gamma distribution. GOF normal R > lognormal and gamma Rs.
Silver	11/27	0.056 J - 0.26 J	SB308-20191125-0006	Lognormal	0.32	Data set follows normal, lognormal, and gamma distribution. GOF lognormal R > normal and gamma Rs.
Thallium	11/26	0.034 J- 0.091 J	SB306-20191125-0624	Normal	0.11	Data set follows normal, lognormal, and gamma distribution. GOF normal R > lognormal and gamma Rs.
Vanadium	27/27	2.3 J - 28.85	SB301-20191125-0624-D	Normal	29	Data set follows normal, lognormal, and gamma distribution. GOF normal R > lognormal and gamma Rs.
Zinc - surface soil	19/19	19.5 - 180	SB308-20191125-0624	Gamma	241	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > lognormal and normal Rs.
Zinc - subsurface soil	7/7	19.3 - 67.15	SB309-20191125-2448-D	Gamma	140	Data set follows normal, lognormal, and gamma distribution. GOF gamma R > lognormal and normal Rs.

Notes:
1 - Background concentration is the 95 UTL. If data comparison indicated surface soil and subsurface soil concentrations were the same the presented concentrations is for both surface soil and subsurface soil.
If the data comparison indicated concentrations in surface and subsurface soil were different a UTL is presented separately for surface and subsurface soil.
GOF = Goodness-of-fit
mg/kg = milligrams per kilogram.
NC = Not calculated, not enough data pointes to compute meaningful or reliable statistics and estimates.
ng/kg = nanograms per kilogram
R = correlation.
ug/kg = micrograms per kilogram.
UTL = upper tolerance limit.

Data Qualifiers:
J = The result is an estimated quantity.
J+ = The result is an estimated quantity, but the results may be biased high.
Z = The isomer was identified with an ion ratio outside the 15% theoretical ion abundance ration; the associated numerical value is reported as the Estimated Maximum Possible Concentration (EMPC) and is

Table 3
Estimated Background Concentrations in Soil
Shaffer Equipment/Arbuckle Creek Area Site
Minden, West Virginia

Chemical	Frequency of Detection	Range of Concentrations	Location of Maximum Detected Concentration	Distribution of Data	Background Concentration	Comments

considered estimated.

ATTACHMENT 1 OF APPENDIX E

OUTLIER TESTING

User Selected Options

Date/Time of Computation	ProUCL 5.15/7/2020 6:20:04 PM
From File	S-A Soil All Bkg.xls
Full Precision	OFF

Dixon's Outlier Test for 2-Butanone

Total N = 27
Number NDs = 24
Number Detects = 3
10% critical value: 0.886
5% critical value: 0.941
1% critical value: 0.988
Note: NDs excluded from Outlier Test

1. Data Value 5.8 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.313

For 10% significance level, 5.8 is not an outlier.
For 5% significance level, 5.8 is not an outlier.
For 1% significance level, 5.8 is not an outlier.

2. Data Value 4.2 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.688

For 10% significance level, 4.2 is not an outlier.
For 5% significance level, 4.2 is not an outlier.
For 1% significance level, 4.2 is not an outlier.

Dixon's Outlier Test for Acetone

Total N = 27
Number NDs = 23
Number Detects = 4
10% critical value: 0.679
5% critical value: 0.765
1% critical value: 0.889
Note: NDs excluded from Outlier Test

1. Data Value 72 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.237

For 10% significance level, 72 is not an outlier.
For 5% significance level, 72 is not an outlier.
For 1% significance level, 72 is not an outlier.

2. Data Value 4.4 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.231

For 10% significance level, 4.4 is not an outlier.
For 5% significance level, 4.4 is not an outlier.
For 1% significance level, 4.4 is not an outlier.

No Outlier Test for m,p-Xylene

No Outlier Test for Methylcyclohexane

Dixon's Outlier Test for Methylene chloride

Total N = 27
Number NDs = 22
Number Detects = 5
10% critical value: 0.557
5% critical value: 0.642
1% critical value: 0.78
Note: NDs excluded from Outlier Test

1. Data Value 8.2 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.849

For 10% significance level, 8.2 is an outlier.
For 5% significance level, 8.2 is an outlier.
For 1% significance level, 8.2 is an outlier.

2. Data Value 2.9 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.019

For 10% significance level, 2.9 is not an outlier.
For 5% significance level, 2.9 is not an outlier.
For 1% significance level, 2.9 is not an outlier.

No Outlier Test for o-xylene

Dixon's Outlier Test for Toluene

Total N = 27
Number NDs = 24
Number Detects = 3
10% critical value: 0.886
5% critical value: 0.941
1% critical value: 0.988
Note: NDs excluded from Outlier Test

1. Data Value 5.7 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.826

For 10% significance level, 5.7 is not an outlier.
For 5% significance level, 5.7 is not an outlier.
For 1% significance level, 5.7 is not an outlier.

2. Data Value 1.1 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.174

For 10% significance level, 1.1 is not an outlier.
For 5% significance level, 1.1 is not an outlier.
For 1% significance level, 1.1 is not an outlier.

Dixon's Outlier Test for 2-Methylnaphthalene

Total N = 27
Number NDs = 24
Number Detects = 3
10% critical value: 0.886
5% critical value: 0.941
1% critical value: 0.988
Note: NDs excluded from Outlier Test

1. Data Value 130 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.128

For 10% significance level, 130 is not an outlier.
For 5% significance level, 130 is not an outlier.
For 1% significance level, 130 is not an outlier.

2. Data Value 52 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.872

For 10% significance level, 52 is not an outlier.
For 5% significance level, 52 is not an outlier.
For 1% significance level, 52 is not an outlier.

No Outlier Test for Acenaphthylene

No Outlier Test for Acetophenone

No Outlier Test for Anthracene

Dixon's Outlier Test for Benzaldehyde

Total N = 27

Number NDs = 23

Number Detects = 4

10% critical value: 0.679

5% critical value: 0.765

1% critical value: 0.889

Note: NDs excluded from Outlier Test

1. Data Value 52 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.300

For 10% significance level, 52 is not an outlier.

For 5% significance level, 52 is not an outlier.

For 1% significance level, 52 is not an outlier.

2. Data Value 42 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.400

For 10% significance level, 42 is not an outlier.

For 5% significance level, 42 is not an outlier.

For 1% significance level, 42 is not an outlier.

Dixon's Outlier Test for Benzo(a)anthracene

Total N = 27

Number NDs = 18

Number Detects = 9

10% critical value: 0.441

5% critical value: 0.512

1% critical value: 0.635

Note: NDs excluded from Outlier Test

1. Data Value 390 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.419

For 10% significance level, 390 is not an outlier.

For 5% significance level, 390 is not an outlier.

For 1% significance level, 390 is not an outlier.

2. Data Value 43 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.063

For 10% significance level, 43 is not an outlier.

For 5% significance level, 43 is not an outlier.

For 1% significance level, 43 is not an outlier.

Dixon's Outlier Test for Benzo(a)pyrene

Total N = 27
Number NDs = 17
Number Detects = 10
10% critical value: 0.409
5% critical value: 0.477
1% critical value: 0.597
Note: NDs excluded from Outlier Test

1. Data Value 410 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.420

For 10% significance level, 410 is an outlier.
For 5% significance level, 410 is not an outlier.
For 1% significance level, 410 is not an outlier.

2. Data Value 44 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.042

For 10% significance level, 44 is not an outlier.
For 5% significance level, 44 is not an outlier.
For 1% significance level, 44 is not an outlier.

Dixon's Outlier Test for Benzo(b)fluoranthene

Total N = 27
Number NDs = 16
Number Detects = 11
10% critical value: 0.517
5% critical value: 0.576
1% critical value: 0.679
Note: NDs excluded from Outlier Test

1. Data Value 560 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.630

For 10% significance level, 560 is an outlier.
For 5% significance level, 560 is an outlier.
For 1% significance level, 560 is not an outlier.

2. Data Value 51 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.092

For 10% significance level, 51 is not an outlier.
For 5% significance level, 51 is not an outlier.
For 1% significance level, 51 is not an outlier.

Dixon's Outlier Test for Benzo(g,h,i)perylene

Total N = 27
Number NDs = 19
Number Detects = 8
10% critical value: 0.479
5% critical value: 0.554
1% critical value: 0.683
Note: NDs excluded from Outlier Test

1. Data Value 300 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.528

For 10% significance level, 300 is an outlier.
For 5% significance level, 300 is not an outlier.
For 1% significance level, 300 is not an outlier.

2. Data Value 41 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.101

For 10% significance level, 41 is not an outlier.
For 5% significance level, 41 is not an outlier.
For 1% significance level, 41 is not an outlier.

Dixon's Outlier Test for Benzo(k)fluoranthene

Total N = 27
Number NDs = 23
Number Detects = 4
10% critical value: 0.679
5% critical value: 0.765
1% critical value: 0.889
Note: NDs excluded from Outlier Test

1. Data Value 170 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.427

For 10% significance level, 170 is not an outlier.
For 5% significance level, 170 is not an outlier.
For 1% significance level, 170 is not an outlier.

2. Data Value 53 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.316

For 10% significance level, 53 is not an outlier.
For 5% significance level, 53 is not an outlier.

For 1% significance level, 53 is not an outlier.

Dixon's Outlier Test for Bis(2-ethylhexyl)phthalate

Total N = 27
Number NDs = 24
Number Detects = 3
10% critical value: 0.886
5% critical value: 0.941
1% critical value: 0.988
Note: NDs excluded from Outlier Test

1. Data Value 210 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.000

For 10% significance level, 210 is not an outlier.
For 5% significance level, 210 is not an outlier.
For 1% significance level, 210 is not an outlier.

2. Data Value 110 is a Potential Outlier (Lower Tail)?

Test Statistic: 1.000

For 10% significance level, 110 is an outlier.
For 5% significance level, 110 is an outlier.
For 1% significance level, 110 is an outlier.

No Outlier Test for Butylbenzylphthalate

Dixon's Outlier Test for Chrysene

Total N = 27
Number NDs = 16
Number Detects = 11
10% critical value: 0.517
5% critical value: 0.576
1% critical value: 0.679
Note: NDs excluded from Outlier Test

1. Data Value 400 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.608

For 10% significance level, 400 is an outlier.
For 5% significance level, 400 is an outlier.
For 1% significance level, 400 is not an outlier.

2. Data Value 53 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.097

For 10% significance level, 53 is not an outlier.
For 5% significance level, 53 is not an outlier.
For 1% significance level, 53 is not an outlier.

No Outlier Test for Dibenzo(a,h)anthracene

No Outlier Test for Dibenzofuran

Rosner's Outlier Test for 1 Outliers in Dimethylphthalate

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**181**
SD of Detects	**75.22**
Number of data	**27**
Number of suspected outliers	**1**

NDs not included in the following:

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	181	73.82	380	3	2.696	2.86	3.18

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Dixon's Outlier Test for Fluoranthene

Total N = 27
Number NDs = 15
Number Detects = 12
10% critical value: 0.49
5% critical value: 0.546
1% critical value: 0.642
Note: NDs excluded from Outlier Test

1. Data Value 910 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.601

For 10% significance level, 910 is an outlier.
For 5% significance level, 910 is an outlier.
For 1% significance level, 910 is not an outlier.

2. Data Value 58 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.011

For 10% significance level, 58 is not an outlier.
For 5% significance level, 58 is not an outlier.
For 1% significance level, 58 is not an outlier.

Dixon's Outlier Test for Indeno(1,2,3-cd)pyrene

Total N = 27
Number NDs = 21
Number Detects = 6
10% critical value: 0.482
5% critical value: 0.56
1% critical value: 0.698
Note: NDs excluded from Outlier Test

1. Data Value 250 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.513

For 10% significance level, 250 is an outlier.
For 5% significance level, 250 is not an outlier.
For 1% significance level, 250 is not an outlier.

2. Data Value 55 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.072

For 10% significance level, 55 is not an outlier.
For 5% significance level, 55 is not an outlier.
For 1% significance level, 55 is not an outlier.

No Outlier Test for Naphthalene

Dixon's Outlier Test for Phenanthrene

Total N = 27
Number NDs = 17
Number Detects = 10
10% critical value: 0.409
5% critical value: 0.477
1% critical value: 0.597
Note: NDs excluded from Outlier Test

1. Data Value 320 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.375

For 10% significance level, 320 is not an outlier.
For 5% significance level, 320 is not an outlier.

For 1% significance level, 320 is not an outlier.

2. Data Value 46 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.185

For 10% significance level, 46 is not an outlier.
For 5% significance level, 46 is not an outlier.
For 1% significance level, 46 is not an outlier.

Rosner's Outlier Test for 1 Outliers in Phenol

Total N	**27**
Number NDs	**2**
Number Detects	**25**
Mean of Detects	**131**
SD of Detects	**45.9**
Number of data	**25**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	131	44.97	41	17	2.001	2.82	3.14

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Dixon's Outlier Test for Pyrene

Total N = 27
Number NDs = 15
Number Detects = 12
10% critical value: 0.49
5% critical value: 0.546
1% critical value: 0.642
Note: NDs excluded from Outlier Test

1. Data Value 820 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.632

For 10% significance level, 820 is an outlier.
For 5% significance level, 820 is an outlier.
For 1% significance level, 820 is not an outlier.

2. Data Value 57 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.024

For 10% significance level, 57 is not an outlier.
For 5% significance level, 57 is not an outlier.
For 1% significance level, 57 is not an outlier.

Dixon's Outlier Test for SIM-2-Methylnaphthalene

Total N = 27
Number NDs = 8
Number Detects = 19
10% critical value: 0.412
5% critical value: 0.462
1% critical value: 0.547
Note: NDs excluded from Outlier Test

1. Data Value 130 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.629

For 10% significance level, 130 is an outlier.
For 5% significance level, 130 is an outlier.
For 1% significance level, 130 is an outlier.

2. Data Value 0.83 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.007

For 10% significance level, 0.83 is not an outlier.
For 5% significance level, 0.83 is not an outlier.
For 1% significance level, 0.83 is not an outlier.

Dixon's Outlier Test for SIM-Acenaphthene

Total N = 27
Number NDs = 18
Number Detects = 9
10% critical value: 0.441
5% critical value: 0.512
1% critical value: 0.635
Note: NDs excluded from Outlier Test

1. Data Value 8.5 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.435

For 10% significance level, 8.5 is not an outlier.
For 5% significance level, 8.5 is not an outlier.
For 1% significance level, 8.5 is not an outlier.

2. Data Value 1.6 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.000

For 10% significance level, 1.6 is not an outlier.
For 5% significance level, 1.6 is not an outlier.
For 1% significance level, 1.6 is not an outlier.

Dixon's Outlier Test for SIM-Acenaphthylene

Total N = 27
Number NDs = 5
Number Detects = 22
10% critical value: 0.382
5% critical value: 0.43
1% critical value: 0.514
Note: NDs excluded from Outlier Test

1. Data Value 61 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.434

For 10% significance level, 61 is an outlier.
For 5% significance level, 61 is an outlier.
For 1% significance level, 61 is not an outlier.

2. Data Value 0.88 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.006

For 10% significance level, 0.88 is not an outlier.
For 5% significance level, 0.88 is not an outlier.
For 1% significance level, 0.88 is not an outlier.

Dixon's Outlier Test for SIM-Anthracene

Total N = 27
Number NDs = 8
Number Detects = 19
10% critical value: 0.412
5% critical value: 0.462
1% critical value: 0.547
Note: NDs excluded from Outlier Test

1. Data Value 57 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.428

For 10% significance level, 57 is an outlier.
For 5% significance level, 57 is not an outlier.

For 1% significance level, 57 is not an outlier.

2. Data Value 0.82 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.003

For 10% significance level, 0.82 is not an outlier.
For 5% significance level, 0.82 is not an outlier.
For 1% significance level, 0.82 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(a)anthracene

Total N = 27
Number NDs = 3
Number Detects = 24
10% critical value: 0.367
5% critical value: 0.413
1% critical value: 0.497
Note: NDs excluded from Outlier Test

1. Data Value 380 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.478

For 10% significance level, 380 is an outlier.
For 5% significance level, 380 is an outlier.
For 1% significance level, 380 is not an outlier.

2. Data Value 0.76 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.013

For 10% significance level, 0.76 is not an outlier.
For 5% significance level, 0.76 is not an outlier.
For 1% significance level, 0.76 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(a)pyrene

Total N = 27
Number NDs = 4
Number Detects = 23
10% critical value: 0.374
5% critical value: 0.421
1% critical value: 0.505
Note: NDs excluded from Outlier Test

1. Data Value 410 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.516

For 10% significance level, 410 is an outlier.

For 5% significance level, 410 is an outlier.

For 1% significance level, 410 is an outlier.

2. Data Value 1.2 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.009

For 10% significance level, 1.2 is not an outlier.

For 5% significance level, 1.2 is not an outlier.

For 1% significance level, 1.2 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(b)fluoranthene

Total N = 27

Number NDs = 3

Number Detects = 24

10% critical value: 0.367

5% critical value: 0.413

1% critical value: 0.497

Note: NDs excluded from Outlier Test

1. Data Value 530 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.513

For 10% significance level, 530 is an outlier.

For 5% significance level, 530 is an outlier.

For 1% significance level, 530 is an outlier.

2. Data Value 1.5 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.010

For 10% significance level, 1.5 is not an outlier.

For 5% significance level, 1.5 is not an outlier.

For 1% significance level, 1.5 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(g,h,i)perylene

Total N = 27

Number NDs = 3

Number Detects = 24

10% critical value: 0.367

5% critical value: 0.413

1% critical value: 0.497

Note: NDs excluded from Outlier Test

1. Data Value 270 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.485

For 10% significance level, 270 is an outlier.
For 5% significance level, 270 is an outlier.
For 1% significance level, 270 is not an outlier.

2. Data Value 0.81 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.009

For 10% significance level, 0.81 is not an outlier.
For 5% significance level, 0.81 is not an outlier.
For 1% significance level, 0.81 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(k)fluoranthene

Total N = 27
Number NDs = 5
Number Detects = 22
10% critical value: 0.382
5% critical value: 0.43
1% critical value: 0.514
Note: NDs excluded from Outlier Test

1. Data Value 220 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.550

For 10% significance level, 220 is an outlier.
For 5% significance level, 220 is an outlier.
For 1% significance level, 220 is an outlier.

2. Data Value 1.6 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.003

For 10% significance level, 1.6 is not an outlier.
For 5% significance level, 1.6 is not an outlier.
For 1% significance level, 1.6 is not an outlier.

Dixon's Outlier Test for SIM-Chrysene

Total N = 27
Number NDs = 3
Number Detects = 24
10% critical value: 0.367
5% critical value: 0.413
1% critical value: 0.497
Note: NDs excluded from Outlier Test

1. Data Value 390 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.466

For 10% significance level, 390 is an outlier.
For 5% significance level, 390 is an outlier.
For 1% significance level, 390 is not an outlier.

2. Data Value 1.1 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.012

For 10% significance level, 1.1 is not an outlier.
For 5% significance level, 1.1 is not an outlier.
For 1% significance level, 1.1 is not an outlier.

Dixon's Outlier Test for SIM-Dibenzo(a,h)anthracene

Total N = 27
Number NDs = 8
Number Detects = 19
10% critical value: 0.412
5% critical value: 0.462
1% critical value: 0.547
Note: NDs excluded from Outlier Test

1. Data Value 59 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.500

For 10% significance level, 59 is an outlier.
For 5% significance level, 59 is an outlier.
For 1% significance level, 59 is not an outlier.

2. Data Value 0.93 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.002

For 10% significance level, 0.93 is not an outlier.
For 5% significance level, 0.93 is not an outlier.
For 1% significance level, 0.93 is not an outlier.

Dixon's Outlier Test for SIM-Fluoranthene

Total N = 27
Number NDs = 3
Number Detects = 24
10% critical value: 0.367
5% critical value: 0.413
1% critical value: 0.497

Note: NDs excluded from Outlier Test

1. Data Value 780 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.581

For 10% significance level, 780 is an outlier.
For 5% significance level, 780 is an outlier.
For 1% significance level, 780 is an outlier.

2. Data Value 0.76 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.016

For 10% significance level, 0.76 is not an outlier.
For 5% significance level, 0.76 is not an outlier.
For 1% significance level, 0.76 is not an outlier.

Dixon's Outlier Test for SIM-Fluorene

Total N = 27
Number NDs = 12
Number Detects = 15
10% critical value: 0.472
5% critical value: 0.525
1% critical value: 0.616
Note: NDs excluded from Outlier Test

1. Data Value 18 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.506

For 10% significance level, 18 is an outlier.
For 5% significance level, 18 is not an outlier.
For 1% significance level, 18 is not an outlier.

2. Data Value 0.82 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.021

For 10% significance level, 0.82 is not an outlier.
For 5% significance level, 0.82 is not an outlier.
For 1% significance level, 0.82 is not an outlier.

Dixon's Outlier Test for SIM-Indeno(1,2,3-cd)pyrene

Total N = 27
Number NDs = 4
Number Detects = 23
10% critical value: 0.374

5% critical value: 0.421

1% critical value: 0.505

Note: NDs excluded from Outlier Test

1. Data Value 230 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.526

For 10% significance level, 230 is an outlier.

For 5% significance level, 230 is an outlier.

For 1% significance level, 230 is an outlier.

2. Data Value 1.1 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.008

For 10% significance level, 1.1 is not an outlier.

For 5% significance level, 1.1 is not an outlier.

For 1% significance level, 1.1 is not an outlier.

Dixon's Outlier Test for SIM-Naphthalene

Total N = 27

Number NDs = 8

Number Detects = 19

10% critical value: 0.412

5% critical value: 0.462

1% critical value: 0.547

Note: NDs excluded from Outlier Test

1. Data Value 110 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.707

For 10% significance level, 110 is an outlier.

For 5% significance level, 110 is an outlier.

For 1% significance level, 110 is an outlier.

2. Data Value 0.75 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.011

For 10% significance level, 0.75 is not an outlier.

For 5% significance level, 0.75 is not an outlier.

For 1% significance level, 0.75 is not an outlier.

No Outlier Test for SIM-Pentachlorophenol

Dixon's Outlier Test for SIM-Phenanthrene

Total N = 27

Number NDs = 3

Number Detects = 24

10% critical value: 0.367

5% critical value: 0.413

1% critical value: 0.497

Note: NDs excluded from Outlier Test

1. Data Value 290 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.278

For 10% significance level, 290 is not an outlier.

For 5% significance level, 290 is not an outlier.

For 1% significance level, 290 is not an outlier.

2. Data Value 0.98 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.006

For 10% significance level, 0.98 is not an outlier.

For 5% significance level, 0.98 is not an outlier.

For 1% significance level, 0.98 is not an outlier.

Dixon's Outlier Test for SIM-Pyrene

Total N = 27

Number NDs = 3

Number Detects = 24

10% critical value: 0.367

5% critical value: 0.413

1% critical value: 0.497

Note: NDs excluded from Outlier Test

1. Data Value 820 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.553

For 10% significance level, 820 is an outlier.

For 5% significance level, 820 is an outlier.

For 1% significance level, 820 is an outlier.

2. Data Value 0.84 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.015

For 10% significance level, 0.84 is not an outlier.

For 5% significance level, 0.84 is not an outlier.

For 1% significance level, 0.84 is not an outlier.

Dixon's Outlier Test for 1,2,3,4,6,7,8-HpCDD

Total N = 14
Number NDs = 0
Number Detects = 14
10% critical value: 0.492
5% critical value: 0.546
1% critical value: 0.641
Note: NDs excluded from Outlier Test

1. Data Value 88 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.621

For 10% significance level, 88 is an outlier.
For 5% significance level, 88 is an outlier.
For 1% significance level, 88 is not an outlier.

2. Data Value 1.9 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.024

For 10% significance level, 1.9 is not an outlier.
For 5% significance level, 1.9 is not an outlier.
For 1% significance level, 1.9 is not an outlier.

Dixon's Outlier Test for 1,2,3,4,6,7,8-HpCDF

Total N = 14
Number NDs = 4
Number Detects = 10
10% critical value: 0.409
5% critical value: 0.477
1% critical value: 0.597
Note: NDs excluded from Outlier Test

1. Data Value 25 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.180

For 10% significance level, 25 is not an outlier.
For 5% significance level, 25 is not an outlier.
For 1% significance level, 25 is not an outlier.

2. Data Value 2.4 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.022

For 10% significance level, 2.4 is not an outlier.
For 5% significance level, 2.4 is not an outlier.
For 1% significance level, 2.4 is not an outlier.

No Outlier Test for 1,2,3,4,7,8-HxCDD

Dixon's Outlier Test for 1,2,3,4,7,8-HxCDF

Total N = 14
Number NDs = 10
Number Detects = 4
10% critical value: 0.679
5% critical value: 0.765
1% critical value: 0.889
Note: NDs excluded from Outlier Test

1. Data Value 5.5 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.750

For 10% significance level, 5.5 is an outlier.
For 5% significance level, 5.5 is not an outlier.
For 1% significance level, 5.5 is not an outlier.

2. Data Value 2.3 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.188

For 10% significance level, 2.3 is not an outlier.
For 5% significance level, 2.3 is not an outlier.
For 1% significance level, 2.3 is not an outlier.

Dixon's Outlier Test for 1,2,3,6,7,8-HxCDD

Total N = 14
Number NDs = 9
Number Detects = 5
10% critical value: 0.557
5% critical value: 0.642
1% critical value: 0.78
Note: NDs excluded from Outlier Test

1. Data Value 11 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.761

For 10% significance level, 11 is an outlier.
For 5% significance level, 11 is an outlier.
For 1% significance level, 11 is not an outlier.

2. Data Value 1.8 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.011

For 10% significance level, 1.8 is not an outlier.
For 5% significance level, 1.8 is not an outlier.
For 1% significance level, 1.8 is not an outlier.

Dixon's Outlier Test for 1,2,3,6,7,8-HxCDF

Total N = 14
Number NDs = 10
Number Detects = 4
10% critical value: 0.679
5% critical value: 0.765
1% critical value: 0.889
Note: NDs excluded from Outlier Test

1. Data Value 3.5 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.667

For 10% significance level, 3.5 is not an outlier.
For 5% significance level, 3.5 is not an outlier.
For 1% significance level, 3.5 is not an outlier.

2. Data Value 2.3 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.167

For 10% significance level, 2.3 is not an outlier.
For 5% significance level, 2.3 is not an outlier.
For 1% significance level, 2.3 is not an outlier.

No Outlier Test for 1,2,3,7,8,9-HxCDD

No Outlier Test for 1,2,3,7,8-PeCDD

Dixon's Outlier Test for 1,2,3,7,8-PeCDF

Total N = 14
Number NDs = 10
Number Detects = 4
10% critical value: 0.679
5% critical value: 0.765
1% critical value: 0.889
Note: NDs excluded from Outlier Test

1. Data Value 3.5 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.474

For 10% significance level, 3.5 is not an outlier.

For 5% significance level, 3.5 is not an outlier.

For 1% significance level, 3.5 is not an outlier.

2. Data Value 1.6 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.158

For 10% significance level, 1.6 is not an outlier.

For 5% significance level, 1.6 is not an outlier.

For 1% significance level, 1.6 is not an outlier.

Dixon's Outlier Test for 2,3,4,6,7,8-HxCDF

Total N = 14

Number NDs = 8

Number Detects = 6

10% critical value: 0.482

5% critical value: 0.56

1% critical value: 0.698

Note: NDs excluded from Outlier Test

1. Data Value 3.9 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.034

For 10% significance level, 3.9 is not an outlier.

For 5% significance level, 3.9 is not an outlier.

For 1% significance level, 3.9 is not an outlier.

2. Data Value 1 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.172

For 10% significance level, 1 is not an outlier.

For 5% significance level, 1 is not an outlier.

For 1% significance level, 1 is not an outlier.

Dixon's Outlier Test for 2,3,4,7,8-PeCDF

Total N = 14

Number NDs = 7

Number Detects = 7

10% critical value: 0.434

5% critical value: 0.507

1% critical value: 0.637

Note: NDs excluded from Outlier Test

1. Data Value 6.9 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.473

For 10% significance level, 6.9 is an outlier.
For 5% significance level, 6.9 is not an outlier.
For 1% significance level, 6.9 is not an outlier.

2. Data Value 0.98 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.105

For 10% significance level, 0.98 is not an outlier.
For 5% significance level, 0.98 is not an outlier.
For 1% significance level, 0.98 is not an outlier.

Dixon's Outlier Test for 2,3,7,8-TCDD

Total N = 14
Number NDs = 9
Number Detects = 5
10% critical value: 0.557
5% critical value: 0.642
1% critical value: 0.78
Note: NDs excluded from Outlier Test

1. Data Value 0.71 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.548

For 10% significance level, 0.71 is not an outlier.
For 5% significance level, 0.71 is not an outlier.
For 1% significance level, 0.71 is not an outlier.

2. Data Value 0.29 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.167

For 10% significance level, 0.29 is not an outlier.
For 5% significance level, 0.29 is not an outlier.
For 1% significance level, 0.29 is not an outlier.

Dixon's Outlier Test for 2,3,7,8-TCDF

Total N = 14
Number NDs = 2
Number Detects = 12
10% critical value: 0.49
5% critical value: 0.546
1% critical value: 0.642
Note: NDs excluded from Outlier Test

1. Data Value 4.6 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.297

For 10% significance level, 4.6 is not an outlier.
For 5% significance level, 4.6 is not an outlier.
For 1% significance level, 4.6 is not an outlier.

2. Data Value 0.54 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.012

For 10% significance level, 0.54 is not an outlier.
For 5% significance level, 0.54 is not an outlier.
For 1% significance level, 0.54 is not an outlier.

Dixon's Outlier Test for OCDD

Total N = 14
Number NDs = 0
Number Detects = 14
10% critical value: 0.492
5% critical value: 0.546
1% critical value: 0.641
Note: NDs excluded from Outlier Test

1. Data Value 1850 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.627

For 10% significance level, 1850 is an outlier.
For 5% significance level, 1850 is an outlier.
For 1% significance level, 1850 is not an outlier.

2. Data Value 63 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.027

For 10% significance level, 63 is not an outlier.
For 5% significance level, 63 is not an outlier.
For 1% significance level, 63 is not an outlier.

Dixon's Outlier Test for OCDF

Total N = 14
Number NDs = 6
Number Detects = 8
10% critical value: 0.479
5% critical value: 0.554
1% critical value: 0.683
Note: NDs excluded from Outlier Test

1. Data Value 36 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.237

For 10% significance level, 36 is not an outlier.
For 5% significance level, 36 is not an outlier.
For 1% significance level, 36 is not an outlier.

2. Data Value 2.2 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.004

For 10% significance level, 2.2 is not an outlier.
For 5% significance level, 2.2 is not an outlier.
For 1% significance level, 2.2 is not an outlier.

Dixon's Outlier Test for Total HpCDD

Total N = 14
Number NDs = 0
Number Detects = 14
10% critical value: 0.492
5% critical value: 0.546
1% critical value: 0.641
Note: NDs excluded from Outlier Test

1. Data Value 170 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.529

For 10% significance level, 170 is an outlier.
For 5% significance level, 170 is not an outlier.
For 1% significance level, 170 is not an outlier.

2. Data Value 3.4 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.026

For 10% significance level, 3.4 is not an outlier.
For 5% significance level, 3.4 is not an outlier.
For 1% significance level, 3.4 is not an outlier.

Dixon's Outlier Test for Total HpCDF

Total N = 14
Number NDs = 4
Number Detects = 10
10% critical value: 0.409
5% critical value: 0.477

1% critical value: 0.597

Note: NDs excluded from Outlier Test

1. Data Value 45 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.237

For 10% significance level, 45 is not an outlier.

For 5% significance level, 45 is not an outlier.

For 1% significance level, 45 is not an outlier.

2. Data Value 2.4 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.012

For 10% significance level, 2.4 is not an outlier.

For 5% significance level, 2.4 is not an outlier.

For 1% significance level, 2.4 is not an outlier.

Dixon's Outlier Test for Total HxCDD

Total N = 14

Number NDs = 4

Number Detects = 10

10% critical value: 0.409

5% critical value: 0.477

1% critical value: 0.597

Note: NDs excluded from Outlier Test

1. Data Value 160 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.732

For 10% significance level, 160 is an outlier.

For 5% significance level, 160 is an outlier.

For 1% significance level, 160 is an outlier.

2. Data Value 1.7 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.028

For 10% significance level, 1.7 is not an outlier.

For 5% significance level, 1.7 is not an outlier.

For 1% significance level, 1.7 is not an outlier.

Dixon's Outlier Test for Total HxCDF

Total N = 14

Number NDs = 4

Number Detects = 10

10% critical value: 0.409

5% critical value: 0.477

1% critical value: 0.597

Note: NDs excluded from Outlier Test

1. Data Value 54 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.275

For 10% significance level, 54 is not an outlier.

For 5% significance level, 54 is not an outlier.

For 1% significance level, 54 is not an outlier.

2. Data Value 1 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.051

For 10% significance level, 1 is not an outlier.

For 5% significance level, 1 is not an outlier.

For 1% significance level, 1 is not an outlier.

Dixon's Outlier Test for Total PeCDD

Total N = 14

Number NDs = 6

Number Detects = 8

10% critical value: 0.479

5% critical value: 0.554

1% critical value: 0.683

Note: NDs excluded from Outlier Test

1. Data Value 130 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.721

For 10% significance level, 130 is an outlier.

For 5% significance level, 130 is an outlier.

For 1% significance level, 130 is an outlier.

2. Data Value 2.3 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.003

For 10% significance level, 2.3 is not an outlier.

For 5% significance level, 2.3 is not an outlier.

For 1% significance level, 2.3 is not an outlier.

Dixon's Outlier Test for Total PeCDF

Total N = 14

Number NDs = 4

Number Detects = 10

10% critical value: 0.409

5% critical value: 0.477

1% critical value: 0.597

Note: NDs excluded from Outlier Test

1. Data Value 89 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.441

For 10% significance level, 89 is an outlier.

For 5% significance level, 89 is not an outlier.

For 1% significance level, 89 is not an outlier.

2. Data Value 1.1 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.079

For 10% significance level, 1.1 is not an outlier.

For 5% significance level, 1.1 is not an outlier.

For 1% significance level, 1.1 is not an outlier.

Dixon's Outlier Test for Total TCDD

Total N = 14

Number NDs = 2

Number Detects = 12

10% critical value: 0.49

5% critical value: 0.546

1% critical value: 0.642

Note: NDs excluded from Outlier Test

1. Data Value 110 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.852

For 10% significance level, 110 is an outlier.

For 5% significance level, 110 is an outlier.

For 1% significance level, 110 is an outlier.

2. Data Value 0.515 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.013

For 10% significance level, 0.515 is not an outlier.

For 5% significance level, 0.515 is not an outlier.

For 1% significance level, 0.515 is not an outlier.

Dixon's Outlier Test for Total TCDF

Total N = 14
Number NDs = 2
Number Detects = 12
10% critical value: 0.49
5% critical value: 0.546
1% critical value: 0.642
Note: NDs excluded from Outlier Test

1. Data Value 70 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.059

For 10% significance level, 70 is not an outlier.
For 5% significance level, 70 is not an outlier.
For 1% significance level, 70 is not an outlier.

2. Data Value 2 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.020

For 10% significance level, 2 is not an outlier.
For 5% significance level, 2 is not an outlier.
For 1% significance level, 2 is not an outlier.

Dixon's Outlier Test for 4,4'-DDD

Total N = 27
Number NDs = 11
Number Detects = 16
10% critical value: 0.454
5% critical value: 0.507
1% critical value: 0.595
Note: NDs excluded from Outlier Test

1. Data Value 5 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.463

For 10% significance level, 5 is an outlier.
For 5% significance level, 5 is not an outlier.
For 1% significance level, 5 is not an outlier.

2. Data Value 0.39 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.028

For 10% significance level, 0.39 is not an outlier.
For 5% significance level, 0.39 is not an outlier.
For 1% significance level, 0.39 is not an outlier.

Dixon's Outlier Test for 4,4'-DDE

Total N = 27
Number NDs = 20
Number Detects = 7
10% critical value: 0.434
5% critical value: 0.507
1% critical value: 0.637
Note: NDs excluded from Outlier Test

1. Data Value 3.9 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.162

For 10% significance level, 3.9 is not an outlier.
For 5% significance level, 3.9 is not an outlier.
For 1% significance level, 3.9 is not an outlier.

2. Data Value 0.185 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.026

For 10% significance level, 0.185 is not an outlier.
For 5% significance level, 0.185 is not an outlier.
For 1% significance level, 0.185 is not an outlier.

Dixon's Outlier Test for 4,4'-DDT

Total N = 27
Number NDs = 21
Number Detects = 6
10% critical value: 0.482
5% critical value: 0.56
1% critical value: 0.698
Note: NDs excluded from Outlier Test

1. Data Value 11 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.771

For 10% significance level, 11 is an outlier.
For 5% significance level, 11 is an outlier.
For 1% significance level, 11 is an outlier.

2. Data Value 0.24 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.009

For 10% significance level, 0.24 is not an outlier.
For 5% significance level, 0.24 is not an outlier.

For 1% significance level, 0.24 is not an outlier.

No Outlier Test for Endosulfan II

No Outlier Test for Endosulfan Sulfate

Dixon's Outlier Test for Endrin

Total N = 24
Number NDs = 19
Number Detects = 5
10% critical value: 0.557
5% critical value: 0.642
1% critical value: 0.78
Note: NDs excluded from Outlier Test

1. Data Value 0.56 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.355

For 10% significance level, 0.56 is not an outlier.
For 5% significance level, 0.56 is not an outlier.
For 1% significance level, 0.56 is not an outlier.

2. Data Value 0.25 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.065

For 10% significance level, 0.25 is not an outlier.
For 5% significance level, 0.25 is not an outlier.
For 1% significance level, 0.25 is not an outlier.

Dixon's Outlier Test for gamma-BHC (Lindane)

Total N = 27
Number NDs = 11
Number Detects = 16
10% critical value: 0.454
5% critical value: 0.507
1% critical value: 0.595
Note: NDs excluded from Outlier Test

1. Data Value 3.9 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.484

For 10% significance level, 3.9 is an outlier.
For 5% significance level, 3.9 is not an outlier.
For 1% significance level, 3.9 is not an outlier.

2. Data Value 0.21 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.090

For 10% significance level, 0.21 is not an outlier.
For 5% significance level, 0.21 is not an outlier.
For 1% significance level, 0.21 is not an outlier.

No Outlier Test for Aroclor-1260

Dixon's Outlier Test for Total DiCB

Total N = 22
Number NDs = 0
Number Detects = 22
10% critical value: 0.382
5% critical value: 0.43
1% critical value: 0.514
Note: NDs excluded from Outlier Test

1. Data Value 890 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.626

For 10% significance level, 890 is an outlier.
For 5% significance level, 890 is an outlier.
For 1% significance level, 890 is an outlier.

2. Data Value 2.8 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.002

For 10% significance level, 2.8 is not an outlier.
For 5% significance level, 2.8 is not an outlier.
For 1% significance level, 2.8 is not an outlier.

Rosner's Outlier Test for 1 Outliers in Total HpCB

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**2820**
SD of Detects	**6832**
Number of data	**27**
Number of suspected outliers	**1**

NDs not included in the following:

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)

1	2820	6705	35000	22	4.8	2.86	3.18

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 35000 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total HxCB

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**4167**
SD of Detects	**9077**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	4167	8908	46000	22	4.696	2.86	3.18

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 46000 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Dixon's Outlier Test for Total MoCB

Total N = 24

Number NDs = 0

Number Detects = 24

10% critical value: 0.367

5% critical value: 0.413

1% critical value: 0.497

Note: NDs excluded from Outlier Test

1. Data Value 210 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.240

For 10% significance level, 210 is not an outlier.

For 5% significance level, 210 is not an outlier.

For 1% significance level, 210 is not an outlier.

2. Data Value 0.49 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.006

For 10% significance level, 0.49 is not an outlier.

For 5% significance level, 0.49 is not an outlier.

For 1% significance level, 0.49 is not an outlier.

Rosner's Outlier Test for 1 Outliers in Total NoCB

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**770.5**
SD of Detects	**1401**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	770.5	1374	6000	23	3.805	2.86	3.18

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 6000 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total OcCB

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**933.5**
SD of Detects	**1948**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	933.5	1911	9800	22	4.639	2.86	3.18

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 9800 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in TOTAL PCBs

Outlier Tests for Selected Variables excluding nondetects - Round 1 (all data)

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**12334**
SD of Detects	**24202**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	12334	23750	120000	22	4.533	2.86	3.18

For 5% Significance Level, there is 1 Potential Outlier
Therefore, Observation 120000 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total PeCB

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**1929**
SD of Detects	**3853**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	1929	3781	17000	22	3.986	2.86	3.18

For 5% Significance Level, there is 1 Potential Outlier
Therefore, Observation 17000 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total TeCB

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**514.7**
SD of Detects	**1111**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

Outlier Tests for Selected Variables excluding nondetects - Round 1 (all data)

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	514.7	1090	5200	22	4.299	2.86	3.18

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 5200 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total TrCB

Total N	**26**
Number NDs	**0**
Number Detects	**26**
Mean of Detects	**171.2**
SD of Detects	**382.6**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	171.2	375.2	1900	22	4.608	2.84	3.16

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 1900 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Aluminum

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**8048**
SD of Detects	**2893**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	8048	2839	1770	26	2.211	2.86	3.18

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Dixon's Outlier Test for Antimony

Total N = 27
Number NDs = 23
Number Detects = 4
10% critical value: 0.679
5% critical value: 0.765
1% critical value: 0.889
Note: NDs excluded from Outlier Test

1. Data Value 2.4 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.636

For 10% significance level, 2.4 is not an outlier.
For 5% significance level, 2.4 is not an outlier.
For 1% significance level, 2.4 is not an outlier.

2. Data Value 1.3 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.273

For 10% significance level, 1.3 is not an outlier.
For 5% significance level, 1.3 is not an outlier.
For 1% significance level, 1.3 is not an outlier.

Rosner's Outlier Test for 1 Outliers in Arsenic

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**9.167**
SD of Detects	**4.515**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	9.167	4.431	21	22	2.671	2.86	3.18

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Rosner's Outlier Test for 1 Outliers in Barium

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**80.28**
SD of Detects	**42.28**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	80.28	41.49	183	22	2.476	2.86	3.18

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Rosner's Outlier Test for 1 Outliers in Beryllium

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**0.656**
SD of Detects	**0.301**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	0.656	0.296	1.3	22	2.179	2.86	3.18

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Dixon's Outlier Test for Cadmium

Total N = 27

Number NDs = 8

Number Detects = 19

10% critical value: 0.412

5% critical value: 0.462

1% critical value: 0.547

Note: NDs excluded from Outlier Test

1. Data Value 1.1 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.228

For 10% significance level, 1.1 is not an outlier.
For 5% significance level, 1.1 is not an outlier.
For 1% significance level, 1.1 is not an outlier.

2. Data Value 0.08 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.015

For 10% significance level, 0.08 is not an outlier.
For 5% significance level, 0.08 is not an outlier.
For 1% significance level, 0.08 is not an outlier.

Rosner's Outlier Test for 1 Outliers in Calcium

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**3083**
SD of Detects	**8282**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	3083	8127	41000	26	4.666	2.86	3.18

For 5% Significance Level, there is 1 Potential Outlier
Therefore, Observation 41000 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Chromium

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**14.01**
SD of Detects	**5.954**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	14.01	5.843	31.9	22	3.062	2.86	3.18

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 31.9 is a Potential Statistical Outlier

For 1% Significance Level, there is no Potential Outlier

Rosner's Outlier Test for 1 Outliers in Cobalt

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**9.38**
SD of Detects	**5.16**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	9.38	5.063	20.8	10	2.255	2.86	3.18

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Rosner's Outlier Test for 1 Outliers in Copper

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**43.64**
SD of Detects	**77.63**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	43.64	76.18	414	7	4.862	2.86	3.18

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 414 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

No Outlier Test for Cyanide

Rosner's Outlier Test for 1 Outliers in Iron

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**20771**
SD of Detects	**15597**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	20771	15305	89300	26	4.478	2.86	3.18

For 5% Significance Level, there is 1 Potential Outlier
Therefore, Observation 89300 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Lead

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**85.21**
SD of Detects	**88.85**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	85.21	87.19	358	23	3.129	2.86	3.18

For 5% Significance Level, there is 1 Potential Outlier
Therefore, Observation 358 is a Potential Statistical Outlier

For 1% Significance Level, there is no Potential Outlier

Rosner's Outlier Test for 1 Outliers in Magnesium

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**860.6**
SD of Detects	**603.9**

Outlier Tests for Selected Variables excluding nondetects - Round 1 (all data)

Number of data 27
Number of suspected outliers 1
NDs not included in the following:

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	860.6	592.7	2290	26	2.412	2.86	3.18

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Rosner's Outlier Test for 1 Outliers in Manganese

Total N 27
Number NDs 0
Number Detects 27
Mean of Detects 452.7
SD of Detects 321.5
Number of data 27
Number of suspected outliers 1
NDs not included in the following:

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	452.7	315.5	1540	7	3.446	2.86	3.18

For 5% Significance Level, there is 1 Potential Outlier
Therefore, Observation 1540 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Dixon's Outlier Test for Mercury

Total N = 27
Number NDs = 13
Number Detects = 14
10% critical value: 0.492
5% critical value: 0.546
1% critical value: 0.641
Note: NDs excluded from Outlier Test

1. Data Value 0.19 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.123

For 10% significance level, 0.19 is not an outlier.
For 5% significance level, 0.19 is not an outlier.
For 1% significance level, 0.19 is not an outlier.

2. Data Value 0.02 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.047

For 10% significance level, 0.02 is not an outlier.
For 5% significance level, 0.02 is not an outlier.
For 1% significance level, 0.02 is not an outlier.

Rosner's Outlier Test for 1 Outliers in Nickel

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**11.09**
SD of Detects	**6.451**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	11.09	6.331	25.7	10	2.308	2.86	3.18

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Dixon's Outlier Test for Potassium

Total N = 27
Number NDs = 4
Number Detects = 23
10% critical value: 0.374
5% critical value: 0.421
1% critical value: 0.505
Note: NDs excluded from Outlier Test

1. Data Value 1750 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.081

For 10% significance level, 1750 is not an outlier.
For 5% significance level, 1750 is not an outlier.
For 1% significance level, 1750 is not an outlier.

2. Data Value 467 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.146

For 10% significance level, 467 is not an outlier.

For 5% significance level, 467 is not an outlier.

For 1% significance level, 467 is not an outlier.

Rosner's Outlier Test for 1 Outliers in Selenium

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**0.74**
SD of Detects	**0.311**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	0.74	0.305	1.5	22	2.492	2.86	3.18

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Dixon's Outlier Test for Silver

Total N = 27

Number NDs = 16

Number Detects = 11

10% critical value: 0.517

5% critical value: 0.576

1% critical value: 0.679

Note: NDs excluded from Outlier Test

1. Data Value 0.26 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.510

For 10% significance level, 0.26 is not an outlier.

For 5% significance level, 0.26 is not an outlier.

For 1% significance level, 0.26 is not an outlier.

2. Data Value 0.056 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.071

For 10% significance level, 0.056 is not an outlier.

For 5% significance level, 0.056 is not an outlier.

For 1% significance level, 0.056 is not an outlier.

Dixon's Outlier Test for Thallium

Total N = 27
Number NDs = 15
Number Detects = 12
10% critical value: 0.49
5% critical value: 0.546
1% critical value: 0.642
Note: NDs excluded from Outlier Test

1. Data Value 0.21 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.695

For 10% significance level, 0.21 is an outlier.
For 5% significance level, 0.21 is an outlier.
For 1% significance level, 0.21 is an outlier.

2. Data Value 0.034 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.333

For 10% significance level, 0.034 is not an outlier.
For 5% significance level, 0.034 is not an outlier.
For 1% significance level, 0.034 is not an outlier.

Rosner's Outlier Test for 1 Outliers in Vanadium

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**14.96**
SD of Detects	**6.27**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	14.96	6.153	28.85	5	2.257	2.86	3.18

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Rosner's Outlier Test for 1 Outliers in Zinc

Outlier Tests for Selected Variables excluding nondetects - Round 1 (all data)

Total N	**27**
Number NDs	**0**
Number Detects	**27**
Mean of Detects	**75.77**
SD of Detects	**65.01**
Number of data	**27**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	75.77	63.79	309	7	3.656	2.86	3.18

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 309 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Outlier Tests for Selected Variables excluding nondetects (Round 2)

User Selected Options

Date/Time of Computation	ProUCL 5.15/8/2020 12:10:26 PM
From File	S-A Soil All Bkg_a.xls
Full Precision	OFF

Dixon's Outlier Test for Methylene chloride

Total N = 26
Number NDs = 22
Number Detects = 4
10% critical value: 0.679
5% critical value: 0.765
1% critical value: 0.889
Note: NDs excluded from Outlier Test

1. Data Value 3.7 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.125

For 10% significance level, 3.7 is not an outlier.
For 5% significance level, 3.7 is not an outlier.
For 1% significance level, 3.7 is not an outlier.

2. Data Value 2.9 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.125

For 10% significance level, 2.9 is not an outlier.
For 5% significance level, 2.9 is not an outlier.
For 1% significance level, 2.9 is not an outlier.

Dixon's Outlier Test for Benzo(b)fluoranthene

Total N = 26
Number NDs = 16
Number Detects = 10
10% critical value: 0.409
5% critical value: 0.477
1% critical value: 0.597
Note: NDs excluded from Outlier Test

1. Data Value 410 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.468

For 10% significance level, 410 is an outlier.
For 5% significance level, 410 is not an outlier.
For 1% significance level, 410 is not an outlier.

2. Data Value 51 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.085

For 10% significance level, 51 is not an outlier.
For 5% significance level, 51 is not an outlier.
For 1% significance level, 51 is not an outlier.

No Outlier Test for Bis(2-ethylhexyl)phthalate

Dixon's Outlier Test for Chrysene

Total N = 26
Number NDs = 16
Number Detects = 10
10% critical value: 0.409
5% critical value: 0.477
1% critical value: 0.597
Note: NDs excluded from Outlier Test

1. Data Value 290 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.411

For 10% significance level, 290 is an outlier.
For 5% significance level, 290 is not an outlier.
For 1% significance level, 290 is not an outlier.

2. Data Value 53 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.122

For 10% significance level, 53 is not an outlier.
For 5% significance level, 53 is not an outlier.
For 1% significance level, 53 is not an outlier.

Dixon's Outlier Test for Fluoranthene

Total N = 26
Number NDs = 15
Number Detects = 11
10% critical value: 0.517
5% critical value: 0.576
1% critical value: 0.679
Note: NDs excluded from Outlier Test

1. Data Value 500 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.478

For 10% significance level, 500 is not an outlier.

For 5% significance level, 500 is not an outlier.

For 1% significance level, 500 is not an outlier.

2. Data Value 58 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.015

For 10% significance level, 58 is not an outlier.

For 5% significance level, 58 is not an outlier.

For 1% significance level, 58 is not an outlier.

Dixon's Outlier Test for Pyrene

Total N = 26

Number NDs = 15

Number Detects = 11

10% critical value: 0.517

5% critical value: 0.576

1% critical value: 0.679

Note: NDs excluded from Outlier Test

1. Data Value 430 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.405

For 10% significance level, 430 is not an outlier.

For 5% significance level, 430 is not an outlier.

For 1% significance level, 430 is not an outlier.

2. Data Value 57 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.032

For 10% significance level, 57 is not an outlier.

For 5% significance level, 57 is not an outlier.

For 1% significance level, 57 is not an outlier.

Dixon's Outlier Test for SIM-2-Methylnaphthalene

Total N = 26

Number NDs = 8

Number Detects = 18

10% critical value: 0.424

5% critical value: 0.475

1% critical value: 0.561

Note: NDs excluded from Outlier Test

1. Data Value 100 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.607

For 10% significance level, 100 is an outlier.
For 5% significance level, 100 is an outlier.
For 1% significance level, 100 is an outlier.

2. Data Value 0.83 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.009

For 10% significance level, 0.83 is not an outlier.
For 5% significance level, 0.83 is not an outlier.
For 1% significance level, 0.83 is not an outlier.

Dixon's Outlier Test for SIM-Acenaphthylene

Total N = 26
Number NDs = 5
Number Detects = 21
10% critical value: 0.391
5% critical value: 0.44
1% critical value: 0.524
Note: NDs excluded from Outlier Test

1. Data Value 60 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.696

For 10% significance level, 60 is an outlier.
For 5% significance level, 60 is an outlier.
For 1% significance level, 60 is an outlier.

2. Data Value 0.88 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.011

For 10% significance level, 0.88 is not an outlier.
For 5% significance level, 0.88 is not an outlier.
For 1% significance level, 0.88 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(a)anthracene

Total N = 26
Number NDs = 3
Number Detects = 23
10% critical value: 0.374
5% critical value: 0.421
1% critical value: 0.505
Note: NDs excluded from Outlier Test

1. Data Value 240 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.422

For 10% significance level, 240 is an outlier.
For 5% significance level, 240 is an outlier.
For 1% significance level, 240 is not an outlier.

2. Data Value 0.76 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.018

For 10% significance level, 0.76 is not an outlier.
For 5% significance level, 0.76 is not an outlier.
For 1% significance level, 0.76 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(a)pyrene

Total N = 26
Number NDs = 4
Number Detects = 22
10% critical value: 0.382
5% critical value: 0.43
1% critical value: 0.514
Note: NDs excluded from Outlier Test

1. Data Value 250 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.526

For 10% significance level, 250 is an outlier.
For 5% significance level, 250 is an outlier.
For 1% significance level, 250 is an outlier.

2. Data Value 1.2 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.015

For 10% significance level, 1.2 is not an outlier.
For 5% significance level, 1.2 is not an outlier.
For 1% significance level, 1.2 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(b)fluoranthene

Total N = 26
Number NDs = 3
Number Detects = 23
10% critical value: 0.374
5% critical value: 0.421
1% critical value: 0.505
Note: NDs excluded from Outlier Test

1. Data Value 390 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.544

For 10% significance level, 390 is an outlier.
For 5% significance level, 390 is an outlier.
For 1% significance level, 390 is an outlier.

2. Data Value 1.5 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.014

For 10% significance level, 1.5 is not an outlier.
For 5% significance level, 1.5 is not an outlier.
For 1% significance level, 1.5 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(g,h,i)perylene

Total N = 26
Number NDs = 3
Number Detects = 23
10% critical value: 0.374
5% critical value: 0.421
1% critical value: 0.505
Note: NDs excluded from Outlier Test

1. Data Value 140 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.370

For 10% significance level, 140 is not an outlier.
For 5% significance level, 140 is not an outlier.
For 1% significance level, 140 is not an outlier.

2. Data Value 0.81 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.015

For 10% significance level, 0.81 is not an outlier.
For 5% significance level, 0.81 is not an outlier.
For 1% significance level, 0.81 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(k)fluoranthene

Total N = 26
Number NDs = 5
Number Detects = 21
10% critical value: 0.391
5% critical value: 0.44

1% critical value: 0.524

Note: NDs excluded from Outlier Test

1. Data Value 150 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.635

For 10% significance level, 150 is an outlier.

For 5% significance level, 150 is an outlier.

For 1% significance level, 150 is an outlier.

2. Data Value 1.6 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.006

For 10% significance level, 1.6 is not an outlier.

For 5% significance level, 1.6 is not an outlier.

For 1% significance level, 1.6 is not an outlier.

Dixon's Outlier Test for SIM-Chrysene

Total N = 26

Number NDs = 3

Number Detects = 23

10% critical value: 0.374

5% critical value: 0.421

1% critical value: 0.505

Note: NDs excluded from Outlier Test

1. Data Value 300 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.472

For 10% significance level, 300 is an outlier.

For 5% significance level, 300 is an outlier.

For 1% significance level, 300 is not an outlier.

2. Data Value 1.1 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.016

For 10% significance level, 1.1 is not an outlier.

For 5% significance level, 1.1 is not an outlier.

For 1% significance level, 1.1 is not an outlier.

Dixon's Outlier Test for SIM-Dibenzo(a,h)anthracene

Total N = 26

Number NDs = 8

Number Detects = 18

10% critical value: 0.424

5% critical value: 0.475

1% critical value: 0.561

Note: NDs excluded from Outlier Test

1. Data Value 42 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.415

For 10% significance level, 42 is not an outlier.

For 5% significance level, 42 is not an outlier.

For 1% significance level, 42 is not an outlier.

2. Data Value 0.93 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.003

For 10% significance level, 0.93 is not an outlier.

For 5% significance level, 0.93 is not an outlier.

For 1% significance level, 0.93 is not an outlier.

Dixon's Outlier Test for SIM-Fluoranthene

Total N = 26

Number NDs = 3

Number Detects = 23

10% critical value: 0.374

5% critical value: 0.421

1% critical value: 0.505

Note: NDs excluded from Outlier Test

1. Data Value 460 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.418

For 10% significance level, 460 is an outlier.

For 5% significance level, 460 is not an outlier.

For 1% significance level, 460 is not an outlier.

2. Data Value 0.76 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.019

For 10% significance level, 0.76 is not an outlier.

For 5% significance level, 0.76 is not an outlier.

For 1% significance level, 0.76 is not an outlier.

Dixon's Outlier Test for SIM-Indeno(1,2,3-cd)pyrene

Total N = 26

Number NDs = 4

Number Detects = 22

10% critical value: 0.382

5% critical value: 0.43

1% critical value: 0.514

Note: NDs excluded from Outlier Test

1. Data Value 130 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.484

For 10% significance level, 130 is an outlier.

For 5% significance level, 130 is an outlier.

For 1% significance level, 130 is not an outlier.

2. Data Value 1.1 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.013

For 10% significance level, 1.1 is not an outlier.

For 5% significance level, 1.1 is not an outlier.

For 1% significance level, 1.1 is not an outlier.

Dixon's Outlier Test for SIM-Naphthalene

Total N = 26

Number NDs = 8

Number Detects = 18

10% critical value: 0.424

5% critical value: 0.475

1% critical value: 0.561

Note: NDs excluded from Outlier Test

1. Data Value 84 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.676

For 10% significance level, 84 is an outlier.

For 5% significance level, 84 is an outlier.

For 1% significance level, 84 is an outlier.

2. Data Value 0.75 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.013

For 10% significance level, 0.75 is not an outlier.

For 5% significance level, 0.75 is not an outlier.

For 1% significance level, 0.75 is not an outlier.

Dixon's Outlier Test for SIM-Pyrene

Total N = 26
Number NDs = 3
Number Detects = 23
10% critical value: 0.374
5% critical value: 0.421
1% critical value: 0.505
Note: NDs excluded from Outlier Test

1. Data Value 460 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.397

For 10% significance level, 460 is an outlier.
For 5% significance level, 460 is not an outlier.
For 1% significance level, 460 is not an outlier.

2. Data Value 0.84 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.020

For 10% significance level, 0.84 is not an outlier.
For 5% significance level, 0.84 is not an outlier.
For 1% significance level, 0.84 is not an outlier.

Dixon's Outlier Test for 1,2,3,4,6,7,8-HpCDD

Total N = 13
Number NDs = 0
Number Detects = 13
10% critical value: 0.467
5% critical value: 0.521
1% critical value: 0.615
Note: NDs excluded from Outlier Test

1. Data Value 43 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.248

For 10% significance level, 43 is not an outlier.
For 5% significance level, 43 is not an outlier.
For 1% significance level, 43 is not an outlier.

2. Data Value 1.9 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.024

For 10% significance level, 1.9 is not an outlier.
For 5% significance level, 1.9 is not an outlier.
For 1% significance level, 1.9 is not an outlier.

Dixon's Outlier Test for 1,2,3,6,7,8-HxCDD

Total N = 13
Number NDs = 9
Number Detects = 4
10% critical value: 0.679
5% critical value: 0.765
1% critical value: 0.889
Note: NDs excluded from Outlier Test

1. Data Value 4 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.818

For 10% significance level, 4 is an outlier.
For 5% significance level, 4 is an outlier.
For 1% significance level, 4 is not an outlier.

2. Data Value 1.8 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.045

For 10% significance level, 1.8 is not an outlier.
For 5% significance level, 1.8 is not an outlier.
For 1% significance level, 1.8 is not an outlier.

Dixon's Outlier Test for OCDD

Total N = 13
Number NDs = 0
Number Detects = 13
10% critical value: 0.467
5% critical value: 0.521
1% critical value: 0.615
Note: NDs excluded from Outlier Test

1. Data Value 750 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.179

For 10% significance level, 750 is not an outlier.
For 5% significance level, 750 is not an outlier.
For 1% significance level, 750 is not an outlier.

2. Data Value 63 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.027

For 10% significance level, 63 is not an outlier.
For 5% significance level, 63 is not an outlier.

For 1% significance level, 63 is not an outlier.

Dixon's Outlier Test for Total HxCDD

Total N = 13
Number NDs = 4
Number Detects = 9
10% critical value: 0.441
5% critical value: 0.512
1% critical value: 0.635
Note: NDs excluded from Outlier Test

1. Data Value 45 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.404

For 10% significance level, 45 is not an outlier.
For 5% significance level, 45 is not an outlier.
For 1% significance level, 45 is not an outlier.

2. Data Value 1.7 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.046

For 10% significance level, 1.7 is not an outlier.
For 5% significance level, 1.7 is not an outlier.
For 1% significance level, 1.7 is not an outlier.

Dixon's Outlier Test for Total PeCDD

Total N = 13
Number NDs = 6
Number Detects = 7
10% critical value: 0.434
5% critical value: 0.507
1% critical value: 0.637
Note: NDs excluded from Outlier Test

1. Data Value 38 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.728

For 10% significance level, 38 is an outlier.
For 5% significance level, 38 is an outlier.
For 1% significance level, 38 is an outlier.

2. Data Value 2.3 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.003

For 10% significance level, 2.3 is not an outlier.

For 5% significance level, 2.3 is not an outlier.

For 1% significance level, 2.3 is not an outlier.

Dixon's Outlier Test for Total TCDD

Total N = 13

Number NDs = 2

Number Detects = 11

10% critical value: 0.517

5% critical value: 0.576

1% critical value: 0.679

Note: NDs excluded from Outlier Test

1. Data Value 37 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.637

For 10% significance level, 37 is an outlier.

For 5% significance level, 37 is an outlier.

For 1% significance level, 37 is not an outlier.

2. Data Value 0.515 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.028

For 10% significance level, 0.515 is not an outlier.

For 5% significance level, 0.515 is not an outlier.

For 1% significance level, 0.515 is not an outlier.

Dixon's Outlier Test for 4,4'-DDT

Total N = 26

Number NDs = 21

Number Detects = 5

10% critical value: 0.557

5% critical value: 0.642

1% critical value: 0.78

Note: NDs excluded from Outlier Test

1. Data Value 2.7 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.447

For 10% significance level, 2.7 is not an outlier.

For 5% significance level, 2.7 is not an outlier.

For 1% significance level, 2.7 is not an outlier.

2. Data Value 0.24 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.041

For 10% significance level, 0.24 is not an outlier.
For 5% significance level, 0.24 is not an outlier.
For 1% significance level, 0.24 is not an outlier.

Dixon's Outlier Test for Total DiCB

Total N = 21
Number NDs = 0
Number Detects = 21
10% critical value: 0.391
5% critical value: 0.44
1% critical value: 0.524
Note: NDs excluded from Outlier Test

1. Data Value 590 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.512

For 10% significance level, 590 is an outlier.
For 5% significance level, 590 is an outlier.
For 1% significance level, 590 is not an outlier.

2. Data Value 2.8 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.003

For 10% significance level, 2.8 is not an outlier.
For 5% significance level, 2.8 is not an outlier.
For 1% significance level, 2.8 is not an outlier.

Rosner's Outlier Test for 1 Outliers in Total HpCB

Total N	**26**
Number NDs	**0**
Number Detects	**26**
Mean of Detects	**1582**
SD of Detects	**2352**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	1582	2307	11000	1	4.083	2.84	3.16

For 5% Significance Level, there is 1 Potential Outlier
Therefore, Observation 11000 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total HxCB

Total N	**26**
Number NDs	**0**
Number Detects	**26**
Mean of Detects	**2558**
SD of Detects	**3605**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	2558	3535	14000	1	3.237	2.84	3.16

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 14000 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total NoCB

Total N	**26**
Number NDs	**0**
Number Detects	**26**
Mean of Detects	**569.4**
SD of Detects	**950.8**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	569.4	932.3	4200	14	3.894	2.84	3.16

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 4200 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total OcCB

Total N	**26**

Outlier Tests for Selected Variables excluding nondetects (Round 2)

Number NDs	**0**
Number Detects	**26**
Mean of Detects	**592.4**
SD of Detects	**824.4**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	592.4	808.4	3000	1	2.978	2.84	3.16

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 3000 is a Potential Statistical Outlier

For 1% Significance Level, there is no Potential Outlier

Rosner's Outlier Test for 1 Outliers in TOTAL PCBs

Total N	**26**
Number NDs	**0**
Number Detects	**26**
Mean of Detects	**8193**
SD of Detects	**11299**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	8193	11080	40000	22	2.871	2.84	3.16

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 40000 is a Potential Statistical Outlier

For 1% Significance Level, there is no Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total PeCB

Total N	**26**
Number NDs	**0**
Number Detects	**26**
Mean of Detects	**1349**
SD of Detects	**2451**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

Outlier Tests for Selected Variables excluding nondetects (Round 2)

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	1349	2403	11000	4	4.016	2.84	3.16

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 11000 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total TeCB

Total N	**26**
Number NDs	**0**
Number Detects	**26**
Mean of Detects	**334.5**
SD of Detects	**608.9**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	334.5	597.1	2500	4	3.627	2.84	3.16

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 2500 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total TrCB

Total N	**25**
Number NDs	**0**
Number Detects	**25**
Mean of Detects	**102.1**
SD of Detects	**151.5**
Number of data	**25**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	102.1	148.5	610	22	3.421	2.82	3.14

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 610 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Calcium

Total N	**26**
Number NDs	**0**
Number Detects	**26**
Mean of Detects	**1624**
SD of Detects	**3407**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	1624	3341	17500	26	4.752	2.84	3.16

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 17500 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Chromium

Total N	**26**
Number NDs	**0**
Number Detects	**26**
Mean of Detects	**13.32**
SD of Detects	**4.855**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	13.32	4.761	23.9	11	2.222	2.84	3.16

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Rosner's Outlier Test for 1 Outliers in Copper

Total N	**26**
Number NDs	**0**
Number Detects	**26**
Mean of Detects	**29.39**

SD of Detects	**23.86**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	29.39	23.39	93.4	25	2.736	2.84	3.16

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Rosner's Outlier Test for 1 Outliers in Iron

Total N	**26**
Number NDs	**0**
Number Detects	**26**
Mean of Detects	**18135**
SD of Detects	**7610**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	18135	7462	38900	9	2.783	2.84	3.16

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Rosner's Outlier Test for 1 Outliers in Lead

Total N	**26**
Number NDs	**0**
Number Detects	**26**
Mean of Detects	**74.72**
SD of Detects	**71.55**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	74.72	70.16	299	14	3.197	2.84	3.16

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 299 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Manganese

Total N	**26**
Number NDs	**0**
Number Detects	**26**
Mean of Detects	**410.9**
SD of Detects	**241.6**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	410.9	236.9	1030	8	2.613	2.84	3.16

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Dixon's Outlier Test for Thallium

Total N = 26
Number NDs = 15
Number Detects = 11
10% critical value: 0.517
5% critical value: 0.576
1% critical value: 0.679
Note: NDs excluded from Outlier Test

1. Data Value 0.091 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.055

For 10% significance level, 0.091 is not an outlier.
For 5% significance level, 0.091 is not an outlier.
For 1% significance level, 0.091 is not an outlier.

2. Data Value 0.034 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.345

For 10% significance level, 0.034 is not an outlier.
For 5% significance level, 0.034 is not an outlier.
For 1% significance level, 0.034 is not an outlier.

Outlier Tests for Selected Variables excluding nondetects (Round 2)

Rosner's Outlier Test for 1 Outliers in Zinc

Total N	**26**
Number NDs	**0**
Number Detects	**26**
Mean of Detects	**66.8**
SD of Detects	**46.21**
Number of data	**26**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	66.8	45.31	180	22	2.498	2.84	3.16

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Outlier Tests for Selected Variables excluding nondetects (Round 3)

User Selected Options

Date/Time of Computation	ProUCL 5.15/8/2020 12:58:29 PM
From File	S-A Soil All Bkg_b.xls
Full Precision	OFF

Dixon's Outlier Test for SIM-2-Methylnaphthalene

Total N = 25
Number NDs = 8
Number Detects = 17
10% critical value: 0.438
5% critical value: 0.49
1% critical value: 0.577
Note: NDs excluded from Outlier Test

1. Data Value 49 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.648

For 10% significance level, 49 is an outlier.
For 5% significance level, 49 is an outlier.
For 1% significance level, 49 is an outlier.

2. Data Value 0.83 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.021

For 10% significance level, 0.83 is not an outlier.
For 5% significance level, 0.83 is not an outlier.
For 1% significance level, 0.83 is not an outlier.

Dixon's Outlier Test for SIM-Acenaphthylene

Total N = 25
Number NDs = 5
Number Detects = 20
10% critical value: 0.401
5% critical value: 0.45
1% critical value: 0.535
Note: NDs excluded from Outlier Test

1. Data Value 35 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.531

For 10% significance level, 35 is an outlier.
For 5% significance level, 35 is an outlier.
For 1% significance level, 35 is not an outlier.

2. Data Value 0.88 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.013

For 10% significance level, 0.88 is not an outlier.
For 5% significance level, 0.88 is not an outlier.
For 1% significance level, 0.88 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(a)anthracene

Total N = 25
Number NDs = 3
Number Detects = 22
10% critical value: 0.382
5% critical value: 0.43
1% critical value: 0.514
Note: NDs excluded from Outlier Test

1. Data Value 200 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.407

For 10% significance level, 200 is an outlier.
For 5% significance level, 200 is not an outlier.
For 1% significance level, 200 is not an outlier.

2. Data Value 0.76 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.021

For 10% significance level, 0.76 is not an outlier.
For 5% significance level, 0.76 is not an outlier.
For 1% significance level, 0.76 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(a)pyrene

Total N = 25
Number NDs = 4
Number Detects = 21
10% critical value: 0.391
5% critical value: 0.44
1% critical value: 0.524
Note: NDs excluded from Outlier Test

1. Data Value 200 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.457

For 10% significance level, 200 is an outlier.
For 5% significance level, 200 is an outlier.
For 1% significance level, 200 is not an outlier.

2. Data Value 1.2 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.017

For 10% significance level, 1.2 is not an outlier.
For 5% significance level, 1.2 is not an outlier.
For 1% significance level, 1.2 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(b)fluoranthene

Total N = 25
Number NDs = 3
Number Detects = 22
10% critical value: 0.382
5% critical value: 0.43
1% critical value: 0.514
Note: NDs excluded from Outlier Test

1. Data Value 260 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.391

For 10% significance level, 260 is an outlier.
For 5% significance level, 260 is not an outlier.
For 1% significance level, 260 is not an outlier.

2. Data Value 1.5 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.016

For 10% significance level, 1.5 is not an outlier.
For 5% significance level, 1.5 is not an outlier.
For 1% significance level, 1.5 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(k)fluoranthene

Total N = 25
Number NDs = 5
Number Detects = 20
10% critical value: 0.401
5% critical value: 0.45
1% critical value: 0.535
Note: NDs excluded from Outlier Test

1. Data Value 100 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.459

For 10% significance level, 100 is an outlier.

For 5% significance level, 100 is an outlier.

For 1% significance level, 100 is not an outlier.

2. Data Value 1.6 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.006

For 10% significance level, 1.6 is not an outlier.

For 5% significance level, 1.6 is not an outlier.

For 1% significance level, 1.6 is not an outlier.

Dixon's Outlier Test for SIM-Chrysene

Total N = 25

Number NDs = 3

Number Detects = 22

10% critical value: 0.382

5% critical value: 0.43

1% critical value: 0.514

Note: NDs excluded from Outlier Test

1. Data Value 210 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.339

For 10% significance level, 210 is not an outlier.

For 5% significance level, 210 is not an outlier.

For 1% significance level, 210 is not an outlier.

2. Data Value 1.1 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.018

For 10% significance level, 1.1 is not an outlier.

For 5% significance level, 1.1 is not an outlier.

For 1% significance level, 1.1 is not an outlier.

Dixon's Outlier Test for SIM-Indeno(1,2,3-cd)pyrene

Total N = 25

Number NDs = 4

Number Detects = 21

10% critical value: 0.391

5% critical value: 0.44

1% critical value: 0.524

Note: NDs excluded from Outlier Test

1. Data Value 110 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.491

For 10% significance level, 110 is an outlier.
For 5% significance level, 110 is an outlier.
For 1% significance level, 110 is not an outlier.

2. Data Value 1.1 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.016

For 10% significance level, 1.1 is not an outlier.
For 5% significance level, 1.1 is not an outlier.
For 1% significance level, 1.1 is not an outlier.

Dixon's Outlier Test for SIM-Naphthalene

Total N = 25
Number NDs = 8
Number Detects = 17
10% critical value: 0.438
5% critical value: 0.49
1% critical value: 0.577
Note: NDs excluded from Outlier Test

1. Data Value 33 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.627

For 10% significance level, 33 is an outlier.
For 5% significance level, 33 is an outlier.
For 1% significance level, 33 is an outlier.

2. Data Value 0.75 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.029

For 10% significance level, 0.75 is not an outlier.
For 5% significance level, 0.75 is not an outlier.
For 1% significance level, 0.75 is not an outlier.

Dixon's Outlier Test for 1,2,3,6,7,8-HxCDD

Total N = 12
Number NDs = 9
Number Detects = 3
10% critical value: 0.886
5% critical value: 0.941
1% critical value: 0.988
Note: NDs excluded from Outlier Test

1. Data Value 2.2 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.750

For 10% significance level, 2.2 is not an outlier.
For 5% significance level, 2.2 is not an outlier.
For 1% significance level, 2.2 is not an outlier.

2. Data Value 1.8 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.250

For 10% significance level, 1.8 is not an outlier.
For 5% significance level, 1.8 is not an outlier.
For 1% significance level, 1.8 is not an outlier.

Dixon's Outlier Test for Total PeCDD

Total N = 12
Number NDs = 6
Number Detects = 6
10% critical value: 0.482
5% critical value: 0.56
1% critical value: 0.698
Note: NDs excluded from Outlier Test

1. Data Value 12 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.206

For 10% significance level, 12 is not an outlier.
For 5% significance level, 12 is not an outlier.
For 1% significance level, 12 is not an outlier.

2. Data Value 2.3 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.010

For 10% significance level, 2.3 is not an outlier.
For 5% significance level, 2.3 is not an outlier.
For 1% significance level, 2.3 is not an outlier.

Dixon's Outlier Test for Total TCDD

Total N = 12
Number NDs = 2
Number Detects = 10
10% critical value: 0.409
5% critical value: 0.477
1% critical value: 0.597
Note: NDs excluded from Outlier Test

1. Data Value 17 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.186

For 10% significance level, 17 is not an outlier.
For 5% significance level, 17 is not an outlier.
For 1% significance level, 17 is not an outlier.

2. Data Value 0.515 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.029

For 10% significance level, 0.515 is not an outlier.
For 5% significance level, 0.515 is not an outlier.
For 1% significance level, 0.515 is not an outlier.

Dixon's Outlier Test for Total DiCB

Total N = 20
Number NDs = 0
Number Detects = 20
10% critical value: 0.401
5% critical value: 0.45
1% critical value: 0.535
Note: NDs excluded from Outlier Test

1. Data Value 335 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.226

For 10% significance level, 335 is not an outlier.
For 5% significance level, 335 is not an outlier.
For 1% significance level, 335 is not an outlier.

2. Data Value 2.8 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.003

For 10% significance level, 2.8 is not an outlier.
For 5% significance level, 2.8 is not an outlier.
For 1% significance level, 2.8 is not an outlier.

Rosner's Outlier Test for 1 Outliers in Total HpCB

Total N	**25**
Number NDs	**0**
Number Detects	**25**
Mean of Detects	**1206**

Outlier Tests for Selected Variables excluding nondetects (Round 3)

SD of Detects	**1386**
Number of data	**25**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	1206	1358	5600	21	3.237	2.82	3.14

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 5600 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total HxCB

Total N	**25**
Number NDs	**0**
Number Detects	**25**
Mean of Detects	**2100**
SD of Detects	**2805**
Number of data	**25**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	2100	2748	10000	21	2.875	2.82	3.14

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 10000 is a Potential Statistical Outlier

For 1% Significance Level, there is no Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total OcCB

Total N	**25**
Number NDs	**0**
Number Detects	**25**
Mean of Detects	**496.1**
SD of Detects	**675.9**
Number of data	**25**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	496.1	662.2	2800	21	3.479	2.82	3.14

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 2800 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in TOTAL PCBs

Total N	**25**
Number NDs	**0**
Number Detects	**25**
Mean of Detects	**6921**
SD of Detects	**9442**
Number of data	**25**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	6921	9251	32000	1	2.711	2.82	3.14

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total PeCB

Total N	**25**
Number NDs	**0**
Number Detects	**25**
Mean of Detects	**963.3**
SD of Detects	**1490**
Number of data	**25**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	963.3	1460	5800	21	3.312	2.82	3.14

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 5800 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Total TeCB

Outlier Tests for Selected Variables excluding nondetects (Round 3)

Total N	**25**
Number NDs	**0**
Number Detects	**25**
Mean of Detects	**247.9**
SD of Detects	**427.8**
Number of data	**25**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	247.9	419.1	1800	21	3.703	2.82	3.14

For 5% Significance Level, there is 1 Potential Outlier
Therefore, Observation 1800 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Dixon's Outlier Test for Total TrCB

Total N = 24
Number NDs = 0
Number Detects = 24
10% critical value: 0.367
5% critical value: 0.413
1% critical value: 0.497
Note: NDs excluded from Outlier Test

1. Data Value 350 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.144

For 10% significance level, 350 is not an outlier.
For 5% significance level, 350 is not an outlier.
For 1% significance level, 350 is not an outlier.

2. Data Value 0.33 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.005

For 10% significance level, 0.33 is not an outlier.
For 5% significance level, 0.33 is not an outlier.
For 1% significance level, 0.33 is not an outlier.

Rosner's Outlier Test for 1 Outliers in Calcium

Total N	**25**
Number NDs	**0**

Outlier Tests for Selected Variables excluding nondetects (Round 3)

Number Detects	**25**
Mean of Detects	**989.1**
SD of Detects	**1081**
Number of data	**25**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	989.1	1060	4600	22	3.408	2.82	3.14

For 5% Significance Level, there is 1 Potential Outlier

Therefore, Observation 4600 is a Potential Statistical Outlier

For 1% Significance Level, there is 1 Potential Outlier

Rosner's Outlier Test for 1 Outliers in Lead

Total N	**25**
Number NDs	**0**
Number Detects	**25**
Mean of Detects	**65.75**
SD of Detects	**56.15**
Number of data	**25**
Number of suspected outliers	**1**
NDs not included in the following:	

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	65.75	55.01	194	21	2.331	2.82	3.14

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Outlier Tests for Selected Variables excluding nondetects (Round 4)

User Selected Options

Date/Time of Computation	ProUCL 5.15/8/2020 2:28:59 PM
From File	S-A Soil All Bkg_c.xls
Full Precision	OFF

Dixon's Outlier Test for SIM-2-Methylnaphthalene

Total N = 24
Number NDs = 8
Number Detects = 16
10% critical value: 0.454
5% critical value: 0.507
1% critical value: 0.595
Note: NDs excluded from Outlier Test

1. Data Value 40 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.696

For 10% significance level, 40 is an outlier.
For 5% significance level, 40 is an outlier.
For 1% significance level, 40 is an outlier.

2. Data Value 0.83 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.030

For 10% significance level, 0.83 is not an outlier.
For 5% significance level, 0.83 is not an outlier.
For 1% significance level, 0.83 is not an outlier.

Dixon's Outlier Test for SIM-Acenaphthylene

Total N = 24
Number NDs = 5
Number Detects = 19
10% critical value: 0.412
5% critical value: 0.462
1% critical value: 0.547
Note: NDs excluded from Outlier Test

1. Data Value 19 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.167

For 10% significance level, 19 is not an outlier.
For 5% significance level, 19 is not an outlier.
For 1% significance level, 19 is not an outlier.

2. Data Value 0.88 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.014

For 10% significance level, 0.88 is not an outlier.
For 5% significance level, 0.88 is not an outlier.
For 1% significance level, 0.88 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(a)pyrene

Total N = 24
Number NDs = 4
Number Detects = 20
10% critical value: 0.401
5% critical value: 0.45
1% critical value: 0.535
Note: NDs excluded from Outlier Test

1. Data Value 120 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.214

For 10% significance level, 120 is not an outlier.
For 5% significance level, 120 is not an outlier.
For 1% significance level, 120 is not an outlier.

2. Data Value 1.2 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.019

For 10% significance level, 1.2 is not an outlier.
For 5% significance level, 1.2 is not an outlier.
For 1% significance level, 1.2 is not an outlier.

Dixon's Outlier Test for SIM-Benzo(k)fluoranthene

Total N = 24
Number NDs = 5
Number Detects = 19
10% critical value: 0.412
5% critical value: 0.462
1% critical value: 0.547
Note: NDs excluded from Outlier Test

1. Data Value 56 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.185

For 10% significance level, 56 is not an outlier.
For 5% significance level, 56 is not an outlier.
For 1% significance level, 56 is not an outlier.

2. Data Value 1.6 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.007

For 10% significance level, 1.6 is not an outlier.
For 5% significance level, 1.6 is not an outlier.
For 1% significance level, 1.6 is not an outlier.

Dixon's Outlier Test for SIM-Indeno(1,2,3-cd)pyrene

Total N = 24
Number NDs = 4
Number Detects = 20
10% critical value: 0.401
5% critical value: 0.45
1% critical value: 0.535
Note: NDs excluded from Outlier Test

1. Data Value 68 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.242

For 10% significance level, 68 is not an outlier.
For 5% significance level, 68 is not an outlier.
For 1% significance level, 68 is not an outlier.

2. Data Value 1.1 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.018

For 10% significance level, 1.1 is not an outlier.
For 5% significance level, 1.1 is not an outlier.
For 1% significance level, 1.1 is not an outlier.

Dixon's Outlier Test for SIM-Naphthalene

Total N = 24
Number NDs = 8
Number Detects = 16
10% critical value: 0.454
5% critical value: 0.507
1% critical value: 0.595
Note: NDs excluded from Outlier Test

1. Data Value 28 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.595

For 10% significance level, 28 is an outlier.

For 5% significance level, 28 is an outlier.

For 1% significance level, 28 is not an outlier.

2. Data Value 0.75 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.031

For 10% significance level, 0.75 is not an outlier.

For 5% significance level, 0.75 is not an outlier.

For 1% significance level, 0.75 is not an outlier.

Dixon's Outlier Test for Total HpCB

Total N = 24

Number NDs = 0

Number Detects = 24

10% critical value: 0.367

5% critical value: 0.413

1% critical value: 0.497

Note: NDs excluded from Outlier Test

1. Data Value 3500 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.264

For 10% significance level, 3500 is not an outlier.

For 5% significance level, 3500 is not an outlier.

For 1% significance level, 3500 is not an outlier.

2. Data Value 28 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.023

For 10% significance level, 28 is not an outlier.

For 5% significance level, 28 is not an outlier.

For 1% significance level, 28 is not an outlier.

Dixon's Outlier Test for Total HxCB

Total N = 24

Number NDs = 0

Number Detects = 24

10% critical value: 0.367

5% critical value: 0.413

1% critical value: 0.497

Note: NDs excluded from Outlier Test

1. Data Value 9400 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.537

For 10% significance level, 9400 is an outlier.
For 5% significance level, 9400 is an outlier.
For 1% significance level, 9400 is an outlier.

2. Data Value 36 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.013

For 10% significance level, 36 is not an outlier.
For 5% significance level, 36 is not an outlier.
For 1% significance level, 36 is not an outlier.

Dixon's Outlier Test for Total OcCB

Total N = 24
Number NDs = 0
Number Detects = 24
10% critical value: 0.367
5% critical value: 0.413
1% critical value: 0.497
Note: NDs excluded from Outlier Test

1. Data Value 2100 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.567

For 10% significance level, 2100 is an outlier.
For 5% significance level, 2100 is an outlier.
For 1% significance level, 2100 is an outlier.

2. Data Value 7.6 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.032

For 10% significance level, 7.6 is not an outlier.
For 5% significance level, 7.6 is not an outlier.
For 1% significance level, 7.6 is not an outlier.

Dixon's Outlier Test for Total PeCB

Total N = 24
Number NDs = 0
Number Detects = 24
10% critical value: 0.367
5% critical value: 0.413
1% critical value: 0.497
Note: NDs excluded from Outlier Test

1. Data Value 4500 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.470

For 10% significance level, 4500 is an outlier.
For 5% significance level, 4500 is an outlier.
For 1% significance level, 4500 is not an outlier.

2. Data Value 13 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.009

For 10% significance level, 13 is not an outlier.
For 5% significance level, 13 is not an outlier.
For 1% significance level, 13 is not an outlier.

Dixon's Outlier Test for Total TeCB

Total N = 24
Number NDs = 0
Number Detects = 24
10% critical value: 0.367
5% critical value: 0.413
1% critical value: 0.497
Note: NDs excluded from Outlier Test

1. Data Value 1100 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.384

For 10% significance level, 1100 is an outlier.
For 5% significance level, 1100 is not an outlier.
For 1% significance level, 1100 is not an outlier.

2. Data Value 3.1 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.007

For 10% significance level, 3.1 is not an outlier.
For 5% significance level, 3.1 is not an outlier.
For 1% significance level, 3.1 is not an outlier.

Dixon's Outlier Test for Calcium

Total N = 24
Number NDs = 0
Number Detects = 24
10% critical value: 0.367
5% critical value: 0.413
1% critical value: 0.497
Note: NDs excluded from Outlier Test

1. Data Value 3600 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.579

For 10% significance level, 3600 is an outlier.
For 5% significance level, 3600 is an outlier.
For 1% significance level, 3600 is an outlier.

2. Data Value 161 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.047

For 10% significance level, 161 is not an outlier.
For 5% significance level, 161 is not an outlier.
For 1% significance level, 161 is not an outlier.

Outlier Tests for Selected Variables excluding nondetects (Round 5)

User Selected Options

Date/Time of Computation	ProUCL 5.15/8/2020 2:46:06 PM
From File	S-A Soil All Bkg_d.xls
Full Precision	OFF

Dixon's Outlier Test for SIM-2-Methylnaphthalene

Total N = 23
Number NDs = 8
Number Detects = 15
10% critical value: 0.472
5% critical value: 0.525
1% critical value: 0.616
Note: NDs excluded from Outlier Test

1. Data Value 18 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.357

For 10% significance level, 18 is not an outlier.
For 5% significance level, 18 is not an outlier.
For 1% significance level, 18 is not an outlier.

2. Data Value 0.83 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.032

For 10% significance level, 0.83 is not an outlier.
For 5% significance level, 0.83 is not an outlier.
For 1% significance level, 0.83 is not an outlier.

Dixon's Outlier Test for SIM-Naphthalene

Total N = 23
Number NDs = 8
Number Detects = 15
10% critical value: 0.472
5% critical value: 0.525
1% critical value: 0.616
Note: NDs excluded from Outlier Test

1. Data Value 13 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.277

For 10% significance level, 13 is not an outlier.
For 5% significance level, 13 is not an outlier.
For 1% significance level, 13 is not an outlier.

2. Data Value 0.75 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.039

For 10% significance level, 0.75 is not an outlier.
For 5% significance level, 0.75 is not an outlier.
For 1% significance level, 0.75 is not an outlier.

Dixon's Outlier Test for Total HxCB

Total N = 23
Number NDs = 0
Number Detects = 23
10% critical value: 0.374
5% critical value: 0.421
1% critical value: 0.505
Note: NDs excluded from Outlier Test

1. Data Value 6400 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.349

For 10% significance level, 6400 is not an outlier.
For 5% significance level, 6400 is not an outlier.
For 1% significance level, 6400 is not an outlier.

2. Data Value 36 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.013

For 10% significance level, 36 is not an outlier.
For 5% significance level, 36 is not an outlier.
For 1% significance level, 36 is not an outlier.

Dixon's Outlier Test for Total OcCB

Total N = 23
Number NDs = 0
Number Detects = 23
10% critical value: 0.374
5% critical value: 0.421
1% critical value: 0.505
Note: NDs excluded from Outlier Test

1. Data Value 1000 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.083

For 10% significance level, 1000 is not an outlier.
For 5% significance level, 1000 is not an outlier.
For 1% significance level, 1000 is not an outlier.

2. Data Value 7.6 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.032

For 10% significance level, 7.6 is not an outlier.
For 5% significance level, 7.6 is not an outlier.
For 1% significance level, 7.6 is not an outlier.

Dixon's Outlier Test for Total PeCB

Total N = 23
Number NDs = 0
Number Detects = 23
10% critical value: 0.374
5% critical value: 0.421
1% critical value: 0.505
Note: NDs excluded from Outlier Test

1. Data Value 2800 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.181

For 10% significance level, 2800 is not an outlier.
For 5% significance level, 2800 is not an outlier.
For 1% significance level, 2800 is not an outlier.

2. Data Value 13 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.010

For 10% significance level, 13 is not an outlier.
For 5% significance level, 13 is not an outlier.
For 1% significance level, 13 is not an outlier.

Dixon's Outlier Test for Total TeCB

Total N = 23
Number NDs = 0
Number Detects = 23
10% critical value: 0.374
5% critical value: 0.421
1% critical value: 0.505
Note: NDs excluded from Outlier Test

1. Data Value 780 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.453

For 10% significance level, 780 is an outlier.

Outlier Tests for Selected Variables excluding nondetects (Round 5)

For 5% significance level, 780 is an outlier.

For 1% significance level, 780 is not an outlier.

2. Data Value 3.1 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.010

For 10% significance level, 3.1 is not an outlier.

For 5% significance level, 3.1 is not an outlier.

For 1% significance level, 3.1 is not an outlier.

Dixon's Outlier Test for Calcium

Total N = 23

Number NDs = 0

Number Detects = 23

10% critical value: 0.374

5% critical value: 0.421

1% critical value: 0.505

Note: NDs excluded from Outlier Test

1. Data Value 1900 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.180

For 10% significance level, 1900 is not an outlier.

For 5% significance level, 1900 is not an outlier.

For 1% significance level, 1900 is not an outlier.

2. Data Value 161 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.049

For 10% significance level, 161 is not an outlier.

For 5% significance level, 161 is not an outlier.

For 1% significance level, 161 is not an outlier.

Outlier Tests for Selected Uncensored Variables (Round 6)

User Selected Options

Date/Time of Computation	ProUCL 5.15/8/2020 2:54:54 PM
From File	S-A Soil All Bkg_f.xls
Full Precision	OFF

Dixon's Outlier Test for Total TeCB

Number of Observations = 21

10% critical value: 0.391

5% critical value: 0.44

1% critical value: 0.524

1. Observation Value 430 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.426

For 10% significance level, 430 is an outlier.

For 5% significance level, 430 is not an outlier.

For 1% significance level, 430 is not an outlier.

2. Observation Value 3.1 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.018

For 10% significance level, 3.1 is not an outlier.

For 5% significance level, 3.1 is not an outlier.

For 1% significance level, 3.1 is not an outlier.

ATTACHMENT 2 OF APPENDIX E

HYPOTHESIS TESTING

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 3:52:52 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: 2-Butanone(ss)

Sample 2 Data: 2-Butanone(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	18	6
Number of Detects	2	1
Minimum Non-Detect	7.9	7.9
Maximum Non-Detect	23	9.85
Percent Non-detects	90.00%	85.71%
Minimum Detect	4.2	5.3
Maximum Detect	5.8	5.3
Mean of Detects	5	5.3
Median of Detects	5	5.3
SD of Detects	1.131	N/A
KM Mean	5	5.3
KM SD	0.8	0

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	-0.12
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.904

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 3:55:36 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Methylcyclohexane(ss)

Sample 2 Data: Methylcyclohexane(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	18	7
Number of Detects	2	0
Minimum Non-Detect	4	3.9
Maximum Non-Detect	8.1	6.2
Percent Non-detects	90.00%	100.00%
Minimum Detect	7.2	N/A
Maximum Detect	11	N/A
Mean of Detects	9.1	N/A
Median of Detects	9.1	N/A
SD of Detects	2.687	N/A
KM Mean	4.54	N/A
KM SD	1.663	N/A

Sample 1 vs Sample 2 Tarone-Ware Test

There are no detects in at least on of the groups - no analysis will be performed!

Graphical displays may be helpful!

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 4:40:09 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Methylene chloride(ss)

Sample 2 Data: Methylene chloride(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	19	7
Number of Missing Observations	1	0
Number of Non-Detects	17	5
Number of Detects	2	2
Minimum Non-Detect	4	3.9
Maximum Non-Detect	12	6.2
Percent Non-detects	89.47%	71.43%
Minimum Detect	3	2.9
Maximum Detect	3.7	3.6
Mean of Detects	3.35	3.25
Median of Detects	3.35	3.25
SD of Detects	0.495	0.495
KM Mean	3.35	3.25
KM SD	0.35	0.35

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	0.768
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.443

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 3:54:16 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: m,p-Xylene(ss)

Sample 2 Data: m,p-Xylene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	19	7
Number of Missing Observations	1	0
Number of Non-Detects	17	7
Number of Detects	2	0
Minimum Non-Detect	4	3.9
Maximum Non-Detect	8.1	6.2
Percent Non-detects	89.47%	100.00%
Minimum Detect	0.91	N/A
Maximum Detect	4	N/A
Mean of Detects	2.455	N/A
Median of Detects	2.455	N/A
SD of Detects	2.185	N/A
KM Mean	1.94	N/A
KM SD	1.457	N/A

Sample 1 vs Sample 2 Tarone-Ware Test

There are no detects in at least on of the groups - no analysis will be performed!

Graphical displays may be helpful!

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 7:19:30 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Dimethylphthalate(ss)

Sample 2 Data: Dimethylphthalate(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	0	0
Number of Detects	20	7
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	83	110
Maximum Detect	330	380
Mean of Detects	173.6	202.1
Median of Detects	160	170
SD of Detects	62.95	106.1
KM Mean	173.6	202.1
KM SD	62.95	106.1

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	-0.175
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.861

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 8:05:34 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Acenaphthylene(ss)

Sample 2 Data: SIM-Acenaphthylene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	17	7
Number of Missing Observations	3	0
Number of Non-Detects	2	3
Number of Detects	15	4
Minimum Non-Detect	3.85	3.6
Maximum Non-Detect	4	3.8
Percent Non-detects	11.76%	42.86%
Minimum Detect	0.94	0.88
Maximum Detect	19	10.35
Mean of Detects	7.255	3.383
Median of Detects	6	1.15
SD of Detects	6.772	4.647
KM Mean	6.558	2.387
KM SD	6.436	3.253

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.777
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0755

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 4:20:52 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Benzo(a)anthracene(ss)

Sample 2 Data: Benzo(a)anthracene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	12	6
Number of Detects	8	1
Minimum Non-Detect	190	180
Maximum Non-Detect	250	200
Percent Non-detects	60.00%	85.71%
Minimum Detect	43	63
Maximum Detect	390	63
Mean of Detects	158.9	63
Median of Detects	125	63
SD of Detects	115.6	N/A
KM Mean	121.6	63
KM SD	81.99	0

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.004
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.315

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 6:57:17 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Benzo(a)pyrene(ss)

Sample 2 Data: Benzo(a)pyrene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	11	6
Number of Detects	9	1
Minimum Non-Detect	190	180
Maximum Non-Detect	220	200
Percent Non-detects	55.00%	85.71%
Minimum Detect	44	71
Maximum Detect	410	71
Mean of Detects	150.9	71
Median of Detects	120	71
SD of Detects	119.9	N/A
KM Mean	117.8	71
KM SD	87.45	0

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	0.87
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.384

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 6:59:31 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Benzo(b)fluoranthene(ss)

Sample 2 Data: Benzo(b)fluoranthene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	19	7
Number of Missing Observations	1	0
Number of Non-Detects	10	6
Number of Detects	9	1
Minimum Non-Detect	190	180
Maximum Non-Detect	220	200
Percent Non-detects	52.63%	85.71%
Minimum Detect	51	110
Maximum Detect	410	110
Mean of Detects	159.2	110
Median of Detects	130	110
SD of Detects	112.7	N/A
KM Mean	133.5	110
KM SD	83.55	0

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	0.647
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.518

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 7:06:00 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Benzo(g,h,i)perylene(ss)

Sample 2 Data: Benzo(g,h,i)perylene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	13	6
Number of Detects	7	1
Minimum Non-Detect	190	180
Maximum Non-Detect	230	200
Percent Non-detects	65.00%	85.71%
Minimum Detect	54	41
Maximum Detect	300	41
Mean of Detects	131.9	41
Median of Detects	110	41
SD of Detects	84.71	N/A
KM Mean	113.6	41
KM SD	58.5	0

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.409
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.159

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 7:09:44 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Chrysene(ss)

Sample 2 Data: Chrysene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	19	7
Number of Missing Observations	1	0
Number of Non-Detects	10	6
Number of Detects	9	1
Minimum Non-Detect	190	180
Maximum Non-Detect	220	200
Percent Non-detects	52.63%	85.71%
Minimum Detect	53	87
Maximum Detect	290	87
Mean of Detects	128.3	87
Median of Detects	95	87
SD of Detects	75.85	N/A
KM Mean	112.9	87
KM SD	57.93	0

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	0.815
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.415

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 7:28:41 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Fluoranthene(ss)

Sample 2 Data: Fluoranthene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	19	7
Number of Missing Observations	1	0
Number of Non-Detects	9	6
Number of Detects	10	1
Minimum Non-Detect	360	360
Maximum Non-Detect	410	400
Percent Non-detects	47.37%	85.71%
Minimum Detect	58	61
Maximum Detect	500	61
Mean of Detects	209.1	61
Median of Detects	175	61
SD of Detects	154.1	N/A
KM Mean	182.2	61
KM SD	127.2	0

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.275
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.202

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 7:31:35 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Phenol(ss)

Sample 2 Data: Phenol(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	1	1
Number of Detects	19	6
Minimum Non-Detect	400	390
Maximum Non-Detect	400	390
Percent Non-detects	5.00%	14.29%
Minimum Detect	43	41
Maximum Detect	210	180
Mean of Detects	129.7	135.2
Median of Detects	125	150
SD of Detects	45.26	52.08
KM Mean	129.7	135.2
KM SD	44.05	47.54

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	-0.336
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.737

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 7:34:43 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Pyrene(ss)

Sample 2 Data: Pyrene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	19	7
Number of Missing Observations	1	0
Number of Non-Detects	9	6
Number of Detects	10	1
Minimum Non-Detect	190	180
Maximum Non-Detect	210	200
Percent Non-detects	47.37%	85.71%
Minimum Detect	60	57
Maximum Detect	430	57
Mean of Detects	190.1	57
Median of Detects	155	57
SD of Detects	130.3	N/A
KM Mean	138	57
KM SD	105.7	0

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.841
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0657

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 4:17:39 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: 4,4'-DDD(ss)

Sample 2 Data: 4,4'-DDD(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	6	5
Number of Detects	14	2
Minimum Non-Detect	3.6	3.6
Maximum Non-Detect	4	3.9
Percent Non-detects	30.00%	71.43%
Minimum Detect	0.435	0.39
Maximum Detect	5	0.535
Mean of Detects	1.986	0.463
Median of Detects	1.75	0.463
SD of Detects	1.43	0.103
KM Mean	1.843	0.463
KM SD	1.25	0.0725

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.849
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0645

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 4:21:26 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: gamma-BHC (Lindane)(ss)

Sample 2 Data: gamma-BHC (Lindane)(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	5	6
Number of Detects	15	1
Minimum Non-Detect	1.9	1.8
Maximum Non-Detect	2.1	2
Percent Non-detects	25.00%	85.71%
Minimum Detect	0.21	0.45
Maximum Detect	3.9	0.45
Mean of Detects	1.34	0.45
Median of Detects	1.2	0.45
SD of Detects	1.048	N/A
KM Mean	1.212	0.45
KM SD	0.935	0

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.176
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.239

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 7:58:20 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-2-Methylnaphthalene(ss)

Sample 2 Data: SIM-2-Methylnaphthalene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	16	7
Number of Missing Observations	4	0
Number of Non-Detects	4	4
Number of Detects	12	3
Minimum Non-Detect	3.6	3.7
Maximum Non-Detect	4	3.9
Percent Non-detects	25.00%	57.14%
Minimum Detect	0.85	0.83
Maximum Detect	18	8.4
Mean of Detects	6.303	3.877
Median of Detects	4.85	2.4
SD of Detects	5.333	3.995
KM Mean	5.143	2.584
KM SD	4.884	2.483

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.551
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.121

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 8:09:48 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Anthracene(ss)

Sample 2 Data: SIM-Anthracene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	4	4
Number of Detects	16	3
Minimum Non-Detect	3.6	3.6
Maximum Non-Detect	4.1	3.8
Percent Non-detects	20.00%	57.14%
Minimum Detect	0.82	0.92
Maximum Detect	57	5.75
Mean of Detects	13.91	2.723
Median of Detects	7.8	1.5
SD of Detects	16.17	2.637
KM Mean	11.49	1.859
KM SD	14.82	1.611

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.532
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.125

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 1:01:09 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Benzo(a)anthracene(ss)

Sample 2 Data: SIM-Benzo(a)anthracene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	17	7
Number of Missing Observations	3	0
Number of Non-Detects	0	3
Number of Detects	17	4
Minimum Non-Detect	N/A	3.7
Maximum Non-Detect	N/A	3.8
Percent Non-detects	0.00%	42.86%
Minimum Detect	0.76	0.79
Maximum Detect	140	40.5
Mean of Detects	35.24	12.9
Median of Detects	8.1	5.15
SD of Detects	43.97	18.52
KM Mean	35.24	7.709
KM SD	43.97	13.52

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.97
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0489

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 1:09:27 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Benzo(a)pyrene(ss)

Sample 2 Data: SIM-Benzo(a)pyrene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	18	7
Number of Missing Observations	2	0
Number of Non-Detects	0	4
Number of Detects	18	3
Minimum Non-Detect	N/A	3.6
Maximum Non-Detect	N/A	3.8
Percent Non-detects	0.00%	57.14%
Minimum Detect	1.2	4
Maximum Detect	200	39.5
Mean of Detects	42.8	16.07
Median of Detects	17.9	4.7
SD of Detects	55.21	20.3
KM Mean	42.8	8.943
KM SD	55.21	12.48

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.137
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0326

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 1:12:29 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Benzo(b)fluoranthene(ss)

Sample 2 Data: SIM-Benzo(b)fluoranthene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	18	7
Number of Missing Observations	2	0
Number of Non-Detects	0	3
Number of Detects	18	4
Minimum Non-Detect	N/A	3.7
Maximum Non-Detect	N/A	3.8
Percent Non-detects	0.00%	42.86%
Minimum Detect	1.9	1.5
Maximum Detect	260	68
Mean of Detects	62.32	20.95
Median of Detects	26	7.15
SD of Detects	75.17	31.49
KM Mean	62.32	12.61
KM SD	75.17	22.75

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.506
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0122

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 1:15:11 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Benzo(g,h,i)perylene(ss)

Sample 2 Data: SIM-Benzo(g,h,i)perylene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	19	7
Number of Missing Observations	1	0
Number of Non-Detects	0	3
Number of Detects	19	4
Minimum Non-Detect	N/A	3.7
Maximum Non-Detect	N/A	3.8
Percent Non-detects	0.00%	42.86%
Minimum Detect	1.2	0.81
Maximum Detect	140	21.4
Mean of Detects	35.72	7.028
Median of Detects	19	2.95
SD of Detects	45.01	9.635
KM Mean	35.72	4.974
KM SD	45.01	6.771

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.039
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0415

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 1:41:21 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Benzo(k)fluoranthene(ss)

Sample 2 Data: SIM-Benzo(k)fluoranthene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	17	7
Number of Missing Observations	3	0
Number of Non-Detects	1	4
Number of Detects	16	3
Minimum Non-Detect	3.6	3.6
Maximum Non-Detect	3.6	3.8
Percent Non-detects	5.88%	57.14%
Minimum Detect	1.6	1.7
Maximum Detect	56	21.8
Mean of Detects	18.05	8.833
Median of Detects	9.5	3
SD of Detects	19.42	11.25
KM Mean	17.11	5.129
KM SD	18.62	6.833

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.649
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0991

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 1:43:53 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Chrysene(ss)

Sample 2 Data: SIM-Chrysene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	18	7
Number of Missing Observations	2	0
Number of Non-Detects	0	3
Number of Detects	18	4
Minimum Non-Detect	N/A	3.7
Maximum Non-Detect	N/A	3.8
Percent Non-detects	0.00%	42.86%
Minimum Detect	1.1	1.7
Maximum Detect	210	51.5
Mean of Detects	54.49	17.85
Median of Detects	23.25	9.1
SD of Detects	62.32	22.93
KM Mean	54.49	10.93
KM SD	62.32	17

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.231
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0257

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 1:48:34 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Dibenzo(a,h)anthracene(ss)

Sample 2 Data: SIM-Dibenzo(a,h)anthracene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	19	7
Number of Missing Observations	1	0
Number of Non-Detects	4	4
Number of Detects	15	3
Minimum Non-Detect	3.6	3.6
Maximum Non-Detect	4	3.8
Percent Non-detects	21.05%	57.14%
Minimum Detect	0.995	0.93
Maximum Detect	42	7.65
Mean of Detects	12.11	3.227
Median of Detects	8.4	1.1
SD of Detects	12.41	3.832
KM Mean	9.806	1.963
KM SD	11.55	2.323

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.897
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0578

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 1:52:07 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Fluoranthene(ss)

Sample 2 Data: SIM-Fluoranthene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	19	7
Number of Missing Observations	1	0
Number of Non-Detects	0	3
Number of Detects	19	4
Minimum Non-Detect	N/A	3.7
Maximum Non-Detect	N/A	3.8
Percent Non-detects	0.00%	42.86%
Minimum Detect	0.76	1.4
Maximum Detect	460	35.5
Mean of Detects	104.1	14.13
Median of Detects	55	9.8
SD of Detects	133.6	14.82
KM Mean	104.1	8.671
KM SD	133.6	11.57

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.528
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0115

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 1:55:20 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Fluorene(ss)

Sample 2 Data: SIM-Fluorene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	7	5
Number of Detects	13	2
Minimum Non-Detect	3.6	3.6
Maximum Non-Detect	4.1	4
Percent Non-detects	35.00%	71.43%
Minimum Detect	0.82	0.83
Maximum Detect	18	1.3
Mean of Detects	6.175	1.065
Median of Detects	5	1.065
SD of Detects	5.154	0.332
KM Mean	4.516	1.065
KM SD	4.614	0.235

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.017
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0437

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 1:58:30 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Indeno(1,2,3-cd)pyrene(ss)

Sample 2 Data: SIM-Indeno(1,2,3-cd)pyrene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	17	7
Number of Missing Observations	3	0
Number of Non-Detects	0	4
Number of Detects	17	3
Minimum Non-Detect	N/A	3.6
Maximum Non-Detect	N/A	3.8
Percent Non-detects	0.00%	57.14%
Minimum Detect	1.1	2.2
Maximum Detect	68	21.05
Mean of Detects	19.24	8.617
Median of Detects	5.1	2.6
SD of Detects	22.05	10.77
KM Mean	19.24	5.064
KM SD	22.05	6.529

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.52
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.129

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 2:01:59 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Naphthalene(ss)

Sample 2 Data: SIM-Naphthalene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	16	7
Number of Missing Observations	4	0
Number of Non-Detects	3	5
Number of Detects	13	2
Minimum Non-Detect	3.9	3.6
Maximum Non-Detect	4	3.9
Percent Non-detects	18.75%	71.43%
Minimum Detect	0.75	1.4
Maximum Detect	13	7.4
Mean of Detects	4.788	4.4
Median of Detects	3.5	4.4
SD of Detects	4.128	4.243
KM Mean	4.303	2.257
KM SD	3.747	2.1

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.019
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.308

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 2:04:41 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Phenanthrene(ss)

Sample 2 Data: SIM-Phenanthrene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	0	3
Number of Detects	20	4
Minimum Non-Detect	N/A	3.7
Maximum Non-Detect	N/A	3.8
Percent Non-detects	0.00%	42.86%
Minimum Detect	0.98	1.7
Maximum Detect	290	16
Mean of Detects	74.26	7.95
Median of Detects	35	7.05
SD of Detects	85.36	6.017
KM Mean	74.26	5.271
KM SD	85.36	5.008

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.47
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0135

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 2:07:21 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: SIM-Pyrene(ss)

Sample 2 Data: SIM-Pyrene(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	19	7
Number of Missing Observations	1	0
Number of Non-Detects	0	3
Number of Detects	19	4
Minimum Non-Detect	N/A	3.7
Maximum Non-Detect	N/A	3.8
Percent Non-detects	0.00%	42.86%
Minimum Detect	0.84	1.5
Maximum Detect	460	40.5
Mean of Detects	106.6	16
Median of Detects	55	11
SD of Detects	139.8	16.96
KM Mean	106.6	9.786
KM SD	139.8	13.22

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.472
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0134

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 2:17:35 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: 2,3,7,8-TCDF(ss)

Sample 2 Data: 2,3,7,8-TCDF(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	10	4
Number of Missing Observations	10	3
Number of Non-Detects	0	2
Number of Detects	10	2
Minimum Non-Detect	N/A	0.22
Maximum Non-Detect	N/A	0.24
Percent Non-detects	0.00%	50.00%
Minimum Detect	0.56	0.54
Maximum Detect	4.6	1.1
Mean of Detects	2.112	0.82
Median of Detects	1.65	0.82
SD of Detects	1.588	0.396
KM Mean	2.112	0.52
KM SD	1.588	0.359

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.297
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0216

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/8/2020 4:29:21 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: 1,2,3,4,6,7,8-HpCDD(ss)

Sample 2 Data: 1,2,3,4,6,7,8-HpCDD(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	9	4
Number of Missing Observations	11	3
Number of Distinct Observations	9	4
Minimum	1.9	2.6
Maximum	43	13.5
Mean	19.72	6.45
Median	19	4.85
SD	15.51	5.128
SE of Mean	5.171	2.564

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	72
WMW U-Stat	27
Mean (U)	18
SD(U) - Adj ties	6.481
Lower U-Stat Critical Value (0.025)	5
Upper U-Stat Critical Value (0.975)	31
Standardized WMW U-Stat	1.312
Approximate P-Value	0.19

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 2:13:14 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: 1,2,3,4,6,7,8-HpCDF(ss)

Sample 2 Data: 1,2,3,4,6,7,8-HpCDF(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	10	4
Number of Missing Observations	10	3
Number of Non-Detects	1	3
Number of Detects	9	1
Minimum Non-Detect	2.3	2.1
Maximum Non-Detect	2.3	2.2
Percent Non-detects	10.00%	75.00%
Minimum Detect	2.4	3.8
Maximum Detect	25	3.8
Mean of Detects	12.1	3.8
Median of Detects	13	3.8
SD of Detects	8.617	N/A
KM Mean	11.12	2.525
KM SD	8.249	0.736

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.015
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0439

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 2:41:11 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: OCDD(ss)

Sample 2 Data: OCDD(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	10	3
Number of Missing Observations	10	4
Number of Distinct Observations	10	3
Minimum	78	63
Maximum	750	530
Mean	401.9	301
Median	340	310
SD	248.1	233.6
SE of Mean	78.44	134.9

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	74
WMW U-Stat	19
Mean (U)	15
SD(U) - Adj ties	5.916
Lower U-Stat Critical Value (0.025)	4
Upper U-Stat Critical Value (0.975)	26
Standardized WMW U-Stat	0.592
Approximate P-Value	0.554

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 4:26:31 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total DiCB(ss)

Sample 2 Data: Total DiCB(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	16	4
Number of Missing Observations	4	3
Number of Distinct Observations	16	4
Minimum	3.5	2.8
Maximum	335	34
Mean	88.63	15.16
Median	27.75	11.93
SD	115	14.48
SE of Mean	28.76	7.239

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	181
WMW U-Stat	45
Mean (U)	32
SD(U) - Adj ties	10.58
Lower U-Stat Critical Value (0.025)	12
Upper U-Stat Critical Value (0.975)	52
Standardized WMW U-Stat	1.181
Approximate P-Value	0.238

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 4:30:05 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total HpCB(ss)

Sample 2 Data: Total HpCB(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	17	7
Number of Missing Observations	3	0
Number of Distinct Observations	15	7
Minimum	87	28
Maximum	3200	3500
Mean	1088	862.6
Median	650	270
SD	1017	1236
SE of Mean	246.7	467.1

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	230
WMW U-Stat	77
Mean (U)	59.5
SD(U) - Adj ties	15.74
Lower U-Stat Critical Value (0.025)	29
Upper U-Stat Critical Value (0.975)	90
Standardized WMW U-Stat	1.112
Approximate P-Value	0.266

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 2:59:54 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total HpCDD(ss)

Sample 2 Data: Total HpCDD(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	10	4
Number of Missing Observations	10	3
Number of Distinct Observations	10	4
Minimum	3.4	5.4
Maximum	170	23.5
Mean	55.63	11.85
Median	51.5	9.25
SD	51.65	8.543
SE of Mean	16.33	4.272

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	86.5
WMW U-Stat	31.5
Mean (U)	20
SD(U) - Adj ties	7.071
Lower U-Stat Critical Value (0.025)	6
Upper U-Stat Critical Value (0.975)	34
Standardized WMW U-Stat	1.628
Approximate P-Value	0.103

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 3:03:07 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total HpCDF(ss)

Sample 2 Data: Total HpCDF(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	10	4
Number of Missing Observations	10	3
Number of Non-Detects	1	3
Number of Detects	9	1
Minimum Non-Detect	2.25	2
Maximum Non-Detect	2.25	2.15
Percent Non-detects	10.00%	75.00%
Minimum Detect	2.4	3.8
Maximum Detect	45	3.8
Mean of Detects	21.09	3.8
Median of Detects	25	3.8
SD of Detects	16.33	N/A
KM Mean	19.21	2.45
KM SD	15.66	0.779

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.015
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0439

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 4:35:24 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total HxCB(ss)

Sample 2 Data: Total HxCB(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	16	7
Number of Missing Observations	4	0
Number of Distinct Observations	16	7
Minimum	91	36
Maximum	6400	3700
Mean	1652	952
Median	815	340
SD	1835	1302
SE of Mean	458.7	492.1

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	212
WMW U-Stat	76
Mean (U)	56
SD(U) - Adj ties	14.97
Lower U-Stat Critical Value (0.025)	27
Upper U-Stat Critical Value (0.975)	85
Standardized WMW U-Stat	1.303
Approximate P-Value	0.193

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 3:06:53 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total HxCDD(ss)

Sample 2 Data: Total HxCDD(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	9	4
Number of Missing Observations	11	3
Number of Non-Detects	1	3
Number of Detects	8	1
Minimum Non-Detect	1.25	1.2
Maximum Non-Detect	1.25	1.2
Percent Non-detects	11.11%	75.00%
Minimum Detect	2.9	1.7
Maximum Detect	45	1.7
Mean of Detects	16.89	1.7
Median of Detects	15.5	1.7
SD of Detects	14.21	N/A
KM Mean	15.15	1.325
KM SD	13.46	0.217

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.38
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0173

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 3:10:23 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total HxCDF(ss)

Sample 2 Data: Total HxCDF(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	10	4
Number of Missing Observations	10	3
Number of Non-Detects	1	3
Number of Detects	9	1
Minimum Non-Detect	0.955	0.87
Maximum Non-Detect	0.955	0.925
Percent Non-detects	10.00%	75.00%
Minimum Detect	1	3.2
Maximum Detect	54	3.2
Mean of Detects	20.34	3.2
Median of Detects	12	3.2
SD of Detects	18.73	N/A
KM Mean	18.41	1.453
KM SD	17.73	1.009

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.135
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0328

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 5:14:44 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total MoCB(ss)

Sample 2 Data: Total MoCB(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	19	5
Number of Missing Observations	1	2
Number of Distinct Observations	19	5
Minimum	1.4	0.49
Maximum	210	11
Mean	52.29	5.976
Median	19	8.2
SD	68.17	4.951
SE of Mean	15.64	2.214

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	266
WMW U-Stat	76
Mean (U)	47.5
SD(U) - Adj ties	14.07
Lower U-Stat Critical Value (0.025)	20
Upper U-Stat Critical Value (0.975)	75
Standardized WMW U-Stat	1.99
Approximate P-Value	0.0466

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 5:18:32 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total NoCB(ss)

Sample 2 Data: Total NoCB(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	19	7
Number of Missing Observations	1	0
Number of Distinct Observations	18	7
Minimum	30	2.2
Maximum	4200	420
Mean	732.7	126
Median	380	20
SD	1067	194.3
SE of Mean	244.8	73.43

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	303
WMW U-Stat	113
Mean (U)	66.5
SD(U) - Adj ties	17.3
Lower U-Stat Critical Value (0.025)	33
Upper U-Stat Critical Value (0.975)	100
Standardized WMW U-Stat	2.689
Approximate P-Value	0.00718

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 6:54:43 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total OcCB(ss)

Sample 2 Data: Total OcCB(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	16	7
Number of Missing Observations	4	0
Number of Distinct Observations	16	7
Minimum	37	7.6
Maximum	930	1000
Mean	363.6	240.9
Median	210	130
SD	328.1	349.3
SE of Mean	82.02	132

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	209.5
WMW U-Stat	73.5
Mean (U)	56
SD(U) - Adj ties	14.97
Lower U-Stat Critical Value (0.025)	27
Upper U-Stat Critical Value (0.975)	85
Standardized WMW U-Stat	1.17
Approximate P-Value	0.242

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 6:46:18 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: TOTAL PCBs(ss)

Sample 2 Data: TOTAL PCBs(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	18	7
Number of Missing Observations	2	0
Number of Distinct Observations	18	7
Minimum	370	100
Maximum	32000	10000
Mean	8616	2561
Median	2950	1600
SD	10524	3467
SE of Mean	2480	1311

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	263
WMW U-Stat	92
Mean (U)	63
SD(U) - Adj ties	16.52
Lower U-Stat Critical Value (0.025)	31
Upper U-Stat Critical Value (0.975)	95
Standardized WMW U-Stat	1.725
Approximate P-Value	0.0845

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 7:00:12 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total PeCB(ss)

Sample 2 Data: Total PeCB(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	16	7
Number of Missing Observations	4	0
Number of Distinct Observations	16	7
Minimum	35	13
Maximum	2800	850
Mean	763.6	223.4
Median	400	120
SD	910	295.8
SE of Mean	227.5	111.8

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	219.5
WMW U-Stat	83.5
Mean (U)	56
SD(U) - Adj ties	14.97
Lower U-Stat Critical Value (0.025)	27
Upper U-Stat Critical Value (0.975)	85
Standardized WMW U-Stat	1.838
Approximate P-Value	0.0661

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 3:14:58 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total PeCDF(ss)

Sample 2 Data: Total PeCDF(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	10	4
Number of Missing Observations	10	3
Number of Non-Detects	1	3
Number of Detects	9	1
Minimum Non-Detect	0.9	0.81
Maximum Non-Detect	0.9	0.86
Percent Non-detects	10.00%	75.00%
Minimum Detect	1.1	6
Maximum Detect	89	6
Mean of Detects	30.91	6
Median of Detects	18	6
SD of Detects	28.29	N/A
KM Mean	27.91	2.108
KM SD	26.86	2.247

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.135
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0328

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 3:18:44 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total TCDD(ss)

Sample 2 Data: Total TCDD(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	8	4
Number of Missing Observations	12	3
Number of Non-Detects	0	2
Number of Detects	8	2
Minimum Non-Detect	N/A	0.18
Maximum Non-Detect	N/A	0.19
Percent Non-detects	0.00%	50.00%
Minimum Detect	0.9	0.515
Maximum Detect	17	1.6
Mean of Detects	7.335	1.058
Median of Detects	4.9	1.058
SD of Detects	6.369	0.767
KM Mean	7.335	0.619
KM SD	6.369	0.583

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.416
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0157

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 3:22:34 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total TCDF(ss)

Sample 2 Data: Total TCDF(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	10	4
Number of Missing Observations	10	3
Number of Non-Detects	0	2
Number of Detects	10	2
Minimum Non-Detect	N/A	0.22
Maximum Non-Detect	N/A	0.24
Percent Non-detects	0.00%	50.00%
Minimum Detect	2	2.4
Maximum Detect	70	13
Mean of Detects	32.87	7.7
Median of Detects	25	7.7
SD of Detects	28.35	7.495
KM Mean	32.87	3.96
KM SD	28.35	5.295

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	2.095
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.0362

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 7:07:57 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total TeCB(ss)

Sample 2 Data: Total TeCB(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	14	7
Number of Missing Observations	6	0
Number of Distinct Observations	14	7
Minimum	7.5	3.1
Maximum	430	120
Mean	112.6	37.13
Median	68	16
SD	125.9	46.61
SE of Mean	33.66	17.62

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	178.5
WMW U-Stat	73.5
Mean (U)	49
SD(U) - Adj ties	13.4
Lower U-Stat Critical Value (0.025)	23
Upper U-Stat Critical Value (0.975)	75
Standardized WMW U-Stat	1.828
Approximate P-Value	0.0675

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 7:16:51 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Total TrCB(ss)

Sample 2 Data: Total TrCB(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	17	7
Number of Missing Observations	3	0
Number of Distinct Observations	17	7
Minimum	1.9	0.33
Maximum	350	75
Mean	105.5	21.06
Median	34	5.9
SD	122.9	29.84
SE of Mean	29.8	11.28

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	249
WMW U-Stat	96
Mean (U)	59.5
SD(U) - Adj ties	15.75
Lower U-Stat Critical Value (0.025)	29
Upper U-Stat Critical Value (0.975)	90
Standardized WMW U-Stat	2.286
Approximate P-Value	0.0222

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 7:21:58 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Aluminum(ss)

Sample 2 Data: Aluminum(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	20	7
Number of Distinct Observations	20	7
Minimum	1770	4480
Maximum	13700	13000
Mean	7886	8513
Median	8205	8810
SD	2981	2793
SE of Mean	666.5	1056

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	273.5
WMW U-Stat	63.5
Mean (U)	70
SD(U) - Adj ties	18.07
Lower U-Stat Critical Value (0.025)	35
Upper U-Stat Critical Value (0.975)	105
Standardized WMW U-Stat	-0.36
Approximate P-Value	0.719

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 7:30:15 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Arsenic(ss)

Sample 2 Data: Arsenic(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	20	7
Number of Distinct Observations	18	6
Minimum	3.3	3.9
Maximum	21	8.6
Mean	10.27	6.014
Median	8.85	6.5
SD	4.707	1.592
SE of Mean	1.052	0.602

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	322
WMW U-Stat	112
Mean (U)	70
SD(U) - Adj ties	18.07
Lower U-Stat Critical Value (0.025)	35
Upper U-Stat Critical Value (0.975)	105
Standardized WMW U-Stat	2.325
Approximate P-Value	0.0201

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/9/2020 7:35:59 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Barium(ss)

Sample 2 Data: Barium(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	20	7
Number of Distinct Observations	20	7
Minimum	35.2	27.2
Maximum	183	95.4
Mean	87.45	59.81
Median	66.33	46.7
SD	44.42	28.98
SE of Mean	9.932	10.95

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	308
WMW U-Stat	98
Mean (U)	70
SD(U) - Adj ties	18.07
Lower U-Stat Critical Value (0.025)	35
Upper U-Stat Critical Value (0.975)	105
Standardized WMW U-Stat	1.522
Approximate P-Value	0.128

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 9:02:19 AM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Beryllium(ss)

Sample 2 Data: Beryllium(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	20	7
Number of Distinct Observations	18	7
Minimum	0.32	0.25
Maximum	1.3	0.89
Mean	0.714	0.492
Median	0.67	0.39
SD	0.302	0.247
SE of Mean	0.0676	0.0934

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	311
WMW U-Stat	101
Mean (U)	70
SD(U) - Adj ties	18.07
Lower U-Stat Critical Value (0.025)	35
Upper U-Stat Critical Value (0.975)	105
Standardized WMW U-Stat	1.716
Approximate P-Value	0.0862

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 9:04:40 AM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Cadmium(ss)

Sample 2 Data: Cadmium(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	4	4
Number of Detects	16	3
Minimum Non-Detect	0.54	0.52
Maximum Non-Detect	0.55	0.56
Percent Non-detects	20.00%	57.14%
Minimum Detect	0.08	0.098
Maximum Detect	1.1	0.215
Mean of Detects	0.4	0.158
Median of Detects	0.255	0.16
SD of Detects	0.327	0.0585
KM Mean	0.367	0.158
KM SD	0.296	0.0478

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.081
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.28

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 9:07:28 AM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Calcium(ss)

Sample 2 Data: Calcium(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	17	6
Number of Missing Observations	3	1
Number of Distinct Observations	17	6
Minimum	231	161
Maximum	1900	718
Mean	853.1	337.7
Median	677	268
SD	565.9	211.6
SE of Mean	137.3	86.39

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	238
WMW U-Stat	85
Mean (U)	51
SD(U) - Adj ties	14.28
Lower U-Stat Critical Value (0.025)	23
Upper U-Stat Critical Value (0.975)	79
Standardized WMW U-Stat	2.345
Approximate P-Value	0.019

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 9:10:16 AM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Chromium(ss)

Sample 2 Data: Chromium(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	19	7
Number of Missing Observations	1	0
Number of Distinct Observations	19	7
Minimum	7.1	4.8
Maximum	23.9	22.8
Mean	13.57	12.64
Median	12.9	11.7
SD	4.621	5.781
SE of Mean	1.06	2.185

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	265
WMW U-Stat	75
Mean (U)	66.5
SD(U) - Adj ties	17.3
Lower U-Stat Critical Value (0.025)	33
Upper U-Stat Critical Value (0.975)	100
Standardized WMW U-Stat	0.492
Approximate P-Value	0.623

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 9:12:40 AM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Cobalt(ss)

Sample 2 Data: Cobalt(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	20	7
Number of Distinct Observations	20	7
Minimum	3.1	3.7
Maximum	20.8	20.7
Mean	8.565	11.71
Median	6.95	11.3
SD	4.636	6.228
SE of Mean	1.037	2.354

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	263
WMW U-Stat	53
Mean (U)	70
SD(U) - Adj ties	18.07
Lower U-Stat Critical Value (0.025)	35
Upper U-Stat Critical Value (0.975)	105
Standardized WMW U-Stat	0.913
Approximate P-Value	0.361

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 12:01:49 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Copper(ss)

Sample 2 Data: Copper(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	19	7
Number of Missing Observations	1	0
Number of Distinct Observations	19	6
Minimum	3.5	5.1
Maximum	93.4	65.2
Mean	31.93	22.51
Median	23.7	20.1
SD	24.83	21.14
SE of Mean	5.695	7.991

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	272
WMW U-Stat	82
Mean (U)	66.5
SD(U) - Adj ties	17.3
Lower U-Stat Critical Value (0.025)	33
Upper U-Stat Critical Value (0.975)	100
Standardized WMW U-Stat	0.896
Approximate P-Value	0.37

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 12:10:25 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Iron(ss)

Sample 2 Data: Iron(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	19	7
Number of Missing Observations	1	0
Number of Distinct Observations	18	7
Minimum	6950	6500
Maximum	28100	38900
Mean	18075	18299
Median	16100	16000
SD	6447	10796
SE of Mean	1479	4081

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	263
WMW U-Stat	73
Mean (U)	66.5
SD(U) - Adj ties	17.29
Lower U-Stat Critical Value (0.025)	33
Upper U-Stat Critical Value (0.975)	100
Standardized WMW U-Stat	0.376
Approximate P-Value	0.707

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 12:14:18 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Lead(ss)

Sample 2 Data: Lead(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	18	7
Number of Missing Observations	2	0
Number of Distinct Observations	18	7
Minimum	13.6	8.5
Maximum	194	70.45
Mean	79.06	31.52
Median	68.75	24.8
SD	59.8	24.09
SE of Mean	14.09	9.104

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	269
WMW U-Stat	98
Mean (U)	63
SD(U) - Adj ties	16.52
Lower U-Stat Critical Value (0.025)	31
Upper U-Stat Critical Value (0.975)	95
Standardized WMW U-Stat	2.088
Approximate P-Value	0.0368

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 12:18:08 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Magnesium(ss)

Sample 2 Data: Magnesium(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	20	7
Number of Distinct Observations	20	7
Minimum	237	245
Maximum	2290	1840
Mean	928.5	666.4
Median	643	505
SD	623.5	538.8
SE of Mean	139.4	203.7

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	305
WMW U-Stat	95
Mean (U)	70
SD(U) - Adj ties	18.07
Lower U-Stat Critical Value (0.025)	35
Upper U-Stat Critical Value (0.975)	105
Standardized WMW U-Stat	1.356
Approximate P-Value	0.175

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 12:42:18 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Manganese(ss)

Sample 2 Data: Manganese(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	19	7
Number of Missing Observations	1	0
Number of Distinct Observations	18	7
Minimum	123	170
Maximum	897	1030
Mean	387.9	473.4
Median	329	382
SD	214.6	314.5
SE of Mean	49.23	118.9

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	250
WMW U-Stat	60
Mean (U)	66.5
SD(U) - Adj ties	17.3
Lower U-Stat Critical Value (0.025)	33
Upper U-Stat Critical Value (0.975)	100
Standardized WMW U-Stat	-0.376
Approximate P-Value	0.707

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 12:44:33 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Mercury(ss)

Sample 2 Data: Mercury(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	9	4
Number of Detects	11	3
Minimum Non-Detect	0.11	0.11
Maximum Non-Detect	0.14	0.12
Percent Non-detects	45.00%	57.14%
Minimum Detect	0.02	0.022
Maximum Detect	0.19	0.04
Mean of Detects	0.0874	0.0297
Median of Detects	0.079	0.027
SD of Detects	0.0661	0.00929
KM Mean	0.0712	0.0297
KM SD	0.053	0.00759

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.36
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.174

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 12:47:17 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Nickel(ss)

Sample 2 Data: Nickel(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	20	7
Number of Distinct Observations	18	7
Minimum	3.8	3.8
Maximum	25.7	17.05
Mean	11.87	8.85
Median	9.7	6.5
SD	6.73	5.387
SE of Mean	1.505	2.036

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	299
WMW U-Stat	89
Mean (U)	70
SD(U) - Adj ties	18.07
Lower U-Stat Critical Value (0.025)	35
Upper U-Stat Critical Value (0.975)	105
Standardized WMW U-Stat	1.052
Approximate P-Value	0.293

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 12:50:51 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Potassium(ss)

Sample 2 Data: Potassium(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	3	1
Number of Detects	17	6
Minimum Non-Detect	553	551
Maximum Non-Detect	581	551
Percent Non-detects	15.00%	14.29%
Minimum Detect	594	467
Maximum Detect	1750	1190
Mean of Detects	1188	844.5
Median of Detects	1240	819.5
SD of Detects	377.1	287
KM Mean	1093	790.6
KM SD	406.5	276.2

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.383
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.167

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 12:54:02 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Selenium(ss)

Sample 2 Data: Selenium(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	20	7
Number of Distinct Observations	19	7
Minimum	0.31	0.3
Maximum	1.5	0.78
Mean	0.809	0.543
Median	0.815	0.53
SD	0.325	0.156
SE of Mean	0.0726	0.0591

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	320
WMW U-Stat	110
Mean (U)	70
SD(U) - Adj ties	18.07
Lower U-Stat Critical Value (0.025)	35
Upper U-Stat Critical Value (0.975)	105
Standardized WMW U-Stat	2.213
Approximate P-Value	0.0269

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 12:57:55 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Silver(ss)

Sample 2 Data: Silver(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	20	7
Number of Non-Detects	10	6
Number of Detects	10	1
Minimum Non-Detect	0.54	0.52
Maximum Non-Detect	0.65	0.58
Percent Non-detects	50.00%	85.71%
Minimum Detect	0.056	0.064
Maximum Detect	0.26	0.064
Mean of Detects	0.129	0.064
Median of Detects	0.104	0.064
SD of Detects	0.0698	N/A
KM Mean	0.129	0.064
KM SD	0.0663	0

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	1.03
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.303

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 1:00:32 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Thallium(ss)

Sample 2 Data: Thallium(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	19	7
Number of Missing Observations	1	0
Number of Non-Detects	11	4
Number of Detects	8	3
Minimum Non-Detect	0.54	0.52
Maximum Non-Detect	0.7	0.58
Percent Non-detects	57.89%	57.14%
Minimum Detect	0.034	0.036
Maximum Detect	0.091	0.081
Mean of Detects	0.0716	0.0577
Median of Detects	0.078	0.056
SD of Detects	0.0209	0.0225
KM Mean	0.0716	0.0577
KM SD	0.0195	0.0184

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

TW Statistic	0.782
Lower TW Critical Value(0.025)	-1.96
Upper TW Critical Value (0.975)	1.96
P-Value	0.435

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 1:02:53 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Vanadium(ss)

Sample 2 Data: Vanadium(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	20	7
Number of Distinct Observations	20	7
Minimum	2.3	7
Maximum	28.85	25.4
Mean	14.54	16.19
Median	12.85	16.6
SD	6.435	6.071
SE of Mean	1.439	2.295

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	270
WMW U-Stat	60
Mean (U)	70
SD(U) - Adj ties	18.07
Lower U-Stat Critical Value (0.025)	35
Upper U-Stat Critical Value (0.975)	105
Standardized WMW U-Stat	0.526
Approximate P-Value	0.599

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 = Sample 2

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.15/10/2020 1:05:16 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median = Sample 2 Mean/Median (Two Sided Alternative)
Alternative Hypothesis	Sample 1 Mean/Median <> Sample 2 Mean/Median

Sample 1 Data: Zinc(ss)

Sample 2 Data: Zinc(sb)

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	19	7
Number of Missing Observations	1	0
Number of Distinct Observations	19	7
Minimum	19.5	19.3
Maximum	180	67.15
Mean	78.43	35.24
Median	69	23.9
SD	47.92	20.41
SE of Mean	10.99	7.712

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 = Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	300
WMW U-Stat	110
Mean (U)	66.5
SD(U) - Adj ties	17.3
Lower U-Stat Critical Value (0.025)	33
Upper U-Stat Critical Value (0.975)	100
Standardized WMW U-Stat	2.486
Approximate P-Value	0.0129

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 <> Sample 2

ATTACHMENT 3

BACKGROUND CONCENTRATIONS

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:46:14 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

Acetone

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	4	23	85.19%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	23	7.9	17	9.952	9.1	2.426
Statistics (Non-Detects Only)	4	4.4	72	38.1	38	31.27
Statistics (All: NDs treated as DL value)	27	4.4	72	14.12	9.2	14.89
Statistics (All: NDs treated as DL/2 value)	27	3.95	72	9.883	4.6	16.06
Statistics (Normal ROS Imputed Data)	27	-19.15	72	4.754	-0.824	19.76
Statistics (Gamma ROS Imputed Data)	27	0.01	72	7.066	0.01	17.22
Statistics (Lognormal ROS Imputed Data)	27	1.759	72	9.409	4.082	16.27

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.263	0.482	30.16	3.195	1.27	0.397
Statistics (NDs = DL)	2.264	2.037	6.239	2.411	0.578	0.24
Statistics (NDs = DL/2)	1.202	1.093	8.221	1.82	0.751	0.413
Statistics (Gamma ROS Estimates)	0.179	0.184	39.48	-2.228	3.473	-1.559
Statistics (Lognormal ROS Estimates)	--	--	--	1.663	0.878	0.528

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.978	0.672	0.619	0.853

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.939	0.748	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.473	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.403	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.744	0.923	Data Not Normal
Lilliefors (Detects Only)	0.219	0.375	Data Appear Normal
Lilliefors (NDs = DL)	0.371	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.423	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.278	0.167	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.896	0.821	0.828	0.974

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.305	0.664	
Kolmogorov-Smirnov (Detects Only)	0.274	0.401	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	4.047	0.755	

Kolmogorov-Smirnov (NDs = DL)	0.32	0.17	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	5.81	0.769	
Kolmogorov-Smirnov (NDs = DL/2)	0.389	0.172	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	4.127	0.922	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.421	0.188	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.955	0.838	0.756	0.873

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.906	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.724	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.582	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.771	0.923	Data Not Lognormal
Lilliefors (Detects Only)	0.244	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.264	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.33	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.285	0.167	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:42:59 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Acetone

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	20		
Number of Detects	4	Number of Non-Detects	23
Number of Distinct Detects	4	Number of Distinct Non-Detects	16
Minimum Detect	4.4	Minimum Non-Detect	7.9
Maximum Detect	72	Maximum Non-Detect	17
Variance Detected	977.6	Percent Non-Detects	85.19%
Mean Detected	38.1	SD Detected	31.27
Mean of Detected Logged Data	3.195	SD of Detected Logged Data	1.27

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.939	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.219	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	9.393	KM SD	15.87
95% UTL95% Coverage	45.27	95% KM UPL (t)	36.96
90% KM Percentile (z)	29.73	95% KM Percentile (z)	35.5
99% KM Percentile (z)	46.32	95% KM USL	52.22

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	9.883	SD	16.06
95% UTL95% Coverage	46.17	95% UPL (t)	37.77
90% Percentile (z)	30.46	95% Percentile (z)	36.3
99% Percentile (z)	47.24	95% USL	53.21

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.305	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.664	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.274	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.401	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.263	k star (bias corrected MLE)	0.482
Theta hat (MLE)	30.16	Theta star (bias corrected MLE)	78.97
nu hat (MLE)	10.11	nu star (bias corrected)	3.86
MLE Mean (bias corrected)	38.1		
MLE Sd (bias corrected)	54.85	95% Percentile of Chisquare (2kstar)	3.754

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	7.066
Maximum	72	Median	0.01
SD	17.22	CV	2.437
k hat (MLE)	0.179	k star (bias corrected MLE)	0.184
Theta hat (MLE)	39.48	Theta star (bias corrected MLE)	38.45
nu hat (MLE)	9.664	nu star (bias corrected)	9.924
MLE Mean (bias corrected)	7.066	MLE Sd (bias corrected)	16.48
95% Percentile of Chisquare (2kstar)	1.935	90% Percentile	21.33
95% Percentile	37.19	99% Percentile	81.5

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	49.04	56.9	95% Approx. Gamma UPL	27.98	28.44
95% Gamma USL	73.21	93.87			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	9.393	SD (KM)	15.87
Variance (KM)	252	SE of Mean (KM)	3.527
k hat (KM)	0.35	k star (KM)	0.336
nu hat (KM)	18.91	nu star (KM)	18.14
theta hat (KM)	26.82	theta star (KM)	27.96
80% gamma percentile (KM)	14.76	90% gamma percentile (KM)	27.29
95% gamma percentile (KM)	41.41	99% gamma percentile (KM)	77.6

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	35.92	34.54	95% Approx. Gamma UPL	26.05	24.63
95% KM Gamma Percentile	24.53	23.13	95% Gamma USL	45.87	44.92

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.906	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.244	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	9.409	Mean in Log Scale	1.663
SD in Original Scale	16.27	SD in Log Scale	0.878

95% UTL95% Coverage	38.4	95% BCA UTL95% Coverage	72
95% Bootstrap (%) UTL95% Coverage	72	95% UPL (t)	24.26
90% Percentile (z)	16.26	95% Percentile (z)	22.37
99% Percentile (z)	40.71	95% USL	56.43

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.735	95% KM UTL (Lognormal)95% Coverage	30.29
KM SD of Logged Data	0.741	95% KM UPL (Lognormal)	20.55
95% KM Percentile Lognormal (z)	19.2	95% KM USL (Lognormal)	41.91

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	9.883	Mean in Log Scale	1.82
SD in Original Scale	16.06	SD in Log Scale	0.751
95% UTL95% Coverage	33.73	95% UPL (t)	22.77
90% Percentile (z)	16.17	95% Percentile (z)	21.25
99% Percentile (z)	35.45	95% USL	46.88

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	72
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	65.6
95% USL	72	95% KM Chebyshev UPL	79.85

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:10:21 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

Methylene chloride

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	1	26	4	22	84.62%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	22	3.9	12	5.323	4.5	1.957
Statistics (Non-Detects Only)	4	2.9	3.7	3.3	3.3	0.408
Statistics (All: NDs treated as DL value)	26	2.9	12	5.012	4.4	1.947
Statistics (All: NDs treated as DL/2 value)	26	1.95	6	2.76	2.3	0.938
Statistics (Normal ROS Imputed Data)	26	2.783	3.817	3.3	3.3	0.266
Statistics (Gamma ROS Imputed Data)	26	2.794	3.827	3.297	3.293	0.266
Statistics (Lognormal ROS Imputed Data)	26	2.803	3.84	3.291	3.281	0.266

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	86.75	21.85	0.038	1.188	0.124	0.105
Statistics (NDs = DL)	9.314	8.265	0.538	1.557	0.317	0.204
Statistics (NDs = DL/2)	11.4	10.11	0.242	0.971	0.29	0.298
Statistics (Gamma ROS Estimates)	159.7	141.3	0.0206	1.19	0.0809	0.068
Statistics (Lognormal ROS Estimates)	--	--	--	1.188	0.0809	0.0681

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.934	0.859	0.876	0.965

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.846	0.748	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.755	0.92	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.778	0.92	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.927	0.92	Data Appear Normal
Lilliefors (Detects Only)	0.269	0.375	Data Appear Normal
Lilliefors (NDs = DL)	0.314	0.17	Data Not Normal
Lilliefors (NDs = DL/2)	0.265	0.17	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.231	0.17	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.93	0.916	0.927	0.965

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.487	0.656	
Kolmogorov-Smirnov (Detects Only)	0.305	0.394	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.625	0.744	

Kolmogorov-Smirnov (NDs = DL)	0.289	0.171	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.53	0.744	
Kolmogorov-Smirnov (NDs = DL/2)	0.267	0.171	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	1.058	0.742	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.235	0.171	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.934	0.935	0.925	0.965

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.847	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.883	0.92	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.855	0.92	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.927	0.92	Data Appear Lognormal
Lilliefors (Detects Only)	0.272	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.27	0.17	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.26	0.17	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.231	0.17	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:06:01 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Methylene chloride

General Statistics

Total Number of Observations	26	Number of Missing Observations	1
Number of Distinct Observations	17		
Number of Detects	4	Number of Non-Detects	22
Number of Distinct Detects	4	Number of Distinct Non-Detects	13
Minimum Detect	2.9	Minimum Non-Detect	3.9
Maximum Detect	3.7	Maximum Non-Detect	12
Variance Detected	0.167	Percent Non-Detects	84.62%
Mean Detected	3.3	SD Detected	0.408
Mean of Detected Logged Data	1.188	SD of Detected Logged Data	0.124

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.275	d2max (for USL)	2.681

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.846	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.269	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	3.3	KM SD	0.354
95% UTL95% Coverage	4.104	95% KM UPL (t)	3.915
90% KM Percentile (z)	3.753	95% KM Percentile (z)	3.882
99% KM Percentile (z)	4.122	95% KM USL	4.248

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	2.76	SD	0.938
95% UTL95% Coverage	4.893	95% UPL (t)	4.392
90% Percentile (z)	3.962	95% Percentile (z)	4.302
99% Percentile (z)	4.941	95% USL	5.274

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.487	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.656	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.305	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.394	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	86.75	k star (bias corrected MLE)	21.85
Theta hat (MLE)	0.038	Theta star (bias corrected MLE)	0.151
nu hat (MLE)	694	nu star (bias corrected)	174.8
MLE Mean (bias corrected)	3.3		
MLE Sd (bias corrected)	0.706	95% Percentile of Chisquare (2kstar)	60.14

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.794	Mean	3.297
Maximum	3.827	Median	3.293
SD	0.266	CV	0.0806
k hat (MLE)	159.7	k star (bias corrected MLE)	141.3
Theta hat (MLE)	0.0206	Theta star (bias corrected MLE)	0.0233
nu hat (MLE)	8304	nu star (bias corrected)	7347
MLE Mean (bias corrected)	3.297	MLE Sd (bias corrected)	0.277
95% Percentile of Chisquare (2kstar)	322.8	90% Percentile	3.657
95% Percentile	3.766	99% Percentile	3.976

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	3.932	3.937	95% Approx. Gamma UPL	3.775	3.777
95% Gamma USL	4.055	4.062			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.3	SD (KM)	0.354
Variance (KM)	0.125	SE of Mean (KM)	0.204
k hat (KM)	87.12	k star (KM)	77.09
nu hat (KM)	4530	nu star (KM)	4009
theta hat (KM)	0.0379	theta star (KM)	0.0428
80% gamma percentile (KM)	3.611	90% gamma percentile (KM)	3.79
95% gamma percentile (KM)	3.942	99% gamma percentile (KM)	4.237

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	4.159	4.167	95% Approx. Gamma UPL	3.942	3.945
95% KM Gamma Percentile	3.904	3.907	95% Gamma USL	4.329	4.341

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.847	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.272	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	3.291	Mean in Log Scale	1.188
SD in Original Scale	0.266	SD in Log Scale	0.0809

95% UTL95% Coverage	3.944	95% BCA UTL95% Coverage	3.805
95% Bootstrap (%) UTL95% Coverage	3.84	95% UPL (t)	3.777
90% Percentile (z)	3.639	95% Percentile (z)	3.748
99% Percentile (z)	3.96	95% USL	4.075

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.188	95% KM UTL (Lognormal)95% Coverage	4.191
KM SD of Logged Data	0.108	95% KM UPL (Lognormal)	3.957
95% KM Percentile Lognormal (z)	3.916	95% KM USL (Lognormal)	4.378

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	2.76	Mean in Log Scale	0.971
SD in Original Scale	0.938	SD in Log Scale	0.29
95% UTL95% Coverage	5.102	95% UPL (t)	4.37
90% Percentile (z)	3.826	95% Percentile (z)	4.251
99% Percentile (z)	5.179	95% USL	5.739

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	26	95% UTL with95% Coverage	12
Approx, f used to compute achieved CC	1.368	Approximate Actual Confidence Coefficient achieved by UTL	0.736
Approximate Sample Size needed to achieve specified CC	59	95% UPL	10.64
95% USL	12	95% KM Chebyshev UPL	4.87

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:14:20 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

Benzaldehyde

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	4	23	85.19%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	23	360	480	397.2	395	28.91
Statistics (Non-Detects Only)	4	42	52	47.25	47.5	4.272
Statistics (All: NDs treated as DL value)	27	42	480	345.3	390	129.4
Statistics (All: NDs treated as DL/2 value)	27	42	240	176.2	195	56.4
Statistics (Normal ROS Imputed Data)	27	41.5	53	47.25	47.25	3.08
Statistics (Gamma ROS Imputed Data)	27	41.6	53.08	47.23	47.19	3.078
Statistics (Lognormal ROS Imputed Data)	27	41.67	53.25	47.2	47.1	3.098

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	161	40.42	0.293	3.852	0.0914	0.0237
Statistics (NDs = DL)	2.964	2.66	116.5	5.666	0.774	0.137
Statistics (NDs = DL/2)	5.4	4.825	32.62	5.076	0.525	0.103
Statistics (Gamma ROS Estimates)	243.5	216.5	0.194	3.853	0.0654	0.017
Statistics (Lognormal ROS Estimates)	--	--	--	3.852	0.0657	0.0171

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.998	0.789	0.808	0.983

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.993	0.748	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.622	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.654	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.956	0.923	Data Appear Normal
Lilliefors (Detects Only)	0.159	0.375	Data Appear Normal
Lilliefors (NDs = DL)	0.397	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.379	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.167	0.167	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.994	0.669	0.726	0.982

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.206	0.657	
Kolmogorov-Smirnov (Detects Only)	0.188	0.394	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	6.147	0.752	

Kolmogorov-Smirnov (NDs = DL)	0.457	0.169	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	5.429	0.747	
Kolmogorov-Smirnov (NDs = DL/2)	0.429	0.169	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.509	0.744	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.17	0.168	Detected Data appear Approximate Gamma Distri

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.995	0.717	0.745	0.983

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.988	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.515	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.557	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.956	0.923	Data Appear Lognormal
Lilliefors (Detects Only)	0.167	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.464	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.44	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.167	0.167	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:12:55 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Benzaldehyde

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	16		
Number of Detects	4	Number of Non-Detects	23
Number of Distinct Detects	4	Number of Distinct Non-Detects	12
Minimum Detect	42	Minimum Non-Detect	360
Maximum Detect	52	Maximum Non-Detect	480
Variance Detected	18.25	Percent Non-Detects	85.19%
Mean Detected	47.25	SD Detected	4.272
Mean of Detected Logged Data	3.852	SD of Detected Logged Data	0.0914

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.993	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.159	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	47.25	KM SD	3.7
95% UTL95% Coverage	55.61	95% KM UPL (t)	53.68
90% KM Percentile (z)	51.99	95% KM Percentile (z)	53.34
99% KM Percentile (z)	55.86	95% KM USL	57.23

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	176.2	SD	56.4
95% UTL95% Coverage	303.6	95% UPL (t)	274.1
90% Percentile (z)	248.4	95% Percentile (z)	268.9
99% Percentile (z)	307.4	95% USL	328.3

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.206	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.657	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.188	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.394	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	161	k star (bias corrected MLE)	40.42
Theta hat (MLE)	0.293	Theta star (bias corrected MLE)	1.169
nu hat (MLE)	1288	nu star (bias corrected)	323.3
MLE Mean (bias corrected)	47.25		
MLE Sd (bias corrected)	7.432	95% Percentile of Chisquare (2kstar)	102.8

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	41.6	Mean	47.23
Maximum	53.08	Median	47.19
SD	3.078	CV	0.0652
k hat (MLE)	243.5	k star (bias corrected MLE)	216.5
Theta hat (MLE)	0.194	Theta star (bias corrected MLE)	0.218
nu hat (MLE)	13151	nu star (bias corrected)	11691
MLE Mean (bias corrected)	47.23	MLE Sd (bias corrected)	3.21
95% Percentile of Chisquare (2kstar)	482.5	90% Percentile	51.39
95% Percentile	52.63	99% Percentile	55.02

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	54.48	54.52	95% Approx. Gamma UPL	52.72	52.74
95% Gamma USL	55.98	56.04			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	47.25	SD (KM)	3.7
Variance (KM)	13.69	SE of Mean (KM)	2.136
k hat (KM)	163.1	k star (KM)	145
nu hat (KM)	8808	nu star (KM)	7831
theta hat (KM)	0.29	theta star (KM)	0.326
80% gamma percentile (KM)	50.52	90% gamma percentile (KM)	52.34
95% gamma percentile (KM)	53.88	99% gamma percentile (KM)	56.85

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	56.07	56.13	95% Approx. Gamma UPL	53.91	53.94
95% KM Gamma Percentile	53.54	53.57	95% Gamma USL	57.92	58.01

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.988	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.167	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	47.2	Mean in Log Scale	3.852
SD in Original Scale	3.098	SD in Log Scale	0.0657

95% UTL95% Coverage	54.65	95% BCA UTL95% Coverage	53.25
95% Bootstrap (%) UTL95% Coverage	53.25	95% UPL (t)	52.8
90% Percentile (z)	51.24	95% Percentile (z)	52.48
99% Percentile (z)	54.89	95% USL	56.25

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	3.852	95% KM UTL (Lognormal)95% Coverage	56.33
KM SD of Logged Data	0.0791	95% KM UPL (Lognormal)	54.04
95% KM Percentile Lognormal (z)	53.65	95% KM USL (Lognormal)	58.32

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	176.2	Mean in Log Scale	5.076
SD in Original Scale	56.4	SD in Log Scale	0.525
95% UTL95% Coverage	524.5	95% UPL (t)	398.5
90% Percentile (z)	313.8	95% Percentile (z)	379.7
99% Percentile (z)	543.1	95% USL	660.1

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	480
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	468
95% USL	480	95% KM Chebyshev UPL	63.67

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:21:00 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

Benzo(a)anthracene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	9	18	66.67%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	18	180	250	203.1	200	16.19
Statistics (Non-Detects Only)	9	43	390	148.2	120	112.7
Statistics (All: NDs treated as DL value)	27	43	390	184.8	195	69.11
Statistics (All: NDs treated as DL/2 value)	27	43	390	117.1	100	66.76
Statistics (Normal ROS Imputed Data)	27	5.632	390	113.6	101	78.81
Statistics (Gamma ROS Imputed Data)	27	27	390	107.1	85.38	76.08
Statistics (Lognormal ROS Imputed Data)	27	43	390	106.9	84.14	73.29

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	2.248	1.573	65.93	4.76	0.73	0.153
Statistics (NDs = DL)	5.595	4.998	33.03	5.127	0.487	0.0951
Statistics (NDs = DL/2)	5.267	4.706	22.23	4.665	0.415	0.089
Statistics (Gamma ROS Estimates)	2.819	2.531	37.97	4.486	0.611	0.136
Statistics (Lognormal ROS Estimates)	--	--	--	4.52	0.524	0.116

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.927	0.914	0.764	0.923

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.861	0.829	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.855	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.614	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.869	0.923	Data Not Normal
Lilliefors (Detects Only)	0.231	0.274	Data Appear Normal
Lilliefors (NDs = DL)	0.271	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.32	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.158	0.167	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.993	0.897	0.847	0.961

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.241	0.729	
Kolmogorov-Smirnov (Detects Only)	0.153	0.282	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	2.506	0.747	

Kolmogorov-Smirnov (NDs = DL)	0.323	0.168	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	2.68	0.747	
Kolmogorov-Smirnov (NDs = DL/2)	0.276	0.169	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.323	0.753	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.0912	0.17	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.991	0.872	0.894	0.973

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.972	0.829	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.775	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.826	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.948	0.923	Data Appear Lognormal
Lilliefors (Detects Only)	0.134	0.274	Data Appear Lognormal
Lilliefors (NDs = DL)	0.338	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.244	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.104	0.167	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:17:37 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Benzo(a)anthracene

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	14		
Number of Detects	9	Number of Non-Detects	18
Number of Distinct Detects	9	Number of Distinct Non-Detects	7
Minimum Detect	43	Minimum Non-Detect	180
Maximum Detect	390	Maximum Non-Detect	250
Variance Detected	12711	Percent Non-Detects	66.67%
Mean Detected	148.2	SD Detected	112.7
Mean of Detected Logged Data	4.76	SD of Detected Logged Data	0.73

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.861	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.231	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	109	KM SD	74.64
95% UTL95% Coverage	277.7	95% KM UPL (t)	238.7
90% KM Percentile (z)	204.7	95% KM Percentile (z)	231.8
99% KM Percentile (z)	282.7	95% KM USL	310.4

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	117.1	SD	66.76
95% UTL95% Coverage	268	95% UPL (t)	233.1
90% Percentile (z)	202.7	95% Percentile (z)	226.9
99% Percentile (z)	272.4	95% USL	297.2

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.241	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.729	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.153	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.282	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.248	k star (bias corrected MLE)	1.573
Theta hat (MLE)	65.93	Theta star (bias corrected MLE)	94.24
nu hat (MLE)	40.47	nu star (bias corrected)	28.31
MLE Mean (bias corrected)	148.2		
MLE Sd (bias corrected)	118.2	95% Percentile of Chisquare (2kstar)	8.066

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	27	Mean	107.1
Maximum	390	Median	85.38
SD	76.08	CV	0.711
k hat (MLE)	2.819	k star (bias corrected MLE)	2.531
Theta hat (MLE)	37.97	Theta star (bias corrected MLE)	42.3
nu hat (MLE)	152.2	nu star (bias corrected)	136.7
MLE Mean (bias corrected)	107.1	MLE Sd (bias corrected)	67.3
95% Percentile of Chisquare (2kstar)	11.17	90% Percentile	197.2
95% Percentile	236.2	99% Percentile	321.4

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	302.9	311.3	95% Approx. Gamma UPL	240.1	242.6
95% Gamma USL	363.3	379.2			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	109	SD (KM)	74.64
Variance (KM)	5571	SE of Mean (KM)	19.19
k hat (KM)	2.134	k star (KM)	1.921
nu hat (KM)	115.2	nu star (KM)	103.8
theta hat (KM)	51.1	theta star (KM)	56.75
80% gamma percentile (KM)	164	90% gamma percentile (KM)	214.1
95% gamma percentile (KM)	261.9	99% gamma percentile (KM)	368.4

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	294.4	300.1	95% Approx. Gamma UPL	235.5	236.7
95% KM Gamma Percentile	226	226.6	95% Gamma USL	350.7	362.4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.134	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	106.9	Mean in Log Scale	4.52
SD in Original Scale	73.29	SD in Log Scale	0.524

95% UTL95% Coverage	300	95% BCA UTL95% Coverage	390
95% Bootstrap (%) UTL95% Coverage	390	95% UPL (t)	228.1
90% Percentile (z)	179.7	95% Percentile (z)	217.4
99% Percentile (z)	310.6	95% USL	377.4

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	4.518	95% KM UTL (Lognormal)95% Coverage	327
KM SD of Logged Data	0.563	95% KM UPL (Lognormal)	243.6
95% KM Percentile Lognormal (z)	231.3	95% KM USL (Lognormal)	418.4

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	117.1	Mean in Log Scale	4.665
SD in Original Scale	66.76	SD in Log Scale	0.415
95% UTL95% Coverage	271.3	95% UPL (t)	218.3
90% Percentile (z)	180.7	95% Percentile (z)	210.2
99% Percentile (z)	278.9	95% USL	325.4

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	390
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	334
95% USL	390	95% KM Chebyshev UPL	440.4

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:28:09 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

Benzo(a)pyrene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	10	17	62.96%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	17	180	220	200.3	200	11.52
Statistics (Non-Detects Only)	10	44	410	142.9	107	115.8
Statistics (All: NDs treated as DL value)	27	44	410	179	190	74.33
Statistics (All: NDs treated as DL/2 value)	27	44	410	116	100	71.47
Statistics (Normal ROS Imputed Data)	27	3.298	410	113.1	94	83.32
Statistics (Gamma ROS Imputed Data)	27	22.82	410	106	82.74	80.98
Statistics (Lognormal ROS Imputed Data)	27	42.44	410	106.5	82.72	77.62

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	2.121	1.551	67.38	4.708	0.732	0.156
Statistics (NDs = DL)	4.795	4.287	37.33	5.08	0.521	0.103
Statistics (NDs = DL/2)	4.7	4.203	24.68	4.643	0.436	0.0939
Statistics (Gamma ROS Estimates)	2.481	2.23	42.74	4.449	0.656	0.148
Statistics (Lognormal ROS Estimates)	--	--	--	4.503	0.542	0.12

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.903	0.908	0.755	0.914

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.821	0.842	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.843	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.599	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.853	0.923	Data Not Normal
Lilliefors (Detects Only)	0.244	0.262	Data Appear Normal
Lilliefors (NDs = DL)	0.262	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.348	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.16	0.167	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.987	0.897	0.843	0.96

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.345	0.735	
Kolmogorov-Smirnov (Detects Only)	0.161	0.27	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	2.432	0.748	

Kolmogorov-Smirnov (NDs = DL)	0.315	0.169	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	2.711	0.748	
Kolmogorov-Smirnov (NDs = DL/2)	0.298	0.169	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.336	0.754	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.0926	0.17	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.983	0.887	0.896	0.969

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.954	0.842	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.795	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.825	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.939	0.923	Data Appear Lognormal
Lilliefors (Detects Only)	0.129	0.262	Data Appear Lognormal
Lilliefors (NDs = DL)	0.33	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.263	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.109	0.167	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:27:28 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Benzo(a)pyrene

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	15		
Number of Detects	10	Number of Non-Detects	17
Number of Distinct Detects	10	Number of Distinct Non-Detects	6
Minimum Detect	44	Minimum Non-Detect	180
Maximum Detect	410	Maximum Non-Detect	220
Variance Detected	13419	Percent Non-Detects	62.96%
Mean Detected	142.9	SD Detected	115.8
Mean of Detected Logged Data	4.708	SD of Detected Logged Data	0.732

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.821	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.244	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	107.3	KM SD	78.37
95% UTL95% Coverage	284.4	95% KM UPL (t)	243.4
90% KM Percentile (z)	207.7	95% KM Percentile (z)	236.2
99% KM Percentile (z)	289.6	95% KM USL	318.7

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	116	SD	71.47
95% UTL95% Coverage	277.5	95% UPL (t)	240.1
90% Percentile (z)	207.6	95% Percentile (z)	233.5
99% Percentile (z)	282.2	95% USL	308.8

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.345	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.735	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.161	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.27	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.121	k star (bias corrected MLE)	1.551
Theta hat (MLE)	67.38	Theta star (bias corrected MLE)	92.12
nu hat (MLE)	42.42	nu star (bias corrected)	31.03
MLE Mean (bias corrected)	142.9		
MLE Sd (bias corrected)	114.7	95% Percentile of Chisquare (2kstar)	7.992

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	22.82	Mean	106
Maximum	410	Median	82.74
SD	80.98	CV	0.764
k hat (MLE)	2.481	k star (bias corrected MLE)	2.23
Theta hat (MLE)	42.74	Theta star (bias corrected MLE)	47.55
nu hat (MLE)	134	nu star (bias corrected)	120.4
MLE Mean (bias corrected)	106	MLE Sd (bias corrected)	71
95% Percentile of Chisquare (2kstar)	10.22	90% Percentile	201
95% Percentile	243.1	99% Percentile	335.7

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	315.5	325.4	95% Approx. Gamma UPL	247.2	250.2
95% Gamma USL	381.6	400.4			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	107.3	SD (KM)	78.37
Variance (KM)	6141	SE of Mean (KM)	18.9
k hat (KM)	1.874	k star (KM)	1.69
nu hat (KM)	101.2	nu star (KM)	91.27
theta hat (KM)	57.25	theta star (KM)	63.47
80% gamma percentile (KM)	163.8	90% gamma percentile (KM)	217.2
95% gamma percentile (KM)	268.6	99% gamma percentile (KM)	383.9

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	294.6	299.2	95% Approx. Gamma UPL	234.7	235
95% KM Gamma Percentile	225.1	224.9	95% Gamma USL	352.1	362.3

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.129	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	106.5	Mean in Log Scale	4.503
SD in Original Scale	77.62	SD in Log Scale	0.542

95% UTL95% Coverage	307.7	95% BCA UTL95% Coverage	410
95% Bootstrap (%) UTL95% Coverage	410	95% UPL (t)	231.7
90% Percentile (z)	181	95% Percentile (z)	220.4
99% Percentile (z)	318.9	95% USL	390.2

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	4.492	95% KM UTL (Lognormal)95% Coverage	321.2
KM SD of Logged Data	0.566	95% KM UPL (Lognormal)	238.8
95% KM Percentile Lognormal (z)	226.7	95% KM USL (Lognormal)	411.6

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	116	Mean in Log Scale	4.643
SD in Original Scale	71.47	SD in Log Scale	0.436
95% UTL95% Coverage	278.4	95% UPL (t)	221.6
90% Percentile (z)	181.7	95% Percentile (z)	212.9
99% Percentile (z)	286.5	95% USL	337

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	410
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	350
95% USL	410	95% KM Chebyshev UPL	455.1

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:32:21 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

Benzo(b)fluoranthene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	1	26	10	16	61.54%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	16	180	220	199.1	200	10.68
Statistics (Non-Detects Only)	10	51	410	154.3	120	107.4
Statistics (All: NDs treated as DL value)	26	51	410	181.8	190	68.65
Statistics (All: NDs treated as DL/2 value)	26	51	410	120.6	100	70.05
Statistics (Normal ROS Imputed Data)	26	33.36	410	131.4	119.3	77.69
Statistics (Gamma ROS Imputed Data)	26	46.74	410	125.7	105.1	75.85
Statistics (Lognormal ROS Imputed Data)	26	51	410	125	103.2	73.4

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	2.891	2.091	53.37	4.856	0.622	0.128
Statistics (NDs = DL)	6.52	5.793	27.89	5.125	0.433	0.0845
Statistics (NDs = DL/2)	5.453	4.85	22.11	4.698	0.396	0.0844
Statistics (Gamma ROS Estimates)	3.898	3.474	32.25	4.7	0.51	0.109
Statistics (Lognormal ROS Estimates)	--	--	--	4.712	0.462	0.098

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.908	0.902	0.741	0.912

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.836	0.842	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.839	0.92	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.579	0.92	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.849	0.92	Data Not Normal
Lilliefors (Detects Only)	0.205	0.262	Data Appear Normal
Lilliefors (NDs = DL)	0.225	0.17	Data Not Normal
Lilliefors (NDs = DL/2)	0.368	0.17	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.144	0.17	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.98	0.903	0.832	0.948

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.244	0.733	
Kolmogorov-Smirnov (Detects Only)	0.134	0.269	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.938	0.746	

Kolmogorov-Smirnov (NDs = DL)	0.273	0.171	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	3.016	0.746	
Kolmogorov-Smirnov (NDs = DL/2)	0.334	0.172	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.429	0.748	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.111	0.172	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.993	0.902	0.872	0.974

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.986	0.842	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.831	0.92	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.787	0.92	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.956	0.92	Data Appear Lognormal
Lilliefors (Detects Only)	0.0988	0.262	Data Appear Lognormal
Lilliefors (NDs = DL)	0.294	0.17	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.305	0.17	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.104	0.17	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:31:15 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Benzo(b)fluoranthene

General Statistics

Total Number of Observations	26	Number of Missing Observations	1
Number of Distinct Observations	15		
Number of Detects	10	Number of Non-Detects	16
Number of Distinct Detects	10	Number of Distinct Non-Detects	6
Minimum Detect	51	Minimum Non-Detect	180
Maximum Detect	410	Maximum Non-Detect	220
Variance Detected	11533	Percent Non-Detects	61.54%
Mean Detected	154.3	SD Detected	107.4
Mean of Detected Logged Data	4.856	SD of Detected Logged Data	0.622

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.275	d2max (for USL)	2.681

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.836	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.205	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	126.2	KM SD	74.16
95% UTL95% Coverage	295	95% KM UPL (t)	255.3
90% KM Percentile (z)	221.3	95% KM Percentile (z)	248.2
99% KM Percentile (z)	298.8	95% KM USL	325.1

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	120.6	SD	70.05
95% UTL95% Coverage	280	95% UPL (t)	242.5
90% Percentile (z)	210.4	95% Percentile (z)	235.8
99% Percentile (z)	283.6	95% USL	308.4

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.244	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.733	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.134	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.269	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.891	k star (bias corrected MLE)	2.091
Theta hat (MLE)	53.37	Theta star (bias corrected MLE)	73.81
nu hat (MLE)	57.83	nu star (bias corrected)	41.81
MLE Mean (bias corrected)	154.3		
MLE Sd (bias corrected)	106.7	95% Percentile of Chisquare (2kstar)	9.78

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	46.74	Mean	125.7
Maximum	410	Median	105.1
SD	75.85	CV	0.603
k hat (MLE)	3.898	k star (bias corrected MLE)	3.474
Theta hat (MLE)	32.25	Theta star (bias corrected MLE)	36.18
nu hat (MLE)	202.7	nu star (bias corrected)	180.7
MLE Mean (bias corrected)	125.7	MLE Sd (bias corrected)	67.45
95% Percentile of Chisquare (2kstar)	13.99	90% Percentile	216.2
95% Percentile	253.2	99% Percentile	332.7

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	316.8	322.9	95% Approx. Gamma UPL	257	258.6
95% Gamma USL	368.1	379.3			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	126.2	SD (KM)	74.16
Variance (KM)	5500	SE of Mean (KM)	19
k hat (KM)	2.898	k star (KM)	2.589
nu hat (KM)	150.7	nu star (KM)	134.6
theta hat (KM)	43.56	theta star (KM)	48.76
80% gamma percentile (KM)	183.3	90% gamma percentile (KM)	231.4
95% gamma percentile (KM)	276.6	99% gamma percentile (KM)	375.4

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	310.6	315.8	95% Approx. Gamma UPL	253.1	254.3
95% KM Gamma Percentile	243.6	244.3	95% Gamma USL	359.6	369.5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.986	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0988	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	125	Mean in Log Scale	4.712
SD in Original Scale	73.4	SD in Log Scale	0.462

95% UTL95% Coverage	318.3	95% BCA UTL95% Coverage	410
95% Bootstrap (%) UTL95% Coverage	410	95% UPL (t)	248.7
90% Percentile (z)	201.2	95% Percentile (z)	237.9
99% Percentile (z)	325.9	95% USL	383.9

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	4.707	95% KM UTL (Lognormal)95% Coverage	340
KM SD of Logged Data	0.493	95% KM UPL (Lognormal)	261.3
95% KM Percentile Lognormal (z)	249.2	95% KM USL (Lognormal)	415.3

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	120.6	Mean in Log Scale	4.698
SD in Original Scale	70.05	SD in Log Scale	0.396
95% UTL95% Coverage	270.3	95% UPL (t)	218.7
90% Percentile (z)	182.3	95% Percentile (z)	210.6
99% Percentile (z)	275.9	95% USL	317.5

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	26	95% UTL with95% Coverage	410
Approx, f used to compute achieved CC	1.368	Approximate Actual Confidence Coefficient achieved by UTL	0.736
Approximate Sample Size needed to achieve specified CC	59	95% UPL	354
95% USL	410	95% KM Chebyshev UPL	455.7

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:38:42 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

Benzo(g,h,i)perylene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	8	19	70.37%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	19	180	230	202.4	200	12.95
Statistics (Non-Detects Only)	8	41	300	120.5	96.5	84.75
Statistics (All: NDs treated as DL value)	27	41	300	178.1	195	59.17
Statistics (All: NDs treated as DL/2 value)	27	41	300	106.9	100	45.21
Statistics (Normal ROS Imputed Data)	27	24.56	300	105.7	100.2	58.87
Statistics (Gamma ROS Imputed Data)	27	40.1	300	101.3	89.43	55.19
Statistics (Lognormal ROS Imputed Data)	27	41	300	98.66	84.67	53.36

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	2.752	1.803	43.79	4.599	0.654	0.142
Statistics (NDs = DL)	6.091	5.439	29.24	5.098	0.476	0.0934
Statistics (NDs = DL/2)	8.272	7.378	12.92	4.61	0.343	0.0745
Statistics (Gamma ROS Estimates)	4.288	3.837	23.61	4.497	0.495	0.11
Statistics (Lognormal ROS Estimates)	--	--	--	4.482	0.459	0.102

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.923	0.912	0.779	0.946

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.859	0.818	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.84	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.645	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.907	0.923	Data Not Normal
Lilliefors (Detects Only)	0.174	0.283	Data Appear Normal
Lilliefors (NDs = DL)	0.283	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.325	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.13	0.167	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.987	0.86	0.832	0.964

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.216	0.722	
Kolmogorov-Smirnov (Detects Only)	0.146	0.297	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	3.007	0.747	

Kolmogorov-Smirnov (NDs = DL)	0.32	0.168	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	2.397	0.745	
Kolmogorov-Smirnov (NDs = DL/2)	0.273	0.168	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.336	0.749	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.128	0.169	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.993	0.846	0.887	0.981

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.982	0.818	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.725	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.823	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.966	0.923	Data Appear Lognormal
Lilliefors (Detects Only)	0.109	0.283	Data Appear Lognormal
Lilliefors (NDs = DL)	0.326	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.25	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.131	0.167	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:37:37 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Benzo(g,h,i)perylene

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	15		
Number of Detects	8	Number of Non-Detects	19
Number of Distinct Detects	8	Number of Distinct Non-Detects	7
Minimum Detect	41	Minimum Non-Detect	180
Maximum Detect	300	Maximum Non-Detect	230
Variance Detected	7183	Percent Non-Detects	70.37%
Mean Detected	120.5	SD Detected	84.75
Mean of Detected Logged Data	4.599	SD of Detected Logged Data	0.654

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.859	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.174	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.283	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	102.5	KM SD	57.9
95% UTL95% Coverage	233.3	95% KM UPL (t)	203
90% KM Percentile (z)	176.7	95% KM Percentile (z)	197.7
99% KM Percentile (z)	237.1	95% KM USL	258.7

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	106.9	SD	45.21
95% UTL95% Coverage	209.1	95% UPL (t)	185.4
90% Percentile (z)	164.8	95% Percentile (z)	181.3
99% Percentile (z)	212.1	95% USL	228.9

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.216	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.722	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.146	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.297	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.752	k star (bias corrected MLE)	1.803
Theta hat (MLE)	43.79	Theta star (bias corrected MLE)	66.82
nu hat (MLE)	44.03	nu star (bias corrected)	28.85
MLE Mean (bias corrected)	120.5		
MLE Sd (bias corrected)	89.73	95% Percentile of Chisquare (2kstar)	8.843

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	40.1	Mean	101.3
Maximum	300	Median	89.43
SD	55.19	CV	0.545
k hat (MLE)	4.288	k star (bias corrected MLE)	3.837
Theta hat (MLE)	23.61	Theta star (bias corrected MLE)	26.39
nu hat (MLE)	231.6	nu star (bias corrected)	207.2
MLE Mean (bias corrected)	101.3	MLE Sd (bias corrected)	51.7
95% Percentile of Chisquare (2kstar)	15.04	90% Percentile	170.6
95% Percentile	198.5	99% Percentile	258.2

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	245.6	250.9	95% Approx. Gamma UPL	201.5	203.4
95% Gamma USL	287.1	296.7			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	102.5	SD (KM)	57.9
Variance (KM)	3352	SE of Mean (KM)	18.83
k hat (KM)	3.131	k star (KM)	2.808
nu hat (KM)	169.1	nu star (KM)	151.6
theta hat (KM)	32.72	theta star (KM)	36.48
80% gamma percentile (KM)	147.3	90% gamma percentile (KM)	184.4
95% gamma percentile (KM)	219.2	99% gamma percentile (KM)	294.8

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	258.2	264.5	95% Approx. Gamma UPL	209.9	212.2
95% KM Gamma Percentile	202.1	203.8	95% Gamma USL	303.9	315.4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.982	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.109	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.283	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	98.66	Mean in Log Scale	4.482
SD in Original Scale	53.36	SD in Log Scale	0.459

95% UTL95% Coverage	249.6	95% BCA UTL95% Coverage	261
95% Bootstrap (%) UTL95% Coverage	300	95% UPL (t)	196.3
90% Percentile (z)	159.3	95% Percentile (z)	188.2
99% Percentile (z)	257.3	95% USL	305.2

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	4.488	95% KM UTL (Lognormal)95% Coverage	292
KM SD of Logged Data	0.526	95% KM UPL (Lognormal)	221.8
95% KM Percentile Lognormal (z)	211.3	95% KM USL (Lognormal)	367.7

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	106.9	Mean in Log Scale	4.61
SD in Original Scale	45.21	SD in Log Scale	0.343
95% UTL95% Coverage	218.4	95% UPL (t)	182.5
90% Percentile (z)	156.1	95% Percentile (z)	176.8
99% Percentile (z)	223.5	95% USL	253.9

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	300
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	272
95% USL	300	95% KM Chebyshev UPL	359.5

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:48:40 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

Benzo(k)fluoranthene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	4	23	85.19%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	23	180	250	206.3	200	18.1
Statistics (Non-Detects Only)	4	53	170	108.3	105	49.45
Statistics (All: NDs treated as DL value)	27	53	250	191.8	200	42.66
Statistics (All: NDs treated as DL/2 value)	27	53	170	103.9	100	18.84
Statistics (Normal ROS Imputed Data)	27	34.96	181.5	108.3	108.3	42.08
Statistics (Gamma ROS Imputed Data)	27	41.98	189	108	104.5	42.27
Statistics (Lognormal ROS Imputed Data)	27	47.95	205.7	107.9	99.32	44.77

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	5.969	1.659	18.13	4.598	0.493	0.107
Statistics (NDs = DL)	13.23	11.79	14.49	5.218	0.322	0.0616
Statistics (NDs = DL/2)	31.65	28.16	3.283	4.628	0.185	0.04
Statistics (Gamma ROS Estimates)	6.317	5.64	17.1	4.601	0.425	0.0924
Statistics (Lognormal ROS Estimates)	--	--	--	4.598	0.418	0.091

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.997	0.873	0.877	0.986

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.995	0.748	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.778	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.812	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.959	0.923	Data Appear Normal
Lilliefors (Detects Only)	0.156	0.375	Data Appear Normal
Lilliefors (NDs = DL)	0.298	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.218	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.0926	0.167	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.993	0.831	0.894	0.981

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.194	0.659	
Kolmogorov-Smirnov (Detects Only)	0.172	0.396	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	3.314	0.744	

Kolmogorov-Smirnov (NDs = DL)	0.338	0.168	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.761	0.744	
Kolmogorov-Smirnov (NDs = DL/2)	0.22	0.168	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.34	0.746	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.113	0.168	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.994	0.778	0.871	0.986

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.989	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.629	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.804	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.958	0.923	Data Appear Lognormal
Lilliefors (Detects Only)	0.171	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.351	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.234	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.0926	0.167	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:47:38 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Benzo(k)fluoranthene

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	12		
Number of Detects	4	Number of Non-Detects	23
Number of Distinct Detects	4	Number of Distinct Non-Detects	8
Minimum Detect	53	Minimum Non-Detect	180
Maximum Detect	170	Maximum Non-Detect	250
Variance Detected	2446	Percent Non-Detects	85.19%
Mean Detected	108.3	SD Detected	49.45
Mean of Detected Logged Data	4.598	SD of Detected Logged Data	0.493

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.995	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.156	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	108.3	KM SD	42.83
95% UTL95% Coverage	205	95% KM UPL (t)	182.6
90% KM Percentile (z)	163.1	95% KM Percentile (z)	178.7
99% KM Percentile (z)	207.9	95% KM USL	223.8

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	103.9	SD	18.84
95% UTL95% Coverage	146.5	95% UPL (t)	136.6
90% Percentile (z)	128.1	95% Percentile (z)	134.9
99% Percentile (z)	147.7	95% USL	154.7

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.194	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.659	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.172	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.396	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	5.969	k star (bias corrected MLE)	1.659
Theta hat (MLE)	18.13	Theta star (bias corrected MLE)	65.25
nu hat (MLE)	47.75	nu star (bias corrected)	13.27
MLE Mean (bias corrected)	108.3		
MLE Sd (bias corrected)	84.04	95% Percentile of Chisquare (2kstar)	8.359

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	41.98	Mean	108
Maximum	189	Median	104.5
SD	42.27	CV	0.391
k hat (MLE)	6.317	k star (bias corrected MLE)	5.64
Theta hat (MLE)	17.1	Theta star (bias corrected MLE)	19.15
nu hat (MLE)	341.1	nu star (bias corrected)	304.6
MLE Mean (bias corrected)	108	MLE Sd (bias corrected)	45.48
95% Percentile of Chisquare (2kstar)	20.06	90% Percentile	168.8
95% Percentile	192	99% Percentile	240.8

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	230.8	236.6	95% Approx. Gamma UPL	194.9	197.6
95% Gamma USL	264.2	273.5			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	108.3	SD (KM)	42.83
Variance (KM)	1834	SE of Mean (KM)	24.73
k hat (KM)	6.389	k star (KM)	5.704
nu hat (KM)	345	nu star (KM)	308
theta hat (KM)	16.94	theta star (KM)	18.98
80% gamma percentile (KM)	143.4	90% gamma percentile (KM)	168.9
95% gamma percentile (KM)	191.9	99% gamma percentile (KM)	240.4

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	232.5	238.1	95% Approx. Gamma UPL	195.9	198.5
95% KM Gamma Percentile	189.9	192.1	95% Gamma USL	266.3	275.5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.989	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.171	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	107.9	Mean in Log Scale	4.598
SD in Original Scale	44.77	SD in Log Scale	0.418

95% UTL95% Coverage	255.6	95% BCA UTL95% Coverage	201.6
95% Bootstrap (%) UTL95% Coverage	205.7	95% UPL (t)	205.4
90% Percentile (z)	169.8	95% Percentile (z)	197.6
99% Percentile (z)	262.8	95% USL	307

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	4.598	95% KM UTL (Lognormal)95% Coverage	260.6
KM SD of Logged Data	0.427	95% KM UPL (Lognormal)	208.5
95% KM Percentile Lognormal (z)	200.4	95% KM USL (Lognormal)	314.2

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	103.9	Mean in Log Scale	4.628
SD in Original Scale	18.84	SD in Log Scale	0.185
95% UTL95% Coverage	155.3	95% UPL (t)	141
90% Percentile (z)	129.6	95% Percentile (z)	138.6
99% Percentile (z)	157.3	95% USL	168.5

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	250
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	250
95% USL	250	95% KM Chebyshev UPL	298.4

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:56:40 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

Dimethylphthalate

Raw Statistics

Number of Valid Observations	27
Number of Distinct Observations	19
Minimum	83
Maximum	380
Mean of Raw Data	181
Standard Deviation of Raw Data	75.22
Khat	6.706
Theta hat	26.99
Kstar	5.986
Theta star	30.24
Mean of Log Transformed Data	5.122
Standard Deviation of Log Transformed Data	0.393

Normal GOF Test Results

Correlation Coefficient R	0.955
Shapiro Wilk Test Statistic	0.909
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.0226
Lilliefors Test Statistic	0.188
Lilliefors Critical (0.05) Value	0.167

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.988
A-D Test Statistic	0.437
A-D Critical (0.05) Value	0.746
K-S Test Statistic	0.142
K-S Critical(0.05) Value	0.168

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.989
Shapiro Wilk Test Statistic	0.97
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.629
Lilliefors Test Statistic	0.116
Lilliefors Critical (0.05) Value	0.167

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:55:17 AM
From File	C:\Users\Karren.Wood\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Dimethylphthalate

General Statistics

Total Number of Observations	27	Number of Distinct Observations	19
Minimum	83	First Quartile	117.5
Second Largest	330	Median	160
Maximum	380	Third Quartile	225
Mean	181	SD	75.22
Coefficient of Variation	0.416	Skewness	1.036
Mean of logged Data	5.122	SD of logged Data	0.393

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test

Shapiro Wilk Test Statistic	0.909	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.188	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with 95% Coverage	351	90% Percentile (z)	277.4
95% UPL (t)	311.7	95% Percentile (z)	304.7
95% USL	384	99% Percentile (z)	356

Gamma GOF Test

A-D Test Statistic	0.437	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.142	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.168	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.706	k star (bias corrected MLE)	5.986
Theta hat (MLE)	26.99	Theta star (bias corrected MLE)	30.24
nu hat (MLE)	362.1	nu star (bias corrected)	323.2
MLE Mean (bias corrected)	181	MLE Sd (bias corrected)	73.98

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	321.5	90% Percentile	279.9
95% Hawkins Wixley (HW) Approx. Gamma UPL	323.6	95% Percentile	317.3
95% WH Approx. Gamma UTL with 95% Coverage	379.3	99% Percentile	395.7

95% HW Approx. Gamma UTL with	95% Coverage	385.1			
	95% WH USL	432.7		95% HW USL	443

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.116	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	407.7		90% Percentile (z)	277.5
	95% UPL (t)	331.9		95% Percentile (z)	320.1
	95% USL	484.3		99% Percentile (z)	418.5

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		27	95% UTL with	95% Coverage	380
Approx, f used to compute achieved CC		1.421	Approximate Actual Confidence Coefficient achieved by UTL		0.75
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	380	95% BCA Bootstrap UTL with	95% Coverage	380
	95% UPL	360		90% Percentile	279
	90% Chebyshev UPL	410.8		95% Percentile	321
	95% Chebyshev UPL	514.9		99% Percentile	367
	95% USL	380			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:00:43 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

Fluoranthene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	1	26	11	15	57.69%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	15	360	410	384.7	385	16.74
Statistics (Non-Detects Only)	11	58	500	195.6	120	152.8
Statistics (All: NDs treated as DL value)	26	58	500	304.7	375	136.3
Statistics (All: NDs treated as DL/2 value)	26	58	500	193.7	191.3	96.89
Statistics (Normal ROS Imputed Data)	26	58	500	169	149.8	109.5
Statistics (Gamma ROS Imputed Data)	26	58	500	158.6	126.6	107.7
Statistics (Lognormal ROS Imputed Data)	26	58	500	152.2	114.8	107.7

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.876	1.425	104.3	4.987	0.807	0.162
Statistics (NDs = DL)	2.997	2.677	101.7	5.543	0.706	0.127
Statistics (NDs = DL/2)	4.222	3.76	45.89	5.143	0.529	0.103
Statistics (Gamma ROS Estimates)	2.962	2.646	53.56	4.888	0.589	0.12
Statistics (Lognormal ROS Estimates)	--	--	--	4.845	0.579	0.119

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.932	0.895	0.904	0.925

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.855	0.85	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.79	0.92	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.831	0.92	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.858	0.92	Data Not Normal
Lilliefors (Detects Only)	0.235	0.251	Data Appear Normal
Lilliefors (NDs = DL)	0.311	0.17	Data Not Normal
Lilliefors (NDs = DL/2)	0.261	0.17	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.196	0.17	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.981	0.801	0.938	0.973

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.549	0.74	
Kolmogorov-Smirnov (Detects Only)	0.196	0.259	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	3.303	0.751	

Kolmogorov-Smirnov (NDs = DL)	0.341	0.172	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.586	0.747	
Kolmogorov-Smirnov (NDs = DL/2)	0.275	0.172	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.708	0.751	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.196	0.172	Detected Data appear Approximate Gamma Distri

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.959	0.845	0.929	0.969

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.893	0.85	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.705	0.92	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.866	0.92	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.931	0.92	Data Appear Lognormal
Lilliefors (Detects Only)	0.168	0.251	Data Appear Lognormal
Lilliefors (NDs = DL)	0.34	0.17	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.307	0.17	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.194	0.17	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:59:33 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Fluoranthene

General Statistics

Total Number of Observations	26	Number of Missing Observations	1
Number of Distinct Observations	18		
Number of Detects	11	Number of Non-Detects	15
Number of Distinct Detects	11	Number of Distinct Non-Detects	8
Minimum Detect	58	Minimum Non-Detect	360
Maximum Detect	500	Maximum Non-Detect	410
Variance Detected	23362	Percent Non-Detects	57.69%
Mean Detected	195.6	SD Detected	152.8
Mean of Detected Logged Data	4.987	SD of Detected Logged Data	0.807

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.275	d2max (for USL)	2.681

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.855	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.235	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	163.9	KM SD	120.2
95% UTL95% Coverage	437.3	95% KM UPL (t)	373.1
90% KM Percentile (z)	317.9	95% KM Percentile (z)	361.6
99% KM Percentile (z)	443.5	95% KM USL	486.1

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	193.7	SD	96.89
95% UTL95% Coverage	414.1	95% UPL (t)	362.4
90% Percentile (z)	317.9	95% Percentile (z)	353.1
99% Percentile (z)	419.1	95% USL	453.5

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.549	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.74	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.196	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.259	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.876	k star (bias corrected MLE)	1.425
Theta hat (MLE)	104.3	Theta star (bias corrected MLE)	137.3
nu hat (MLE)	41.27	nu star (bias corrected)	31.35
MLE Mean (bias corrected)	195.6		
MLE Sd (bias corrected)	163.9	95% Percentile of Chisquare (2kstar)	7.553

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	58	Mean	158.6
Maximum	500	Median	126.6
SD	107.7	CV	0.679
k hat (MLE)	2.962	k star (bias corrected MLE)	2.646
Theta hat (MLE)	53.56	Theta star (bias corrected MLE)	59.95
nu hat (MLE)	154	nu star (bias corrected)	137.6
MLE Mean (bias corrected)	158.6	MLE Sd (bias corrected)	97.52
95% Percentile of Chisquare (2kstar)	11.52	90% Percentile	289.3
95% Percentile	345.3	99% Percentile	467.5

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	444.1	455.3	95% Approx. Gamma UPL	351.7	354.8
95% Gamma USL	524.3	544.9			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	163.9	SD (KM)	120.2
Variance (KM)	14441	SE of Mean (KM)	33.55
k hat (KM)	1.86	k star (KM)	1.671
nu hat (KM)	96.73	nu star (KM)	86.9
theta hat (KM)	88.11	theta star (KM)	98.08
80% gamma percentile (KM)	250.5	90% gamma percentile (KM)	332.7
95% gamma percentile (KM)	411.9	99% gamma percentile (KM)	589.6

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	515.2	534.9	95% Approx. Gamma UPL	396.9	403.2
95% KM Gamma Percentile	377.8	382.5	95% Gamma USL	619.3	654.7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.893	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.168	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	152.2	Mean in Log Scale	4.845
SD in Original Scale	107.7	SD in Log Scale	0.579

95% UTL95% Coverage	474.4	95% BCA UTL95% Coverage	500
95% Bootstrap (%) UTL95% Coverage	500	95% UPL (t)	348.2
90% Percentile (z)	266.9	95% Percentile (z)	329.4
99% Percentile (z)	488.7	95% USL	600

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	4.848	95% KM UTL (Lognormal)95% Coverage	625.7
KM SD of Logged Data	0.699	95% KM UPL (Lognormal)	430.6
95% KM Percentile Lognormal (z)	402.7	95% KM USL (Lognormal)	831.2

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	193.7	Mean in Log Scale	5.143
SD in Original Scale	96.89	SD in Log Scale	0.529
95% UTL95% Coverage	571.3	95% UPL (t)	430.5
90% Percentile (z)	337.6	95% Percentile (z)	409.2
99% Percentile (z)	587.1	95% USL	708.3

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	26	95% UTL with95% Coverage	500
Approx, f used to compute achieved CC	1.368	Approximate Actual Confidence Coefficient achieved by UTL	0.736
Approximate Sample Size needed to achieve specified CC	59	95% UPL	468.5
95% USL	500	95% KM Chebyshev UPL	697.7

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:04:00 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

Indeno(1,2,3-cd)pyrene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	6	21	77.78%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	21	180	250	204.5	200	16.12
Statistics (Non-Detects Only)	6	55	250	120.3	99	72.65
Statistics (All: NDs treated as DL value)	27	55	250	185.8	200	49.87
Statistics (All: NDs treated as DL/2 value)	27	55	250	106.3	100	33.52
Statistics (Normal ROS Imputed Data)	27	35.35	250	102.2	97.59	46.79
Statistics (Gamma ROS Imputed Data)	27	49.14	250	99.42	90.97	42.94
Statistics (Lognormal ROS Imputed Data)	27	54.05	250	97.54	87.84	41.31

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	3.8	2.011	31.67	4.653	0.562	0.121
Statistics (NDs = DL)	9.313	8.303	19.95	5.17	0.38	0.0736
Statistics (NDs = DL/2)	14.42	12.84	7.369	4.631	0.256	0.0552
Statistics (Gamma ROS Estimates)	6.676	5.959	14.89	4.523	0.391	0.0865
Statistics (Lognormal ROS Estimates)	--	--	--	4.511	0.364	0.0806

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.933	0.889	0.789	0.95

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.873	0.788	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.792	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.662	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.913	0.923	Data Not Normal
Lilliefors (Detects Only)	0.22	0.325	Data Appear Normal
Lilliefors (NDs = DL)	0.311	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.271	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.169	0.167	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.987	0.835	0.832	0.957

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.285	0.7	
Kolmogorov-Smirnov (Detects Only)	0.229	0.334	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	3.318	0.744	

Kolmogorov-Smirnov (NDs = DL)	0.348	0.168	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	2.142	0.744	
Kolmogorov-Smirnov (NDs = DL/2)	0.228	0.168	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.54	0.746	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.168	0.168	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.982	0.817	0.888	0.968

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.956	0.788	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.675	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.826	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.939	0.923	Data Appear Lognormal
Lilliefors (Detects Only)	0.201	0.325	Data Appear Lognormal
Lilliefors (NDs = DL)	0.358	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.233	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.169	0.167	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:02:50 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Indeno(1,2,3-cd)pyrene

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	13		
Number of Detects	6	Number of Non-Detects	21
Number of Distinct Detects	6	Number of Distinct Non-Detects	8
Minimum Detect	55	Minimum Non-Detect	180
Maximum Detect	250	Maximum Non-Detect	250
Variance Detected	5278	Percent Non-Detects	77.78%
Mean Detected	120.3	SD Detected	72.65
Mean of Detected Logged Data	4.653	SD of Detected Logged Data	0.562

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.873	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.22	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	100.2	KM SD	45.39
95% UTL95% Coverage	202.7	95% KM UPL (t)	179
90% KM Percentile (z)	158.3	95% KM Percentile (z)	174.8
99% KM Percentile (z)	205.8	95% KM USL	222.6

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	106.3	SD	33.52
95% UTL95% Coverage	182	95% UPL (t)	164.5
90% Percentile (z)	149.2	95% Percentile (z)	161.4
99% Percentile (z)	184.3	95% USL	196.7

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.285	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.7	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.229	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.334	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.8	k star (bias corrected MLE)	2.011
Theta hat (MLE)	31.67	Theta star (bias corrected MLE)	59.83
nu hat (MLE)	45.6	nu star (bias corrected)	24.13
MLE Mean (bias corrected)	120.3		
MLE Sd (bias corrected)	84.85	95% Percentile of Chisquare (2kstar)	9.524

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	49.14	Mean	99.42
Maximum	250	Median	90.97
SD	42.94	CV	0.432
k hat (MLE)	6.676	k star (bias corrected MLE)	5.959
Theta hat (MLE)	14.89	Theta star (bias corrected MLE)	16.68
nu hat (MLE)	360.5	nu star (bias corrected)	321.8
MLE Mean (bias corrected)	99.42	MLE Sd (bias corrected)	40.73
95% Percentile of Chisquare (2kstar)	20.92	90% Percentile	153.9
95% Percentile	174.5	99% Percentile	217.7

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	208.4	211.3	95% Approx. Gamma UPL	176.6	177.6
95% Gamma USL	237.8	243			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	100.2	SD (KM)	45.39
Variance (KM)	2060	SE of Mean (KM)	17.75
k hat (KM)	4.87	k star (KM)	4.354
nu hat (KM)	263	nu star (KM)	235.1
theta hat (KM)	20.57	theta star (KM)	23.01
80% gamma percentile (KM)	136.8	90% gamma percentile (KM)	164.5
95% gamma percentile (KM)	189.9	99% gamma percentile (KM)	244

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	216.8	219.8	95% Approx. Gamma UPL	182.3	183.3
95% KM Gamma Percentile	176.7	177.3	95% Gamma USL	248.8	254.5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.201	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	97.54	Mean in Log Scale	4.511
SD in Original Scale	41.31	SD in Log Scale	0.364

95% UTL95% Coverage	207.2	95% BCA UTL95% Coverage	220
95% Bootstrap (%) UTL95% Coverage	250	95% UPL (t)	171.3
90% Percentile (z)	145.1	95% Percentile (z)	165.6
99% Percentile (z)	212.2	95% USL	243

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	4.518	95% KM UTL (Lognormal)95% Coverage	231.9
KM SD of Logged Data	0.411	95% KM UPL (Lognormal)	187.1
95% KM Percentile Lognormal (z)	180.1	95% KM USL (Lognormal)	277.6

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	106.3	Mean in Log Scale	4.631
SD in Original Scale	33.52	SD in Log Scale	0.256
95% UTL95% Coverage	182.9	95% UPL (t)	160
90% Percentile (z)	142.4	95% Percentile (z)	156.3
99% Percentile (z)	186	95% USL	204.6

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	250
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	250
95% USL	250	95% KM Chebyshev UPL	301.6

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:06:44 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

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	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	10	17	62.96%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	17	180	220	199.1	200	10.34
Statistics (Non-Detects Only)	10	46	320	148.6	120	84.75
Statistics (All: NDs treated as DL value)	27	46	320	180.4	195	56.3
Statistics (All: NDs treated as DL/2 value)	27	46	320	117.7	100	55.55
Statistics (Normal ROS Imputed Data)	27	39.14	320	122.8	109.3	63.02
Statistics (Gamma ROS Imputed Data)	27	46	320	119.2	99.98	61.1
Statistics (Lognormal ROS Imputed Data)	27	46	320	118	97.2	59.77

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	3.554	2.555	41.81	4.854	0.581	0.12
Statistics (NDs = DL)	7.852	7.004	22.98	5.13	0.406	0.0792
Statistics (NDs = DL/2)	6.868	6.13	17.14	4.694	0.366	0.0781
Statistics (Gamma ROS Estimates)	4.808	4.298	24.79	4.673	0.464	0.0994
Statistics (Lognormal ROS Estimates)	--	--	--	4.672	0.437	0.0935

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.955	0.923	0.785	0.947

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.913	0.842	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.869	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.64	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.904	0.923	Data Not Normal
Lilliefors (Detects Only)	0.217	0.262	Data Appear Normal
Lilliefors (NDs = DL)	0.271	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.37	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.177	0.167	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.988	0.892	0.859	0.971

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.271	0.731	
Kolmogorov-Smirnov (Detects Only)	0.198	0.268	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	2.45	0.745	

Kolmogorov-Smirnov (NDs = DL)	0.308	0.168	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	3.491	0.746	
Kolmogorov-Smirnov (NDs = DL/2)	0.343	0.168	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.525	0.748	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.179	0.169	Detected Data appear Approximate Gamma Distri

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.985	0.871	0.862	0.979

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.97	0.842	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.777	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.771	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.963	0.923	Data Appear Lognormal
Lilliefors (Detects Only)	0.166	0.262	Data Appear Lognormal
Lilliefors (NDs = DL)	0.317	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.321	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.153	0.167	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:05:55 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Phenanthrene

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	14		
Number of Detects	10	Number of Non-Detects	17
Number of Distinct Detects	9	Number of Distinct Non-Detects	6
Minimum Detect	46	Minimum Non-Detect	180
Maximum Detect	320	Maximum Non-Detect	220
Variance Detected	7183	Percent Non-Detects	62.96%
Mean Detected	148.6	SD Detected	84.75
Mean of Detected Logged Data	4.854	SD of Detected Logged Data	0.581

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.913	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.217	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	119.4	KM SD	60.51
95% UTL95% Coverage	256.2	95% KM UPL (t)	224.5
90% KM Percentile (z)	197	95% KM Percentile (z)	219
99% KM Percentile (z)	260.2	95% KM USL	282.7

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	117.7	SD	55.55
95% UTL95% Coverage	243.3	95% UPL (t)	214.2
90% Percentile (z)	188.9	95% Percentile (z)	209.1
99% Percentile (z)	246.9	95% USL	267.6

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.271	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.731	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.198	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.268	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.554	k star (bias corrected MLE)	2.555
Theta hat (MLE)	41.81	Theta star (bias corrected MLE)	58.17
nu hat (MLE)	71.09	nu star (bias corrected)	51.1
MLE Mean (bias corrected)	148.6		
MLE Sd (bias corrected)	92.97	95% Percentile of Chisquare (2kstar)	11.24

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	46	Mean	119.2
Maximum	320	Median	99.98
SD	61.1	CV	0.513
k hat (MLE)	4.808	k star (bias corrected MLE)	4.298
Theta hat (MLE)	24.79	Theta star (bias corrected MLE)	27.73
nu hat (MLE)	259.6	nu star (bias corrected)	232.1
MLE Mean (bias corrected)	119.2	MLE Sd (bias corrected)	57.49
95% Percentile of Chisquare (2kstar)	16.35	90% Percentile	196.2
95% Percentile	226.7	99% Percentile	291.7

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	277.9	283.1	95% Approx. Gamma UPL	230	231.8
95% Gamma USL	322.7	332.3			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	119.4	SD (KM)	60.51
Variance (KM)	3662	SE of Mean (KM)	16.09
k hat (KM)	3.896	k star (KM)	3.488
nu hat (KM)	210.4	nu star (KM)	188.3
theta hat (KM)	30.66	theta star (KM)	34.25
80% gamma percentile (KM)	167.3	90% gamma percentile (KM)	205.2
95% gamma percentile (KM)	240.3	99% gamma percentile (KM)	315.7

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	278.1	283.7	95% Approx. Gamma UPL	230.1	232.1
95% KM Gamma Percentile	222.3	223.9	95% Gamma USL	323	333.1

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.166	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	118	Mean in Log Scale	4.672
SD in Original Scale	59.77	SD in Log Scale	0.437

95% UTL95% Coverage	286.9	95% BCA UTL95% Coverage	320
95% Bootstrap (%) UTL95% Coverage	320	95% UPL (t)	228.3
90% Percentile (z)	187.1	95% Percentile (z)	219.3
99% Percentile (z)	295.4	95% USL	347.4

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	4.671	95% KM UTL (Lognormal)95% Coverage	308.6
KM SD of Logged Data	0.47	95% KM UPL (Lognormal)	241.4
95% KM Percentile Lognormal (z)	231.2	95% KM USL (Lognormal)	379.1

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	117.7	Mean in Log Scale	4.694
SD in Original Scale	55.55	SD in Log Scale	0.366
95% UTL95% Coverage	250.1	95% UPL (t)	206.5
90% Percentile (z)	174.8	95% Percentile (z)	199.7
99% Percentile (z)	256.3	95% USL	293.7

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	320
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	284
95% USL	320	95% KM Chebyshev UPL	388

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:09:38 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

Phenol

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	25	2	7.41%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	2	390	400	395	395	7.071
Statistics (Non-Detects Only)	25	41	210	131	130	45.9
Statistics (All: NDs treated as DL value)	27	41	400	150.6	130	83.13
Statistics (All: NDs treated as DL/2 value)	27	41	210	135.9	130	47.54
Statistics (Normal ROS Imputed Data)	27	41	210	131	130	44.1
Statistics (Gamma ROS Imputed Data)	27	41	210	130.6	126	44.12
Statistics (Lognormal ROS Imputed Data)	27	41	210	130.3	125	44.18

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	6.64	5.869	19.73	4.798	0.436	0.0908
Statistics (NDs = DL)	4.039	3.615	37.27	4.885	0.524	0.107
Statistics (NDs = DL/2)	6.574	5.868	20.68	4.834	0.439	0.0907
Statistics (Gamma ROS Estimates)	7.153	6.383	18.26	4.801	0.419	0.0873
Statistics (Lognormal ROS Estimates)	--	--	--	4.798	0.419	0.0873

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.985	0.892	0.981	0.983

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.96	0.918	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.805	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.95	0.923	Data Appear Normal
Shapiro-Wilk (Normal ROS Estimates)	0.959	0.923	Data Appear Normal
Lilliefors (Detects Only)	0.124	0.173	Data Appear Normal
Lilliefors (NDs = DL)	0.185	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.134	0.167	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.132	0.167	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.958	0.941	0.949	0.96

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.742	0.746	
Kolmogorov-Smirnov (Detects Only)	0.18	0.175	Detected Data appear Approximate Gamma Distri
Anderson-Darling (NDs = DL)	0.766	0.749	

Kolmogorov-Smirnov (NDs = DL)	0.149	0.169	Detected Data appear Approximate Gamma Distri
Anderson-Darling (NDs = DL/2)	0.79	0.746	
Kolmogorov-Smirnov (NDs = DL/2)	0.163	0.168	Detected Data appear Approximate Gamma Distri
Anderson-Darling (Gamma ROS Estimates)	0.846	0.746	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.189	0.168	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.934	0.962	0.931	0.931

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.869	0.918	Data Not Lognormal
Shapiro-Wilk (NDs = DL)	0.93	0.923	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.863	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.865	0.923	Data Not Lognormal
Lilliefors (Detects Only)	0.211	0.173	Data Not Lognormal
Lilliefors (NDs = DL)	0.177	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.195	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.223	0.167	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:08:59 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Phenol

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	18		
Number of Detects	25	Number of Non-Detects	2
Number of Distinct Detects	16	Number of Distinct Non-Detects	2
Minimum Detect	41	Minimum Non-Detect	390
Maximum Detect	210	Maximum Non-Detect	400
Variance Detected	2107	Percent Non-Detects	7.407%
Mean Detected	131	SD Detected	45.9
Mean of Detected Logged Data	4.798	SD of Detected Logged Data	0.436

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.918	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.124	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.173	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	131	KM SD	44.97
95% UTL95% Coverage	232.6	95% KM UPL (t)	209.1
90% KM Percentile (z)	188.6	95% KM Percentile (z)	205
99% KM Percentile (z)	235.6	95% KM USL	252.3

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	135.9	SD	47.54
95% UTL95% Coverage	243.4	95% UPL (t)	218.5
90% Percentile (z)	196.9	95% Percentile (z)	214.1
99% Percentile (z)	246.5	95% USL	264.2

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.742	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.18	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.175	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	6.64	k star (bias corrected MLE)	5.869
Theta hat (MLE)	19.73	Theta star (bias corrected MLE)	22.32
nu hat (MLE)	332	nu star (bias corrected)	293.5
MLE Mean (bias corrected)	131		
MLE Sd (bias corrected)	54.07	95% Percentile of Chisquare (2kstar)	20.67

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	41	Mean	130.6
Maximum	210	Median	126
SD	44.12	CV	0.338
k hat (MLE)	7.153	k star (bias corrected MLE)	6.383
Theta hat (MLE)	18.26	Theta star (bias corrected MLE)	20.47
nu hat (MLE)	386.3	nu star (bias corrected)	344.7
MLE Mean (bias corrected)	130.6	MLE Sd (bias corrected)	51.7
95% Percentile of Chisquare (2kstar)	22.05	90% Percentile	199.7
95% Percentile	225.6	99% Percentile	279.8

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	268.6	277.1	95% Approx. Gamma UPL	228.7	233.3
95% Gamma USL	305.3	318.3			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	131	SD (KM)	44.97
Variance (KM)	2023	SE of Mean (KM)	9.18
k hat (KM)	8.484	k star (KM)	7.566
nu hat (KM)	458.2	nu star (KM)	408.6
theta hat (KM)	15.44	theta star (KM)	17.31
80% gamma percentile (KM)	168.5	90% gamma percentile (KM)	194.5
95% gamma percentile (KM)	217.9	99% gamma percentile (KM)	266.3

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	272	280.8	95% Approx. Gamma UPL	231.1	235.7
95% KM Gamma Percentile	224.3	228.4	95% Gamma USL	309.8	323.3

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.869	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.918	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.211	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.173	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	130.3	Mean in Log Scale	4.798
SD in Original Scale	44.18	SD in Log Scale	0.419

95% UTL95% Coverage	312.4	95% BCA UTL95% Coverage	207
95% Bootstrap (%) UTL95% Coverage	210	95% UPL (t)	251
90% Percentile (z)	207.4	95% Percentile (z)	241.5
99% Percentile (z)	321.2	95% USL	375.3

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	4.798	95% KM UTL (Lognormal)95% Coverage	318.3
KM SD of Logged Data	0.427	95% KM UPL (Lognormal)	254.6
95% KM Percentile Lognormal (z)	244.8	95% KM USL (Lognormal)	383.8

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	135.9	Mean in Log Scale	4.834
SD in Original Scale	47.54	SD in Log Scale	0.439
95% UTL95% Coverage	338.7	95% UPL (t)	269.3
90% Percentile (z)	220.6	95% Percentile (z)	258.6
99% Percentile (z)	348.7	95% USL	410.5

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	400
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	396
95% USL	400	95% KM Chebyshev UPL	330.6

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:12:13 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

Pyrene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	1	26	11	15	57.69%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	15	180	210	197.7	200	9.424
Statistics (Non-Detects Only)	11	57	430	178	100	129.9
Statistics (All: NDs treated as DL value)	26	57	430	189.3	197.5	83.08
Statistics (All: NDs treated as DL/2 value)	26	57	430	132.3	100	91.42
Statistics (Normal ROS Imputed Data)	26	-10.33	430	126.9	96.13	103.8
Statistics (Gamma ROS Imputed Data)	26	13.57	430	120.7	85.86	101.9
Statistics (Lognormal ROS Imputed Data)	26	43.54	430	124.6	88.88	97.19

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	2.126	1.607	83.74	4.928	0.753	0.153
Statistics (NDs = DL)	4.743	4.221	39.92	5.134	0.511	0.0994
Statistics (NDs = DL/2)	3.476	3.1	38.07	4.735	0.507	0.107
Statistics (Gamma ROS Estimates)	1.745	1.569	69.15	4.48	0.836	0.187
Statistics (Lognormal ROS Estimates)	--	--	--	4.615	0.615	0.133

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.935	0.924	0.795	0.938

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.861	0.85	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.863	0.92	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.643	0.92	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.885	0.92	Data Not Normal
Lilliefors (Detects Only)	0.271	0.251	Data Not Normal
Lilliefors (NDs = DL)	0.248	0.17	Data Not Normal
Lilliefors (NDs = DL/2)	0.425	0.17	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.188	0.17	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.977	0.932	0.895	0.984

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.584	0.738	
Kolmogorov-Smirnov (Detects Only)	0.247	0.258	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.934	0.747	

Kolmogorov-Smirnov (NDs = DL)	0.295	0.172	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	3.33	0.749	
Kolmogorov-Smirnov (NDs = DL/2)	0.4	0.172	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.521	0.759	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.147	0.174	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.957	0.913	0.881	0.961

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.892	0.85	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.835	0.92	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.781	0.92	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.917	0.92	Data Not Lognormal
Lilliefors (Detects Only)	0.212	0.251	Data Appear Lognormal
Lilliefors (NDs = DL)	0.318	0.17	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.371	0.17	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.164	0.17	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:11:29 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Pyrene

General Statistics

Total Number of Observations	26	Number of Missing Observations	1
Number of Distinct Observations	15		
Number of Detects	11	Number of Non-Detects	15
Number of Distinct Detects	11	Number of Distinct Non-Detects	5
Minimum Detect	57	Minimum Non-Detect	180
Maximum Detect	430	Maximum Non-Detect	210
Variance Detected	16886	Percent Non-Detects	57.69%
Mean Detected	178	SD Detected	129.9
Mean of Detected Logged Data	4.928	SD of Detected Logged Data	0.753

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.275	d2max (for USL)	2.681

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.861	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.271	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Data Not Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	119.3	KM SD	95.88
95% UTL95% Coverage	337.5	95% KM UPL (t)	286.2
90% KM Percentile (z)	242.2	95% KM Percentile (z)	277.1
99% KM Percentile (z)	342.4	95% KM USL	376.4

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	132.3	SD	91.42
95% UTL95% Coverage	340.3	95% UPL (t)	291.5
90% Percentile (z)	249.5	95% Percentile (z)	282.7
99% Percentile (z)	345	95% USL	377.4

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.584	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.738	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.247	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.258	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.126	k star (bias corrected MLE)	1.607
Theta hat (MLE)	83.74	Theta star (bias corrected MLE)	110.8
nu hat (MLE)	46.76	nu star (bias corrected)	35.34
MLE Mean (bias corrected)	178		
MLE Sd (bias corrected)	140.4	95% Percentile of Chisquare (2kstar)	8.181

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	13.57	Mean	120.7
Maximum	430	Median	85.86
SD	101.9	CV	0.845
k hat (MLE)	1.745	k star (bias corrected MLE)	1.569
Theta hat (MLE)	69.15	Theta star (bias corrected MLE)	76.89
nu hat (MLE)	90.73	nu star (bias corrected)	81.6
MLE Mean (bias corrected)	120.7	MLE Sd (bias corrected)	96.31
95% Percentile of Chisquare (2kstar)	8.053	90% Percentile	248.7
95% Percentile	309.6	99% Percentile	446.8

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	420.7	444.8	95% Approx. Gamma UPL	316.9	325.8
95% Gamma USL	513.2	554.9			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	119.3	SD (KM)	95.88
Variance (KM)	9193	SE of Mean (KM)	20.37
k hat (KM)	1.549	k star (KM)	1.396
nu hat (KM)	80.57	nu star (KM)	72.61
theta hat (KM)	77.02	theta star (KM)	85.47
80% gamma percentile (KM)	186.1	90% gamma percentile (KM)	253.1
95% gamma percentile (KM)	318.5	99% gamma percentile (KM)	466.8

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	346.8	350	95% Approx. Gamma UPL	271.6	270.2
95% KM Gamma Percentile	259.4	257.5	95% Gamma USL	412.4	421.6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.892	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.212	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	124.6	Mean in Log Scale	4.615
SD in Original Scale	97.19	SD in Log Scale	0.615

95% UTL95% Coverage	409.3	95% BCA UTL95% Coverage	430
95% Bootstrap (%) UTL95% Coverage	430	95% UPL (t)	294.7
90% Percentile (z)	222.2	95% Percentile (z)	277.8
99% Percentile (z)	422.4	95% USL	525.4

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	4.571	95% KM UTL (Lognormal)95% Coverage	364.9
KM SD of Logged Data	0.584	95% KM UPL (Lognormal)	267.1
95% KM Percentile Lognormal (z)	252.6	95% KM USL (Lognormal)	462.4

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	132.3	Mean in Log Scale	4.735
SD in Original Scale	91.42	SD in Log Scale	0.507
95% UTL95% Coverage	360.7	95% UPL (t)	275.1
90% Percentile (z)	218	95% Percentile (z)	262
99% Percentile (z)	370.2	95% USL	443.1

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	26	95% UTL with95% Coverage	430
Approx, f used to compute achieved CC	1.368	Approximate Actual Confidence Coefficient achieved by UTL	0.736
Approximate Sample Size needed to achieve specified CC	59	95% UPL	398.5
95% USL	430	95% KM Chebyshev UPL	545.2

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:40:21 AM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-2-Methylnaphthalene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	4	23	15	8	34.78%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	8	3.6	4	3.838	3.85	0.141
Statistics (Non-Detects Only)	15	0.83	18	5.818	4.7	5.063
Statistics (All: NDs treated as DL value)	23	0.83	18	5.129	3.9	4.153
Statistics (All: NDs treated as DL/2 value)	23	0.83	18	4.462	2	4.463
Statistics (Normal ROS Imputed Data)	23	-0.09	18	4.297	2.921	4.634
Statistics (Gamma ROS Imputed Data)	23	0.144	18	4.163	1.992	4.682
Statistics (Lognormal ROS Imputed Data)	23	0.83	18	4.341	2.079	4.545

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.385	1.153	4.2	1.358	0.996	0.733
Statistics (NDs = DL)	1.927	1.704	2.662	1.354	0.795	0.587
Statistics (NDs = DL/2)	1.449	1.289	3.079	1.112	0.866	0.779
Statistics (Gamma ROS Estimates)	0.841	0.761	4.947	0.725	1.385	1.909
Statistics (Lognormal ROS Estimates)	--	--	--	1.029	0.934	0.907

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.934	0.88	0.864	0.902

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.869	0.881	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.784	0.914	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.752	0.914	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.818	0.914	Data Not Normal
Lilliefors (Detects Only)	0.195	0.22	Data Appear Normal
Lilliefors (NDs = DL)	0.252	0.18	Data Not Normal
Lilliefors (NDs = DL/2)	0.243	0.18	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.185	0.18	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.992	0.966	0.978	0.993

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.282	0.756	
Kolmogorov-Smirnov (Detects Only)	0.145	0.226	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.853	0.756	

Kolmogorov-Smirnov (NDs = DL)	0.171	0.184	Detected Data appear Approximate Gamma Distri
Anderson-Darling (NDs = DL/2)	1.002	0.761	
Kolmogorov-Smirnov (NDs = DL/2)	0.234	0.185	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.294	0.778	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.108	0.188	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.977	0.961	0.973	0.971

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.938	0.881	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.923	0.914	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.938	0.914	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.93	0.914	Data Appear Lognormal
Lilliefors (Detects Only)	0.149	0.22	Data Appear Lognormal
Lilliefors (NDs = DL)	0.218	0.18	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.208	0.18	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.147	0.18	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:38:45 AM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-2-Methylnaphthalene

General Statistics

Total Number of Observations	23	Number of Missing Observations	4
Number of Distinct Observations	20		
Number of Detects	15	Number of Non-Detects	8
Number of Distinct Detects	15	Number of Distinct Non-Detects	5
Minimum Detect	0.83	Minimum Non-Detect	3.6
Maximum Detect	18	Maximum Non-Detect	4
Variance Detected	25.64	Percent Non-Detects	34.78%
Mean Detected	5.818	SD Detected	5.063
Mean of Detected Logged Data	1.358	SD of Detected Logged Data	0.996

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.328	d2max (for USL)	2.624

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.869	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.881	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.195	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.22	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	4.367	KM SD	4.457
95% UTL95% Coverage	14.74	95% KM UPL (t)	12.18
90% KM Percentile (z)	10.08	95% KM Percentile (z)	11.7
99% KM Percentile (z)	14.74	95% KM USL	16.06

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	4.462	SD	4.463
95% UTL95% Coverage	14.85	95% UPL (t)	12.29
90% Percentile (z)	10.18	95% Percentile (z)	11.8
99% Percentile (z)	14.85	95% USL	16.17

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.282	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.756	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.145	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.226	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.385	k star (bias corrected MLE)	1.153
Theta hat (MLE)	4.2	Theta star (bias corrected MLE)	5.047
nu hat (MLE)	41.56	nu star (bias corrected)	34.58
MLE Mean (bias corrected)	5.818		
MLE Sd (bias corrected)	5.419	95% Percentile of Chisquare (2kstar)	6.57

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.144	Mean	4.163
Maximum	18	Median	1.992
SD	4.682	CV	1.125
k hat (MLE)	0.841	k star (bias corrected MLE)	0.761
Theta hat (MLE)	4.947	Theta star (bias corrected MLE)	5.472
nu hat (MLE)	38.71	nu star (bias corrected)	34.99
MLE Mean (bias corrected)	4.163	MLE Sd (bias corrected)	4.773
95% Percentile of Chisquare (2kstar)	5.026	90% Percentile	10.24
95% Percentile	13.75	99% Percentile	22.06

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	20.94	23.69	95% Approx. Gamma UPL	14.2	15.19
95% Gamma USL	25.12	29.27			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.367	SD (KM)	4.457
Variance (KM)	19.87	SE of Mean (KM)	0.979
k hat (KM)	0.96	k star (KM)	0.864
nu hat (KM)	44.15	nu star (KM)	39.72
theta hat (KM)	4.549	theta star (KM)	5.056
80% gamma percentile (KM)	7.103	90% gamma percentile (KM)	10.42
95% gamma percentile (KM)	13.78	99% gamma percentile (KM)	21.67

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	18	19.13	95% Approx. Gamma UPL	12.78	13.1
95% KM Gamma Percentile	11.92	12.14	95% Gamma USL	21.17	22.95

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.938	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.881	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.149	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.22	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	4.341	Mean in Log Scale	1.029
SD in Original Scale	4.545	SD in Log Scale	0.934

95% UTL95% Coverage	24.62	95% BCA UTL95% Coverage	18
95% Bootstrap (%) UTL95% Coverage	18	95% UPL (t)	14.4
90% Percentile (z)	9.265	95% Percentile (z)	13.01
99% Percentile (z)	24.58	95% USL	32.45

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.008	95% KM UTL (Lognormal)95% Coverage	25.85
KM SD of Logged Data	0.964	95% KM UPL (Lognormal)	14.86
95% KM Percentile Lognormal (z)	13.38	95% KM USL (Lognormal)	34.38

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	4.462	Mean in Log Scale	1.112
SD in Original Scale	4.463	SD in Log Scale	0.866
95% UTL95% Coverage	22.84	95% UPL (t)	13.9
90% Percentile (z)	9.229	95% Percentile (z)	12.64
99% Percentile (z)	22.81	95% USL	29.51

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	23	95% UTL with95% Coverage	18
Approx, f used to compute achieved CC	1.211	Approximate Actual Confidence Coefficient achieved by UTL	0.693
Approximate Sample Size needed to achieve specified CC	59	95% UPL	17
95% USL	18	95% KM Chebyshev UPL	24.21

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:49:31 AM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Acenaphthene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	9	18	66.67%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	18	3.6	4.3	3.903	3.9	0.211
Statistics (Non-Detects Only)	9	1.6	8.5	3.6	3.5	2.266
Statistics (All: NDs treated as DL value)	27	1.6	8.5	3.802	3.85	1.277
Statistics (All: NDs treated as DL/2 value)	27	1.6	8.5	2.501	1.975	1.488
Statistics (Normal ROS Imputed Data)	27	1.053	8.5	2.767	2.405	1.521
Statistics (Gamma ROS Imputed Data)	27	1.202	8.5	2.639	2.157	1.517
Statistics (Lognormal ROS Imputed Data)	27	1.512	8.5	2.677	2.204	1.47

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	3.32	2.288	1.084	1.123	0.586	0.522
Statistics (NDs = DL)	9.368	8.352	0.406	1.281	0.347	0.271
Statistics (NDs = DL/2)	5.284	4.722	0.473	0.819	0.394	0.481
Statistics (Gamma ROS Estimates)	4.712	4.213	0.56	0.861	0.446	0.519
Statistics (Lognormal ROS Estimates)	--	--	--	0.891	0.403	0.453

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.922	0.849	0.727	0.878

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.852	0.829	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.75	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.551	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.791	0.923	Data Not Normal
Lilliefors (Detects Only)	0.19	0.274	Data Appear Normal
Lilliefors (NDs = DL)	0.274	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.395	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.224	0.167	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.982	0.867	0.831	0.925

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.369	0.726	
Kolmogorov-Smirnov (Detects Only)	0.183	0.281	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	2.763	0.744	

Kolmogorov-Smirnov (NDs = DL)	0.296	0.168	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	4.072	0.747	
Kolmogorov-Smirnov (NDs = DL/2)	0.371	0.169	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.958	0.748	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.22	0.169	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.969	0.871	0.819	0.933

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.923	0.829	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.778	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.683	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.875	0.923	Data Not Lognormal
Lilliefors (Detects Only)	0.16	0.274	Data Appear Lognormal
Lilliefors (NDs = DL)	0.319	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.346	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.228	0.167	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:48:31 AM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Acenaphthene

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	16		
Number of Detects	9	Number of Non-Detects	18
Number of Distinct Detects	8	Number of Distinct Non-Detects	10
Minimum Detect	1.6	Minimum Non-Detect	3.6
Maximum Detect	8.5	Maximum Non-Detect	4.3
Variance Detected	5.135	Percent Non-Detects	66.67%
Mean Detected	3.6	SD Detected	2.266
Mean of Detected Logged Data	1.123	SD of Detected Logged Data	0.586

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.852	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.19	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	2.723	KM SD	1.531
95% UTL95% Coverage	6.182	95% KM UPL (t)	5.381
90% KM Percentile (z)	4.684	95% KM Percentile (z)	5.24
99% KM Percentile (z)	6.284	95% KM USL	6.853

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	2.501	SD	1.488
95% UTL95% Coverage	5.864	95% UPL (t)	5.086
90% Percentile (z)	4.408	95% Percentile (z)	4.949
99% Percentile (z)	5.963	95% USL	6.516

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.369	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.726	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.183	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.281	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.32	k star (bias corrected MLE)	2.288
Theta hat (MLE)	1.084	Theta star (bias corrected MLE)	1.574
nu hat (MLE)	59.77	nu star (bias corrected)	41.18
MLE Mean (bias corrected)	3.6		
MLE Sd (bias corrected)	2.38	95% Percentile of Chisquare (2kstar)	10.41

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.202	Mean	2.639
Maximum	8.5	Median	2.157
SD	1.517	CV	0.575
k hat (MLE)	4.712	k star (bias corrected MLE)	4.213
Theta hat (MLE)	0.56	Theta star (bias corrected MLE)	0.627
nu hat (MLE)	254.4	nu star (bias corrected)	227.5
MLE Mean (bias corrected)	2.639	MLE Sd (bias corrected)	1.286
95% Percentile of Chisquare (2kstar)	16.11	90% Percentile	4.363
95% Percentile	5.047	99% Percentile	6.505

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	6.175	6.229	95% Approx. Gamma UPL	5.104	5.103
95% Gamma USL	7.178	7.308			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.723	SD (KM)	1.531
Variance (KM)	2.343	SE of Mean (KM)	0.407
k hat (KM)	3.164	k star (KM)	2.837
nu hat (KM)	170.8	nu star (KM)	153.2
theta hat (KM)	0.861	theta star (KM)	0.96
80% gamma percentile (KM)	3.909	90% gamma percentile (KM)	4.89
95% gamma percentile (KM)	5.807	99% gamma percentile (KM)	7.801

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	6.366	6.426	95% Approx. Gamma UPL	5.26	5.26
95% KM Gamma Percentile	5.08	5.073	95% Gamma USL	7.403	7.542

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.923	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.16	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	2.677	Mean in Log Scale	0.891
SD in Original Scale	1.47	SD in Log Scale	0.403

95% UTL95% Coverage	6.065	95% BCA UTL95% Coverage	8.5
95% Bootstrap (%) UTL95% Coverage	8.5	95% UPL (t)	4.912
90% Percentile (z)	4.087	95% Percentile (z)	4.733
99% Percentile (z)	6.23	95% USL	7.237

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	0.887	95% KM UTL (Lognormal)95% Coverage	6.684
KM SD of Logged Data	0.448	95% KM UPL (Lognormal)	5.287
95% KM Percentile Lognormal (z)	5.074	95% KM USL (Lognormal)	8.133

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	2.501	Mean in Log Scale	0.819
SD in Original Scale	1.488	SD in Log Scale	0.394
95% UTL95% Coverage	5.531	95% UPL (t)	4.5
90% Percentile (z)	3.76	95% Percentile (z)	4.34
99% Percentile (z)	5.678	95% USL	6.574

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	8.5
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	7.3
95% USL	8.5	95% KM Chebyshev UPL	9.517

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:52:55 AM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Acenaphthylene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	3	24	19	5	20.83%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	5	3.6	4	3.79	3.8	0.152
Statistics (Non-Detects Only)	19	0.88	19	6.44	2.1	6.473
Statistics (All: NDs treated as DL value)	24	0.88	19	5.888	3.75	5.831
Statistics (All: NDs treated as DL/2 value)	24	0.88	19	5.493	1.913	6.029
Statistics (Normal ROS Imputed Data)	24	0.88	19	5.591	2.365	5.971
Statistics (Gamma ROS Imputed Data)	24	0.88	19	5.403	1.462	6.087
Statistics (Lognormal ROS Imputed Data)	24	0.88	19	5.43	1.595	6.069

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.948	0.834	6.79	1.25	1.193	0.954
Statistics (NDs = DL)	1.126	1.013	5.23	1.267	1.056	0.833
Statistics (NDs = DL/2)	0.994	0.898	5.524	1.123	1.086	0.967
Statistics (Gamma ROS Estimates)	0.941	0.851	5.744	1.069	1.115	1.044
Statistics (Lognormal ROS Estimates)	--	--	--	1.087	1.104	1.016

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.906	0.903	0.87	0.879

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.804	0.901	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.804	0.916	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.747	0.916	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.761	0.916	Data Not Normal
Lilliefors (Detects Only)	0.275	0.197	Data Not Normal
Lilliefors (NDs = DL)	0.252	0.177	Data Not Normal
Lilliefors (NDs = DL/2)	0.338	0.177	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.33	0.177	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.941	0.967	0.952	0.948

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	1.363	0.771	
Kolmogorov-Smirnov (Detects Only)	0.254	0.205	Data Not Gamma Distributed
Anderson-Darling (NDs = DL)	0.943	0.769	

Kolmogorov-Smirnov (NDs = DL)	0.176	0.183	Detected Data appear Approximate Gamma Distri
Anderson-Darling (NDs = DL/2)	1.907	0.772	
Kolmogorov-Smirnov (NDs = DL/2)	0.306	0.183	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	2.354	0.774	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.327	0.183	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.925	0.961	0.93	0.915

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.832	0.901	Data Not Lognormal
Shapiro-Wilk (NDs = DL)	0.903	0.916	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.845	0.916	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.818	0.916	Data Not Lognormal
Lilliefors (Detects Only)	0.234	0.197	Data Not Lognormal
Lilliefors (NDs = DL)	0.168	0.177	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.262	0.177	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.296	0.177	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:51:38 AM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Acenaphthylene

General Statistics

Total Number of Observations	24	Number of Missing Observations	3
Number of Distinct Observations	22		
Number of Detects	19	Number of Non-Detects	5
Number of Distinct Detects	17	Number of Distinct Non-Detects	5
Minimum Detect	0.88	Minimum Non-Detect	3.6
Maximum Detect	19	Maximum Non-Detect	4
Variance Detected	41.9	Percent Non-Detects	20.83%
Mean Detected	6.44	SD Detected	6.473
Mean of Detected Logged Data	1.25	SD of Detected Logged Data	1.193

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.309	d2max (for USL)	2.644

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.804	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.901	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.275	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.197	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	5.359	KM SD	5.991
95% UTL95% Coverage	19.19	95% KM UPL (t)	15.84
90% KM Percentile (z)	13.04	95% KM Percentile (z)	15.21
99% KM Percentile (z)	19.3	95% KM USL	21.2

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	5.493	SD	6.029
95% UTL95% Coverage	19.41	95% UPL (t)	16.04
90% Percentile (z)	13.22	95% Percentile (z)	15.41
99% Percentile (z)	19.52	95% USL	21.43

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.363	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.771	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.254	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.205	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.948	k star (bias corrected MLE)	0.834
Theta hat (MLE)	6.79	Theta star (bias corrected MLE)	7.724
nu hat (MLE)	36.04	nu star (bias corrected)	31.68
MLE Mean (bias corrected)	6.44		
MLE Sd (bias corrected)	7.053	95% Percentile of Chisquare (2kstar)	5.329

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.88	Mean	5.403
Maximum	19	Median	1.462
SD	6.087	CV	1.127
k hat (MLE)	0.941	k star (bias corrected MLE)	0.851
Theta hat (MLE)	5.744	Theta star (bias corrected MLE)	6.35
nu hat (MLE)	45.15	nu star (bias corrected)	40.84
MLE Mean (bias corrected)	5.403	MLE Sd (bias corrected)	5.857
95% Percentile of Chisquare (2kstar)	5.399	90% Percentile	12.94
95% Percentile	17.14	99% Percentile	27.02

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	25.55	27.42	95% Approx. Gamma UPL	17.63	18.11
95% Gamma USL	31.27	34.48			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.359	SD (KM)	5.991
Variance (KM)	35.89	SE of Mean (KM)	1.257
k hat (KM)	0.8	k star (KM)	0.728
nu hat (KM)	38.4	nu star (KM)	34.94
theta hat (KM)	6.698	theta star (KM)	7.363
80% gamma percentile (KM)	8.796	90% gamma percentile (KM)	13.33
95% gamma percentile (KM)	17.98	99% gamma percentile (KM)	29.07

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	25.07	26.89	95% Approx. Gamma UPL	17.28	17.73
95% KM Gamma Percentile	16.03	16.32	95% Gamma USL	30.7	33.85

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.832	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.901	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.234	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.197	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	5.43	Mean in Log Scale	1.087
SD in Original Scale	6.069	SD in Log Scale	1.104

95% UTL95% Coverage	37.96	95% BCA UTL95% Coverage	19
95% Bootstrap (%) UTL95% Coverage	19	95% UPL (t)	20.46
90% Percentile (z)	12.21	95% Percentile (z)	18.23
99% Percentile (z)	38.69	95% USL	54.94

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.03	95% KM UTL (Lognormal)95% Coverage	37.52
KM SD of Logged Data	1.124	95% KM UPL (Lognormal)	20
95% KM Percentile Lognormal (z)	17.79	95% KM USL (Lognormal)	54.66

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	5.493	Mean in Log Scale	1.123
SD in Original Scale	6.029	SD in Log Scale	1.086
95% UTL95% Coverage	37.68	95% UPL (t)	20.52
90% Percentile (z)	12.35	95% Percentile (z)	18.32
99% Percentile (z)	38.39	95% USL	54.2

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	24	95% UTL with95% Coverage	19
Approx, f used to compute achieved CC	1.263	Approximate Actual Confidence Coefficient achieved by UTL	0.708
Approximate Sample Size needed to achieve specified CC	59	95% UPL	18.5
95% USL	19	95% KM Chebyshev UPL	32.01

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 12:06:17 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Anthracene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	19	8	29.63%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	8	3.6	4.1	3.825	3.8	0.191
Statistics (Non-Detects Only)	19	0.82	57	12.14	5.75	15.37
Statistics (All: NDs treated as DL value)	27	0.82	57	9.676	3.8	13.36
Statistics (All: NDs treated as DL/2 value)	27	0.82	57	9.11	2	13.65
Statistics (Normal ROS Imputed Data)	27	-2.43	57	9.078	3.5	13.81
Statistics (Gamma ROS Imputed Data)	27	0.01	57	8.73	1.666	13.87
Statistics (Lognormal ROS Imputed Data)	27	0.82	57	9.1	2.705	13.66

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.723	0.644	16.79	1.665	1.401	0.842
Statistics (NDs = DL)	0.841	0.772	11.51	1.569	1.176	0.75
Statistics (NDs = DL/2)	0.712	0.658	12.79	1.363	1.259	0.923
Statistics (Gamma ROS Estimates)	0.372	0.355	23.49	0.375	2.71	7.223
Statistics (Lognormal ROS Estimates)	--	--	--	1.337	1.293	0.967

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.87	0.809	0.8	0.847

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.76	0.901	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.666	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.651	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.729	0.923	Data Not Normal
Lilliefors (Detects Only)	0.263	0.197	Data Not Normal
Lilliefors (NDs = DL)	0.295	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.289	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.277	0.167	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.993	0.976	0.98	0.992

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.634	0.781	
Kolmogorov-Smirnov (Detects Only)	0.172	0.207	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.365	0.78	

Kolmogorov-Smirnov (NDs = DL)	0.249	0.174	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	2.048	0.787	
Kolmogorov-Smirnov (NDs = DL/2)	0.277	0.175	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.617	0.837	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.143	0.181	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.972	0.974	0.946	0.954

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.925	0.901	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.938	0.923	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.882	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.896	0.923	Data Not Lognormal
Lilliefors (Detects Only)	0.165	0.197	Data Appear Lognormal
Lilliefors (NDs = DL)	0.183	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.251	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.165	0.167	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 12:05:11 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Anthracene

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	22		
Number of Detects	19	Number of Non-Detects	8
Number of Distinct Detects	17	Number of Distinct Non-Detects	5
Minimum Detect	0.82	Minimum Non-Detect	3.6
Maximum Detect	57	Maximum Non-Detect	4.1
Variance Detected	236.3	Percent Non-Detects	29.63%
Mean Detected	12.14	SD Detected	15.37
Mean of Detected Logged Data	1.665	SD of Detected Logged Data	1.401

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.76	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.901	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.263	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.197	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	9.044	KM SD	13.44
95% UTL95% Coverage	39.41	95% KM UPL (t)	32.38
90% KM Percentile (z)	26.26	95% KM Percentile (z)	31.15
99% KM Percentile (z)	40.3	95% KM USL	45.3

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	9.11	SD	13.65
95% UTL95% Coverage	39.95	95% UPL (t)	32.81
90% Percentile (z)	26.6	95% Percentile (z)	31.56
99% Percentile (z)	40.86	95% USL	45.93

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.634	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.781	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.172	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.207	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.723	k star (bias corrected MLE)	0.644
Theta hat (MLE)	16.79	Theta star (bias corrected MLE)	18.85
nu hat (MLE)	27.48	nu star (bias corrected)	24.47
MLE Mean (bias corrected)	12.14		
MLE Sd (bias corrected)	15.13	95% Percentile of Chisquare (2kstar)	4.518

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	8.73
Maximum	57	Median	1.666
SD	13.87	CV	1.589
k hat (MLE)	0.372	k star (bias corrected MLE)	0.355
Theta hat (MLE)	23.49	Theta star (bias corrected MLE)	24.59
nu hat (MLE)	20.07	nu star (bias corrected)	19.17
MLE Mean (bias corrected)	8.73	MLE Sd (bias corrected)	14.65
95% Percentile of Chisquare (2kstar)	3.073	90% Percentile	25.15
95% Percentile	37.78	99% Percentile	69.94

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	56.08	69.19	95% Approx. Gamma UPL	35.81	40.4
95% Gamma USL	78.01	103.3			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	9.044	SD (KM)	13.44
Variance (KM)	180.6	SE of Mean (KM)	2.661
k hat (KM)	0.453	k star (KM)	0.427
nu hat (KM)	24.46	nu star (KM)	23.07
theta hat (KM)	19.97	theta star (KM)	21.16
80% gamma percentile (KM)	14.7	90% gamma percentile (KM)	25.24
95% gamma percentile (KM)	36.72	99% gamma percentile (KM)	65.4

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	45.61	48.61	95% Approx. Gamma UPL	30.95	31.41
95% KM Gamma Percentile	28.75	28.93	95% Gamma USL	60.96	67.78

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.925	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.901	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.165	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.197	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	9.1	Mean in Log Scale	1.337
SD in Original Scale	13.66	SD in Log Scale	1.293

95% UTL95% Coverage	70.66	95% BCA UTL95% Coverage	57
95% Bootstrap (%) UTL95% Coverage	57	95% UPL (t)	35.94
90% Percentile (z)	19.95	95% Percentile (z)	31.91
99% Percentile (z)	76.99	95% USL	124.5

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.287	95% KM UTL (Lognormal)95% Coverage	70.26
KM SD of Logged Data	1.312	95% KM UPL (Lognormal)	35.37
95% KM Percentile Lognormal (z)	31.35	95% KM USL (Lognormal)	124.8

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	9.11	Mean in Log Scale	1.363
SD in Original Scale	13.65	SD in Log Scale	1.259
95% UTL95% Coverage	67.22	95% UPL (t)	34.8
90% Percentile (z)	19.62	95% Percentile (z)	30.99
99% Percentile (z)	73.07	95% USL	116.7

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	57
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	48.2
95% USL	57	95% KM Chebyshev UPL	68.69

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 12:13:46 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Benzo(a)anthracene (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	0	7	4	3	42.86%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	3	3.7	3.8	3.767	3.8	0.0577
Statistics (Non-Detects Only)	4	0.79	40.5	12.9	5.15	18.52
Statistics (All: NDs treated as DL value)	7	0.79	40.5	8.984	3.8	13.97
Statistics (All: NDs treated as DL/2 value)	7	0.79	40.5	8.177	1.9	14.36
Statistics (Normal ROS Imputed Data)	7	-11.28	40.5	4.782	0.79	16.81
Statistics (Gamma ROS Imputed Data)	7	0.01	40.5	7.374	0.79	14.8
Statistics (Lognormal ROS Imputed Data)	7	0.353	40.5	7.674	1.115	14.63

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.694	0.34	18.59	1.685	1.609	0.955
Statistics (NDs = DL)	0.882	0.599	10.19	1.531	1.154	0.754
Statistics (NDs = DL/2)	0.697	0.494	11.73	1.234	1.269	1.029
Statistics (Gamma ROS Estimates)	0.238	0.231	30.99	-1.011	3.549	-3.511
Statistics (Lognormal ROS Estimates)	--	--	--	0.77	1.645	2.137

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.846	0.722	0.728	0.872

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.73	0.748	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.552	0.803	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.558	0.803	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.786	0.803	Data Not Normal
Lilliefors (Detects Only)	0.405	0.375	Data Not Normal
Lilliefors (NDs = DL)	0.456	0.304	Data Not Normal
Lilliefors (NDs = DL/2)	0.431	0.304	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.34	0.304	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.986	0.909	0.934	0.982

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.377	0.673	
Kolmogorov-Smirnov (Detects Only)	0.329	0.406	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.981	0.732	

Kolmogorov-Smirnov (NDs = DL)	0.379	0.321	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.866	0.739	
Kolmogorov-Smirnov (NDs = DL/2)	0.316	0.324	Detected Data appear Approximate Gamma Distri
Anderson-Darling (Gamma ROS Estimates)	0.484	0.808	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.266	0.34	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.97	0.9	0.927	0.956

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.958	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.851	0.803	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.879	0.803	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.913	0.803	Data Appear Lognormal
Lilliefors (Detects Only)	0.245	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.297	0.304	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.251	0.304	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.227	0.304	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

SIM-Benzo(a)anthracene (ss)

Raw Statistics

Number of Valid Observations	17
Number of Missing Observations	3
Number of Distinct Observations	17
Minimum	0.76
Maximum	140
Mean of Raw Data	35.24
Standard Deviation of Raw Data	43.97
Khat	0.679
Theta hat	51.92
Kstar	0.598
Theta star	58.91
Mean of Log Transformed Data	2.668
Standard Deviation of Log Transformed Data	1.509

Normal GOF Test Results

Correlation Coefficient R	0.876
Shapiro Wilk Test Statistic	0.762
Shapiro Wilk Critical (0.05) Value	0.892
Approximate Shapiro Wilk P Value	4.4601E-4
Lilliefors Test Statistic	0.261
Lilliefors Critical (0.05) Value	0.207

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.974

A-D Test Statistic	0.648
A-D Critical (0.05) Value	0.783
K-S Test Statistic	0.235
K-S Critical(0.05) Value	0.218

Data follow Appr. Gamma Distribution at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.974
Shapiro Wilk Test Statistic	0.94
Shapiro Wilk Critical (0.05) Value	0.892
Approximate Shapiro Wilk P Value	0.357
Lilliefors Test Statistic	0.178
Lilliefors Critical (0.05) Value	0.207

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 12:11:29 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Benzo(a)anthracene (sb)

General Statistics

Total Number of Observations	7	Number of Missing Observations	0
Number of Distinct Observations	6		
Number of Detects	4	Number of Non-Detects	3
Number of Distinct Detects	4	Number of Distinct Non-Detects	2
Minimum Detect	0.79	Minimum Non-Detect	3.7
Maximum Detect	40.5	Maximum Non-Detect	3.8
Variance Detected	342.9	Percent Non-Detects	42.86%
Mean Detected	12.9	SD Detected	18.52
Mean of Detected Logged Data	1.685	SD of Detected Logged Data	1.609

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.73	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.405	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	7.709	KM SD	13.52
95% UTL95% Coverage	53.67	95% KM UPL (t)	35.8
90% KM Percentile (z)	25.04	95% KM Percentile (z)	29.95
99% KM Percentile (z)	39.17	95% KM USL	33.92

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	8.177	SD	14.36
95% UTL95% Coverage	56.98	95% UPL (t)	38
90% Percentile (z)	26.58	95% Percentile (z)	31.79
99% Percentile (z)	41.58	95% USL	36

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.377	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.673	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.329	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.406	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.694	k star (bias corrected MLE)	0.34
Theta hat (MLE)	18.59	Theta star (bias corrected MLE)	37.92
nu hat (MLE)	5.55	nu star (bias corrected)	2.721
MLE Mean (bias corrected)	12.9		
MLE Sd (bias corrected)	22.12	95% Percentile of Chisquare (2kstar)	2.986

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	7.374
Maximum	40.5	Median	0.79
SD	14.8	CV	2.006
k hat (MLE)	0.238	k star (bias corrected MLE)	0.231
Theta hat (MLE)	30.99	Theta star (bias corrected MLE)	31.89
nu hat (MLE)	3.331	nu star (bias corrected)	3.237
MLE Mean (bias corrected)	7.374	MLE Sd (bias corrected)	15.34
95% Percentile of Chisquare (2kstar)	2.29	90% Percentile	22.24
95% Percentile	36.52	99% Percentile	74.97

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	145.6	233.4	95% Approx. Gamma UPL	50.05	61.57
95% Gamma USL	43.59	51.94			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.709	SD (KM)	13.52
Variance (KM)	182.9	SE of Mean (KM)	5.902
k hat (KM)	0.325	k star (KM)	0.281
nu hat (KM)	4.549	nu star (KM)	3.933
theta hat (KM)	23.72	theta star (KM)	27.44
80% gamma percentile (KM)	11.62	90% gamma percentile (KM)	22.9
95% gamma percentile (KM)	36.01	99% gamma percentile (KM)	70.34

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	87.12	102.8	95% Approx. Gamma UPL	35.85	36.81
95% KM Gamma Percentile	25.04	24.6	95% Gamma USL	32.09	32.48

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.245	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	7.674	Mean in Log Scale	0.77
SD in Original Scale	14.63	SD in Log Scale	1.645

95% UTL95% Coverage	579.6	95% BCA UTL95% Coverage	40.5
95% Bootstrap (%) UTL95% Coverage	40.5	95% UPL (t)	65.88
90% Percentile (z)	17.79	95% Percentile (z)	32.34
99% Percentile (z)	99.24	95% USL	52.39

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	0.862	95% KM UTL (Lognormal)95% Coverage	294.2
KM SD of Logged Data	1.419	95% KM UPL (Lognormal)	45.11
95% KM Percentile Lognormal (z)	24.42	95% KM USL (Lognormal)	37.02

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	8.177	Mean in Log Scale	1.234
SD in Original Scale	14.36	SD in Log Scale	1.269
95% UTL95% Coverage	256.7	95% UPL (t)	47.97
90% Percentile (z)	17.47	95% Percentile (z)	27.71
99% Percentile (z)	65.8	95% USL	40.2

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	7	95% UTL with95% Coverage	40.5
Approx, f used to compute achieved CC	0.368	Approximate Actual Confidence Coefficient achieved by UTL	0.302
Approximate Sample Size needed to achieve specified CC	59	95% UPL	40.5
95% USL	40.5	95% KM Chebyshev UPL	70.72

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

SIM-Benzo(a)anthracene (ss)

General Statistics

Total Number of Observations	17	Number of Distinct Observations	17
		Number of Missing Observations	3
Minimum	0.76	First Quartile	4.8
Second Largest	120	Median	8.1
Maximum	140	Third Quartile	44
Mean	35.24	SD	43.97
Coefficient of Variation	1.248	Skewness	1.463
Mean of logged Data	2.668	SD of logged Data	1.509

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.486	d2max (for USL)	2.475

Normal GOF Test

Shapiro Wilk Test Statistic	0.762	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.261	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Data Not Normal at 5% Significance Level	

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	144.5	90% Percentile (z)		91.59
	95% UPL (t)	114.2	95% Percentile (z)		107.6
	95% USL	144.1	99% Percentile (z)		137.5

Gamma GOF Test

A-D Test Statistic	0.648	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.783	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.235	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.218	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.679	k star (bias corrected MLE)	0.598
Theta hat (MLE)	51.92	Theta star (bias corrected MLE)	58.91
nu hat (MLE)	23.08	nu star (bias corrected)	20.34
MLE Mean (bias corrected)	35.24	MLE Sd (bias corrected)	45.56

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		134.8	90% Percentile		91.72
95% Hawkins Wixley (HW) Approx. Gamma UPL		144.1	95% Percentile		126.9
95% WH Approx. Gamma UTL with	95% Coverage	221	99% Percentile		212.2
95% HW Approx. Gamma UTL with	95% Coverage	254.9			
	95% WH USL	219.4	95% HW USL		252.7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.94	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.892	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.178	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.207	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	613.8	90% Percentile (z)		99.68
	95% UPL (t)	216.8	95% Percentile (z)		172.5
	95% USL	603.5	99% Percentile (z)		482.4

Nonparametric Distribution Free Background Statistics

Data appear Approximate Gamma Distribution at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		17	95% UTL with	95% Coverage	140
Approx, f used to compute achieved CC		0.895	Approximate Actual Confidence Coefficient achieved by UTL		0.582
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	140	95% BCA Bootstrap UTL with	95% Coverage	140
	95% UPL	140		90% Percentile	106.8
	90% Chebyshev UPL	171		95% Percentile	124
	95% Chebyshev UPL	232.4		99% Percentile	136.8
	95% USL	140			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.

Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 12:38:06 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Benzo(a)pyrene (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	0	7	3	4	57.14%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	4	3.6	3.8	3.725	3.75	0.0957
Statistics (Non-Detects Only)	3	4	39.5	16.07	4.7	20.3
Statistics (All: NDs treated as DL value)	7	3.6	39.5	9.014	3.8	13.45
Statistics (All: NDs treated as DL/2 value)	7	1.8	39.5	7.95	1.9	13.96
Statistics (Normal ROS Imputed Data)	7	-65.13	39.5	-22.23	-37.89	38.5
Statistics (Gamma ROS Imputed Data)	7	0.01	39.5	6.891	0.01	14.53
Statistics (Lognormal ROS Imputed Data)	7	0.0494	39.5	6.97	0.284	14.48

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	N/A	N/A	N/A	N/A	N/A	N/A
Statistics (NDs = DL)	1.131	0.742	7.968	1.696	0.878	0.518
Statistics (NDs = DL/2)	0.771	0.536	10.31	1.3	1.122	0.864
Statistics (Gamma ROS Estimates)	0.203	0.211	33.95	-1.687	3.713	-2.201
Statistics (Lognormal ROS Estimates)	--	--	--	-0.254	2.467	-9.694

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.875	0.668	0.702	0.954

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.765	0.767	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.475	0.803	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.52	0.803	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.901	0.803	Data Appear Normal
Lilliefors (Detects Only)	0.379	0.425	Data Appear Normal
Lilliefors (NDs = DL)	0.483	0.304	Data Not Normal
Lilliefors (NDs = DL/2)	0.449	0.304	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.229	0.304	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	N/A	0.868	0.917	0.982

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	N/A	N/A	
Kolmogorov-Smirnov (Detects Only)	N/A	N/A	
Anderson-Darling (NDs = DL)	1.862	0.726	

Kolmogorov-Smirnov (NDs = DL)	0.473	0.319	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.292	0.735	
Kolmogorov-Smirnov (NDs = DL/2)	0.368	0.322	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.831	0.822	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.362	0.342	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.896	0.713	0.833	0.956

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.803	0.767	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.535	0.803	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.707	0.803	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.903	0.803	Data Appear Lognormal
Lilliefors (Detects Only)	0.363	0.425	Data Appear Lognormal
Lilliefors (NDs = DL)	0.424	0.304	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.292	0.304	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.23	0.304	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

SIM-Benzo(a)pyrene (ss)

Raw Statistics

Number of Valid Observations	18
Number of Missing Observations	2
Number of Distinct Observations	16
Minimum	1.2
Maximum	200
Mean of Raw Data	42.8
Standard Deviation of Raw Data	55.21
Khat	0.634
Theta hat	67.52
Kstar	0.565
Theta star	75.72
Mean of Log Transformed Data	2.79
Standard Deviation of Log Transformed Data	1.563

Normal GOF Test Results

Correlation Coefficient R	0.872
Shapiro Wilk Test Statistic	0.765
Shapiro Wilk Critical (0.05) Value	0.897
Approximate Shapiro Wilk P Value	2.9258E-4
Lilliefors Test Statistic	0.231
Lilliefors Critical (0.05) Value	0.202

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.99

A-D Test Statistic	0.678
A-D Critical (0.05) Value	0.788
K-S Test Statistic	0.209
K-S Critical(0.05) Value	0.213

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.972
Shapiro Wilk Test Statistic	0.931
Shapiro Wilk Critical (0.05) Value	0.897
Approximate Shapiro Wilk P Value	0.245
Lilliefors Test Statistic	0.153
Lilliefors Critical (0.05) Value	0.202

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 12:31:06 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Benzo(a)pyrene (sb)

General Statistics

Total Number of Observations	7	Number of Missing Observations	0
Number of Distinct Observations	6		
Number of Detects	3	Number of Non-Detects	4
Number of Distinct Detects	3	Number of Distinct Non-Detects	3
Minimum Detect	4	Minimum Non-Detect	3.6
Maximum Detect	39.5	Maximum Non-Detect	3.8
Variance Detected	412	Percent Non-Detects	57.14%
Mean Detected	16.07	SD Detected	20.3
Mean of Detected Logged Data	2.203	SD of Detected Logged Data	1.278

Warning: Data set has only 3 Detected Values.

This is not enough to compute meaningful or reliable statistics and estimates.

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.765	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.379	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	8.943	KM SD	12.48
95% UTL95% Coverage	51.36	95% KM UPL (t)	34.87
90% KM Percentile (z)	24.94	95% KM Percentile (z)	29.47
99% KM Percentile (z)	37.98	95% KM USL	33.13

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	7.95	SD	13.96
95% UTL95% Coverage	55.41	95% UPL (t)	36.96
90% Percentile (z)	25.84	95% Percentile (z)	30.92
99% Percentile (z)	40.43	95% USL	35.01

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	1.006	k star (bias corrected MLE)	N/A
Theta hat (MLE)	15.97	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	6.036	nu star (bias corrected)	N/A
MLE Mean (bias corrected)	N/A		
MLE Sd (bias corrected)	N/A	95% Percentile of Chisquare (2kstar)	N/A

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	6.891
Maximum	39.5	Median	0.01
SD	14.53	CV	2.108
k hat (MLE)	0.203	k star (bias corrected MLE)	0.211
Theta hat (MLE)	33.95	Theta star (bias corrected MLE)	32.63
nu hat (MLE)	2.842	nu star (bias corrected)	2.957
MLE Mean (bias corrected)	6.891	MLE Sd (bias corrected)	14.99
95% Percentile of Chisquare (2kstar)	2.145	90% Percentile	20.84
95% Percentile	35	99% Percentile	73.64

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	144	231.6	95% Approx. Gamma UPL	47.49	57.53
95% Gamma USL	41.09	48.08			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	8.943	SD (KM)	12.48
Variance (KM)	155.8	SE of Mean (KM)	5.777
k hat (KM)	0.513	k star (KM)	0.389
nu hat (KM)	7.188	nu star (KM)	5.441
theta hat (KM)	17.42	theta star (KM)	23.01
80% gamma percentile (KM)	14.38	90% gamma percentile (KM)	25.39
95% gamma percentile (KM)	37.53	99% gamma percentile (KM)	68.15

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	65.13	68.76	95% Approx. Gamma UPL	31.85	31.32
95% KM Gamma Percentile	24.15	23.31	95% Gamma USL	29.22	28.55

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.803	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.363	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	6.97	Mean in Log Scale	-0.254
SD in Original Scale	14.48	SD in Log Scale	2.467

95% UTL95% Coverage	3398	95% BCA UTL95% Coverage	39.5
95% Bootstrap (%) UTL95% Coverage	39.5	95% UPL (t)	130.4
90% Percentile (z)	18.3	95% Percentile (z)	44.85
99% Percentile (z)	241	95% USL	92.47

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.676	95% KM UTL (Lognormal)95% Coverage	87.28
KM SD of Logged Data	0.822	95% KM UPL (Lognormal)	29.46
95% KM Percentile Lognormal (z)	20.65	95% KM USL (Lognormal)	26.28

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	7.95	Mean in Log Scale	1.3
SD in Original Scale	13.96	SD in Log Scale	1.122
95% UTL95% Coverage	166.4	95% UPL (t)	37.75
90% Percentile (z)	15.45	95% Percentile (z)	23.23
99% Percentile (z)	49.93	95% USL	32.29

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	7	95% UTL with95% Coverage	39.5
Approx, f used to compute achieved CC	0.368	Approximate Actual Confidence Coefficient achieved by UTL	0.302
Approximate Sample Size needed to achieve specified CC	59	95% UPL	39.5
95% USL	39.5	95% KM Chebyshev UPL	67.1

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

SIM-Benzo(a)pyrene (ss)

General Statistics

Total Number of Observations	18	Number of Distinct Observations	16
		Number of Missing Observations	2
Minimum	1.2	First Quartile	4.4
Second Largest	120	Median	17.9
Maximum	200	Third Quartile	53.75
Mean	42.8	SD	55.21
Coefficient of Variation	1.29	Skewness	1.683
Mean of logged Data	2.79	SD of logged Data	1.563

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.453	d2max (for USL)	2.504

Normal GOF Test

Shapiro Wilk Test Statistic	0.765	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.231	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	178.2	90% Percentile (z)		113.6
	95% UPL (t)	141.5	95% Percentile (z)		133.6
	95% USL	181	99% Percentile (z)		171.2

Gamma GOF Test

A-D Test Statistic	0.678	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.788	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.209	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.213	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.634	k star (bias corrected MLE)	0.565
Theta hat (MLE)	67.52	Theta star (bias corrected MLE)	75.72
nu hat (MLE)	22.82	nu star (bias corrected)	20.35
MLE Mean (bias corrected)	42.8	MLE Sd (bias corrected)	56.93

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		165.8	90% Percentile		112.8
95% Hawkins Wixley (HW) Approx. Gamma UPL		177.5	95% Percentile		157.4
95% WH Approx. Gamma UTL with	95% Coverage	270.8	99% Percentile		265.7
95% HW Approx. Gamma UTL with	95% Coverage	313			
	95% WH USL	280.3	95% HW USL		325.9

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.931	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.153	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	753.1	90% Percentile (z)		120.7
	95% UPL (t)	266	95% Percentile (z)		212.9
	95% USL	815.6	99% Percentile (z)		617.8

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		18	95% UTL with	95% Coverage	200
Approx, f used to compute achieved CC		0.947	Approximate Actual Confidence Coefficient achieved by UTL		0.603
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	200	95% BCA Bootstrap UTL with	95% Coverage	200
	95% UPL	200		90% Percentile	113
	90% Chebyshev UPL	213		95% Percentile	132
	95% Chebyshev UPL	290		99% Percentile	186.4
	95% USL	200			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.

Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 12:45:33 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Benzo(b)fluoranthene (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	0	7	4	3	42.86%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	3	3.7	3.8	3.767	3.8	0.0577
Statistics (Non-Detects Only)	4	1.5	68	20.95	7.15	31.49
Statistics (All: NDs treated as DL value)	7	1.5	68	13.59	3.8	24.08
Statistics (All: NDs treated as DL/2 value)	7	1.5	68	12.78	1.9	24.49
Statistics (Normal ROS Imputed Data)	7	-19.21	68	7.468	1.5	28.33
Statistics (Gamma ROS Imputed Data)	7	0.01	68	11.98	1.5	24.92
Statistics (Lognormal ROS Imputed Data)	7	0.634	68	12.5	1.892	24.64

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.672	0.335	31.19	2.137	1.573	0.736
Statistics (NDs = DL)	0.733	0.514	18.54	1.789	1.193	0.667
Statistics (NDs = DL/2)	0.587	0.431	21.76	1.492	1.372	0.919
Statistics (Gamma ROS Estimates)	0.224	0.223	53.58	-0.752	3.772	-5.012
Statistics (Lognormal ROS Estimates)	--	--	--	1.267	1.586	1.252

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.835	0.71	0.714	0.864

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.71	0.748	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.533	0.803	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.536	0.803	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.773	0.803	Data Not Normal
Lilliefors (Detects Only)	0.411	0.375	Data Not Normal
Lilliefors (NDs = DL)	0.45	0.304	Data Not Normal
Lilliefors (NDs = DL/2)	0.436	0.304	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.351	0.304	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.986	0.92	0.939	0.98

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.428	0.674	
Kolmogorov-Smirnov (Detects Only)	0.351	0.407	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.047	0.737	

Kolmogorov-Smirnov (NDs = DL)	0.365	0.323	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.047	0.746	
Kolmogorov-Smirnov (NDs = DL/2)	0.313	0.326	Detected Data appear Approximate Gamma Distri
Anderson-Darling (Gamma ROS Estimates)	0.484	0.814	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.268	0.341	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.967	0.901	0.885	0.95

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.951	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.841	0.803	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.79	0.803	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.909	0.803	Data Appear Lognormal
Lilliefors (Detects Only)	0.268	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.265	0.304	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.304	0.304	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.226	0.304	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

SIM-Benzo(b)fluoranthene (ss)

Raw Statistics

Number of Valid Observations	18
Number of Missing Observations	2
Number of Distinct Observations	18
Minimum	1.9
Maximum	260
Mean of Raw Data	62.32
Standard Deviation of Raw Data	75.17
Khat	0.669
Theta hat	93.2
Kstar	0.594
Theta star	104.9
Mean of Log Transformed Data	3.223
Standard Deviation of Log Transformed Data	1.53

Normal GOF Test Results

Correlation Coefficient R	0.893
Shapiro Wilk Test Statistic	0.796
Shapiro Wilk Critical (0.05) Value	0.897
Approximate Shapiro Wilk P Value	9.5924E-4
Lilliefors Test Statistic	0.248
Lilliefors Critical (0.05) Value	0.202

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.986

A-D Test Statistic	0.724
A-D Critical (0.05) Value	0.785
K-S Test Statistic	0.233
K-S Critical(0.05) Value	0.213

Data follow Appr. Gamma Distribution at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.967
Shapiro Wilk Test Statistic	0.921
Shapiro Wilk Critical (0.05) Value	0.897
Approximate Shapiro Wilk P Value	0.164
Lilliefors Test Statistic	0.185
Lilliefors Critical (0.05) Value	0.202

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 12:44:23 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Benzo(b)fluoranthene (sb)

General Statistics

Total Number of Observations	7	Number of Missing Observations	0
Number of Distinct Observations	6		
Number of Detects	4	Number of Non-Detects	3
Number of Distinct Detects	4	Number of Distinct Non-Detects	2
Minimum Detect	1.5	Minimum Non-Detect	3.7
Maximum Detect	68	Maximum Non-Detect	3.8
Variance Detected	991.3	Percent Non-Detects	42.86%
Mean Detected	20.95	SD Detected	31.49
Mean of Detected Logged Data	2.137	SD of Detected Logged Data	1.573

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.71	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.411	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	12.61	KM SD	22.75
95% UTL95% Coverage	89.94	95% KM UPL (t)	59.87
90% KM Percentile (z)	41.77	95% KM Percentile (z)	50.03
99% KM Percentile (z)	65.54	95% KM USL	56.7

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	12.78	SD	24.49
95% UTL95% Coverage	96	95% UPL (t)	63.64
90% Percentile (z)	44.16	95% Percentile (z)	53.05
99% Percentile (z)	69.74	95% USL	60.23

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.428	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.674	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.351	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.407	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.672	k star (bias corrected MLE)	0.335
Theta hat (MLE)	31.19	Theta star (bias corrected MLE)	62.62
nu hat (MLE)	5.373	nu star (bias corrected)	2.677
MLE Mean (bias corrected)	20.95		
MLE Sd (bias corrected)	36.22	95% Percentile of Chisquare (2kstar)	2.954

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	11.98
Maximum	68	Median	1.5
SD	24.92	CV	2.081
k hat (MLE)	0.224	k star (bias corrected MLE)	0.223
Theta hat (MLE)	53.58	Theta star (bias corrected MLE)	53.71
nu hat (MLE)	3.129	nu star (bias corrected)	3.121
MLE Mean (bias corrected)	11.98	MLE Sd (bias corrected)	25.36
95% Percentile of Chisquare (2kstar)	2.231	90% Percentile	36.16
95% Percentile	59.92	99% Percentile	124.2

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	238.4	385.4	95% Approx. Gamma UPL	81.15	100.1
95% Gamma USL	70.56	84.24			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	12.61	SD (KM)	22.75
Variance (KM)	517.5	SE of Mean (KM)	9.928
k hat (KM)	0.307	k star (KM)	0.271
nu hat (KM)	4.305	nu star (KM)	3.793
theta hat (KM)	41.03	theta star (KM)	46.56
80% gamma percentile (KM)	18.81	90% gamma percentile (KM)	37.61
95% gamma percentile (KM)	59.59	99% gamma percentile (KM)	117.4

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	138.7	160	95% Approx. Gamma UPL	57.45	58.06
95% KM Gamma Percentile	40.26	39.06	95% Gamma USL	51.47	51.32

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.268	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	12.5	Mean in Log Scale	1.267
SD in Original Scale	24.64	SD in Log Scale	1.586

95% UTL95% Coverage	778.1	95% BCA UTL95% Coverage	68
95% Bootstrap (%) UTL95% Coverage	68	95% UPL (t)	95.67
90% Percentile (z)	27.08	95% Percentile (z)	48.19
99% Percentile (z)	142	95% USL	76.72

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.395	95% KM UTL (Lognormal)95% Coverage	382.9
KM SD of Logged Data	1.339	95% KM UPL (Lognormal)	65.2
95% KM Percentile Lognormal (z)	36.53	95% KM USL (Lognormal)	54.11

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	12.78	Mean in Log Scale	1.492
SD in Original Scale	24.49	SD in Log Scale	1.372
95% UTL95% Coverage	471.8	95% UPL (t)	76.93
90% Percentile (z)	25.82	95% Percentile (z)	42.5
99% Percentile (z)	108.3	95% USL	63.56

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	7	95% UTL with95% Coverage	68
Approx, f used to compute achieved CC	0.368	Approximate Actual Confidence Coefficient achieved by UTL	0.302
Approximate Sample Size needed to achieve specified CC	59	95% UPL	68
95% USL	68	95% KM Chebyshev UPL	118.6

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

SIM-Benzo(b)fluoranthene (ss)

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	2
Minimum	1.9	First Quartile	6.7
Second Largest	180	Median	26
Maximum	260	Third Quartile	85
Mean	62.32	SD	75.17
Coefficient of Variation	1.206	Skewness	1.414
Mean of logged Data	3.223	SD of logged Data	1.53

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.453	d2max (for USL)	2.504

Normal GOF Test

Shapiro Wilk Test Statistic	0.796	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.248	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	246.7	90% Percentile (z)		158.7
	95% UPL (t)	196.7	95% Percentile (z)		186
	95% USL	250.6	99% Percentile (z)		237.2

Gamma GOF Test

A-D Test Statistic	0.724	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.785	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.233	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.213	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.669	k star (bias corrected MLE)	0.594
Theta hat (MLE)	93.2	Theta star (bias corrected MLE)	104.9
nu hat (MLE)	24.07	nu star (bias corrected)	21.39
MLE Mean (bias corrected)	62.32	MLE Sd (bias corrected)	80.84

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		238.8	90% Percentile		162.4
95% Hawkins Wixley (HW) Approx. Gamma UPL		256.6	95% Percentile		225
95% WH Approx. Gamma UTL with	95% Coverage	386.7	99% Percentile		376.5
95% HW Approx. Gamma UTL with	95% Coverage	447.9			
	95% WH USL	400	95% HW USL		466.1

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.921	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.185	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	1070	90% Percentile (z)		178.3
	95% UPL (t)	386.5	95% Percentile (z)		310.8
	95% USL	1157	99% Percentile (z)		881.7

Nonparametric Distribution Free Background Statistics

Data appear Approximate Gamma Distribution at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		18	95% UTL with	95% Coverage	260
Approx, f used to compute achieved CC		0.947	Approximate Actual Confidence Coefficient achieved by UTL		0.603
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	260	95% BCA Bootstrap UTL with	95% Coverage	260
	95% UPL	260		90% Percentile	166
	90% Chebyshev UPL	294		95% Percentile	192
	95% Chebyshev UPL	399		99% Percentile	246.4
	95% USL	260			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.

Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 12:51:35 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Benzo(g,h,i)perylene (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	0	7	4	3	42.86%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	3	3.7	3.8	3.767	3.8	0.0577
Statistics (Non-Detects Only)	4	0.81	21.4	7.028	2.95	9.635
Statistics (All: NDs treated as DL value)	7	0.81	21.4	5.63	3.7	7.032
Statistics (All: NDs treated as DL/2 value)	7	0.81	21.4	4.823	1.9	7.347
Statistics (Normal ROS Imputed Data)	7	-0.128	21.4	5.442	3	7.363
Statistics (Gamma ROS Imputed Data)	7	0.218	21.4	4.974	2.9	7.381
Statistics (Lognormal ROS Imputed Data)	7	0.81	21.4	4.955	2.9	7.313

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.847	0.378	8.3	1.254	1.351	1.078
Statistics (NDs = DL)	1.269	0.82	4.437	1.285	0.956	0.744
Statistics (NDs = DL/2)	0.987	0.659	4.885	0.988	1.012	1.024
Statistics (Gamma ROS Estimates)	0.756	0.527	6.578	0.813	1.426	1.753
Statistics (Lognormal ROS Estimates)	--	--	--	1.016	1.043	1.027

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.84	0.745	0.72	0.834

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.721	0.748	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.589	0.803	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.548	0.803	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.717	0.803	Data Not Normal
Lilliefors (Detects Only)	0.412	0.375	Data Not Normal
Lilliefors (NDs = DL)	0.46	0.304	Data Not Normal
Lilliefors (NDs = DL/2)	0.455	0.304	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.323	0.304	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.981	0.896	0.905	0.951

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.465	0.669	
Kolmogorov-Smirnov (Detects Only)	0.369	0.404	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.929	0.724	

Kolmogorov-Smirnov (NDs = DL)	0.4	0.318	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.068	0.728	
Kolmogorov-Smirnov (NDs = DL/2)	0.392	0.32	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.394	0.736	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.24	0.323	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.954	0.897	0.888	0.93

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.929	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.847	0.803	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.822	0.803	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.886	0.803	Data Appear Lognormal
Lilliefors (Detects Only)	0.296	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.336	0.304	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.314	0.304	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.285	0.304	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

SIM-Benzo(g,h,i)perylene (ss)

Raw Statistics

Number of Valid Observations	19
Number of Missing Observations	1
Number of Distinct Observations	18
Minimum	1.2
Maximum	140
Mean of Raw Data	35.72
Standard Deviation of Raw Data	45.01
Khat	0.627
Theta hat	56.96
Kstar	0.563
Theta star	63.43
Mean of Log Transformed Data	2.597
Standard Deviation of Log Transformed Data	1.578

Normal GOF Test Results

Correlation Coefficient R	0.878
Shapiro Wilk Test Statistic	0.763
Shapiro Wilk Critical (0.05) Value	0.901
Approximate Shapiro Wilk P Value	1.9366E-4
Lilliefors Test Statistic	0.222
Lilliefors Critical (0.05) Value	0.197

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.969

A-D Test Statistic	0.749
A-D Critical (0.05) Value	0.791
K-S Test Statistic	0.213
K-S Critical(0.05) Value	0.208

Data follow Appr. Gamma Distribution at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.965
Shapiro Wilk Test Statistic	0.912
Shapiro Wilk Critical (0.05) Value	0.901
Approximate Shapiro Wilk P Value	0.0983
Lilliefors Test Statistic	0.169
Lilliefors Critical (0.05) Value	0.197

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 12:50:40 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Benzo(g,h,i)perylene (sb)

General Statistics

Total Number of Observations	7	Number of Missing Observations	0
Number of Distinct Observations	6		
Number of Detects	4	Number of Non-Detects	3
Number of Distinct Detects	4	Number of Distinct Non-Detects	2
Minimum Detect	0.81	Minimum Non-Detect	3.7
Maximum Detect	21.4	Maximum Non-Detect	3.8
Variance Detected	92.83	Percent Non-Detects	42.86%
Mean Detected	7.028	SD Detected	9.635
Mean of Detected Logged Data	1.254	SD of Detected Logged Data	1.351

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.721	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.412	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	4.974	KM SD	6.771
95% UTL95% Coverage	27.99	95% KM UPL (t)	19.04
90% KM Percentile (z)	13.65	95% KM Percentile (z)	16.11
99% KM Percentile (z)	20.73	95% KM USL	18.1

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	4.823	SD	7.347
95% UTL95% Coverage	29.79	95% UPL (t)	20.08
90% Percentile (z)	14.24	95% Percentile (z)	16.91
99% Percentile (z)	21.91	95% USL	19.06

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.465	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.669	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.369	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.404	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.847	k star (bias corrected MLE)	0.378
Theta hat (MLE)	8.3	Theta star (bias corrected MLE)	18.57
nu hat (MLE)	6.773	nu star (bias corrected)	3.027
MLE Mean (bias corrected)	7.028		
MLE Sd (bias corrected)	11.43	95% Percentile of Chisquare (2kstar)	3.205

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.218	Mean	4.974
Maximum	21.4	Median	2.9
SD	7.381	CV	1.484
k hat (MLE)	0.756	k star (bias corrected MLE)	0.527
Theta hat (MLE)	6.578	Theta star (bias corrected MLE)	9.433
nu hat (MLE)	10.59	nu star (bias corrected)	7.383
MLE Mean (bias corrected)	4.974	MLE Sd (bias corrected)	6.85
95% Percentile of Chisquare (2kstar)	3.975	90% Percentile	13.31
95% Percentile	18.75	99% Percentile	32.06

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	53.66	66.19	95% Approx. Gamma UPL	23.53	25.44
95% Gamma USL	21.26	22.67			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.974	SD (KM)	6.771
Variance (KM)	45.84	SE of Mean (KM)	2.983
k hat (KM)	0.54	k star (KM)	0.404
nu hat (KM)	7.557	nu star (KM)	5.651
theta hat (KM)	9.216	theta star (KM)	12.32
80% gamma percentile (KM)	8.037	90% gamma percentile (KM)	14.03
95% gamma percentile (KM)	20.6	99% gamma percentile (KM)	37.12

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	40.22	44.99	95% Approx. Gamma UPL	19.04	19.41
95% KM Gamma Percentile	14.23	14.11	95% Gamma USL	17.39	17.57

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.929	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.296	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	4.955	Mean in Log Scale	1.016
SD in Original Scale	7.313	SD in Log Scale	1.043

95% UTL95% Coverage	95.87	95% BCA UTL95% Coverage	21.4
95% Bootstrap (%) UTL95% Coverage	21.4	95% UPL (t)	24.14
90% Percentile (z)	10.52	95% Percentile (z)	15.37
99% Percentile (z)	31.3	95% USL	20.88

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	0.996	95% KM UTL (Lognormal)95% Coverage	85.35
KM SD of Logged Data	1.015	95% KM UPL (Lognormal)	22.3
95% KM Percentile Lognormal (z)	14.38	95% KM USL (Lognormal)	19.36

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	4.823	Mean in Log Scale	0.988
SD in Original Scale	7.347	SD in Log Scale	1.012
95% UTL95% Coverage	83.64	95% UPL (t)	21.96
90% Percentile (z)	9.819	95% Percentile (z)	14.18
99% Percentile (z)	28.26	95% USL	19.08

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	7	95% UTL with95% Coverage	21.4
Approx, f used to compute achieved CC	0.368	Approximate Actual Confidence Coefficient achieved by UTL	0.302
Approximate Sample Size needed to achieve specified CC	59	95% UPL	21.4
95% USL	21.4	95% KM Chebyshev UPL	36.52

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

SIM-Benzo(g,h,i)perylene (ss)

General Statistics

Total Number of Observations	19	Number of Distinct Observations	18
		Number of Missing Observations	1
Minimum	1.2	First Quartile	3.1
Second Largest	140	Median	19
Maximum	140	Third Quartile	55
Mean	35.72	SD	45.01
Coefficient of Variation	1.26	Skewness	1.465
Mean of logged Data	2.597	SD of logged Data	1.578

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.423	d2max (for USL)	2.531

Normal GOF Test

Shapiro Wilk Test Statistic	0.763	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.901	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.222	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.197	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	144.8	90% Percentile (z)		93.41
	95% UPL (t)	115.8	95% Percentile (z)		109.8
	95% USL	149.7	99% Percentile (z)		140.4

Gamma GOF Test

A-D Test Statistic	0.749	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.791	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.213	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.208	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.627	k star (bias corrected MLE)	0.563
Theta hat (MLE)	56.96	Theta star (bias corrected MLE)	63.43
nu hat (MLE)	23.83	nu star (bias corrected)	21.4
MLE Mean (bias corrected)	35.72	MLE Sd (bias corrected)	47.6

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		138.1	90% Percentile		94.22
95% Hawkins Wixley (HW) Approx. Gamma UPL		148.1	95% Percentile		131.5
95% WH Approx. Gamma UTL with	95% Coverage	222.7	99% Percentile		222.2
95% HW Approx. Gamma UTL with	95% Coverage	257.6			
	95% WH USL	239.7	95% HW USL		280.7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.912	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.901	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.169	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.197	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	614.7	90% Percentile (z)		101.4
	95% UPL (t)	222.5	95% Percentile (z)		180
	95% USL	729.2	99% Percentile (z)		527.7

Nonparametric Distribution Free Background Statistics

Data appear Approximate Gamma Distribution at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		19	95% UTL with	95% Coverage	140
Approx, f used to compute achieved CC		1	Approximate Actual Confidence Coefficient achieved by UTL		0.623
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	140	95% BCA Bootstrap UTL with	95% Coverage	140
	95% UPL	140		90% Percentile	99.2
	90% Chebyshev UPL	174.3		95% Percentile	140
	95% Chebyshev UPL	237		99% Percentile	140
	95% USL	140			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.

Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 12:55:30 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Benzo(k)fluoranthene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	3	24	19	5	20.83%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	5	3.6	3.8	3.7	3.7	0.1
Statistics (Non-Detects Only)	19	1.6	56	16.59	5	18.45
Statistics (All: NDs treated as DL value)	24	1.6	56	13.91	3.75	17.17
Statistics (All: NDs treated as DL/2 value)	24	1.6	56	13.52	2.925	17.43
Statistics (Normal ROS Imputed Data)	24	-2.901	56	13.67	4.35	17.45
Statistics (Gamma ROS Imputed Data)	24	0.01	56	13.47	3.424	17.48
Statistics (Lognormal ROS Imputed Data)	24	1.6	56	13.73	3.709	17.3

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.805	0.713	20.61	2.072	1.324	0.639
Statistics (NDs = DL)	0.822	0.747	16.92	1.913	1.214	0.635
Statistics (NDs = DL/2)	0.72	0.658	18.77	1.769	1.319	0.746
Statistics (Gamma ROS Estimates)	0.509	0.474	26.45	1.358	2.233	1.645
Statistics (Lognormal ROS Estimates)	--	--	--	1.845	1.267	0.687

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.893	0.851	0.848	0.885

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.785	0.901	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.719	0.916	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.711	0.916	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.777	0.916	Data Not Normal
Lilliefors (Detects Only)	0.261	0.197	Data Not Normal
Lilliefors (NDs = DL)	0.323	0.177	Data Not Normal
Lilliefors (NDs = DL/2)	0.313	0.177	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.245	0.177	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.956	0.961	0.96	0.956

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	1.12	0.777	
Kolmogorov-Smirnov (Detects Only)	0.225	0.206	Data Not Gamma Distributed
Anderson-Darling (NDs = DL)	1.832	0.779	

Kolmogorov-Smirnov (NDs = DL)	0.3	0.184	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	2.175	0.785	
Kolmogorov-Smirnov (NDs = DL/2)	0.27	0.185	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.787	0.805	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.171	0.188	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.941	0.936	0.909	0.93

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.862	0.901	Data Not Lognormal
Shapiro-Wilk (NDs = DL)	0.858	0.916	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.807	0.916	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.845	0.916	Data Not Lognormal
Lilliefors (Detects Only)	0.198	0.197	Data Not Lognormal
Lilliefors (NDs = DL)	0.266	0.177	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.236	0.177	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.211	0.177	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 12:54:34 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Benzo(k)fluoranthene

General Statistics

Total Number of Observations	24	Number of Missing Observations	3
Number of Distinct Observations	19		
Number of Detects	19	Number of Non-Detects	5
Number of Distinct Detects	17	Number of Distinct Non-Detects	3
Minimum Detect	1.6	Minimum Non-Detect	3.6
Maximum Detect	56	Maximum Non-Detect	3.8
Variance Detected	340.3	Percent Non-Detects	20.83%
Mean Detected	16.59	SD Detected	18.45
Mean of Detected Logged Data	2.072	SD of Detected Logged Data	1.324

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.309	d2max (for USL)	2.644

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.785	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.901	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.261	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.197	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	13.61	KM SD	17
95% UTL95% Coverage	52.87	95% KM UPL (t)	43.35
90% KM Percentile (z)	35.4	95% KM Percentile (z)	41.58
99% KM Percentile (z)	53.17	95% KM USL	58.57

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	13.52	SD	17.43
95% UTL95% Coverage	53.76	95% UPL (t)	44.01
90% Percentile (z)	35.86	95% Percentile (z)	42.19
99% Percentile (z)	54.06	95% USL	59.6

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.12	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.777	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.225	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.206	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.805	k star (bias corrected MLE)	0.713
Theta hat (MLE)	20.61	Theta star (bias corrected MLE)	23.27
nu hat (MLE)	30.59	nu star (bias corrected)	27.09
MLE Mean (bias corrected)	16.59		
MLE Sd (bias corrected)	19.65	95% Percentile of Chisquare (2kstar)	4.821

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	13.47
Maximum	56	Median	3.424
SD	17.48	CV	1.297
k hat (MLE)	0.509	k star (bias corrected MLE)	0.474
Theta hat (MLE)	26.45	Theta star (bias corrected MLE)	28.45
nu hat (MLE)	24.45	nu star (bias corrected)	22.73
MLE Mean (bias corrected)	13.47	MLE Sd (bias corrected)	19.58
95% Percentile of Chisquare (2kstar)	3.709	90% Percentile	36.86
95% Percentile	52.77	99% Percentile	92.1

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	81.15	98.01	95% Approx. Gamma UPL	52.51	58.62
95% Gamma USL	102.4	129.5			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	13.61	SD (KM)	17
Variance (KM)	289.1	SE of Mean (KM)	3.567
k hat (KM)	0.64	k star (KM)	0.588
nu hat (KM)	30.74	nu star (KM)	28.23
theta hat (KM)	21.25	theta star (KM)	23.14
80% gamma percentile (KM)	22.43	90% gamma percentile (KM)	35.55
95% gamma percentile (KM)	49.32	99% gamma percentile (KM)	82.68

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	69.03	74.78	95% Approx. Gamma UPL	46.41	47.76
95% KM Gamma Percentile	42.83	43.68	95% Gamma USL	85.56	95.64

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.862	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.901	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.198	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.197	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	13.73	Mean in Log Scale	1.845
SD in Original Scale	17.3	SD in Log Scale	1.267

95% UTL95% Coverage	117.9	95% BCA UTL95% Coverage	56
95% Bootstrap (%) UTL95% Coverage	56	95% UPL (t)	58.01
90% Percentile (z)	32.08	95% Percentile (z)	50.82
99% Percentile (z)	120.5	95% USL	180.2

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.805	95% KM UTL (Lognormal)95% Coverage	112.7
KM SD of Logged Data	1.264	95% KM UPL (Lognormal)	55.51
95% KM Percentile Lognormal (z)	48.65	95% KM USL (Lognormal)	172.1

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	13.52	Mean in Log Scale	1.769
SD in Original Scale	17.43	SD in Log Scale	1.319
95% UTL95% Coverage	123.1	95% UPL (t)	58.85
90% Percentile (z)	31.76	95% Percentile (z)	51.28
99% Percentile (z)	126	95% USL	191.4

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	24	95% UTL with95% Coverage	56
Approx, f used to compute achieved CC	1.263	Approximate Actual Confidence Coefficient achieved by UTL	0.708
Approximate Sample Size needed to achieve specified CC	59	95% UPL	55.75
95% USL	56	95% KM Chebyshev UPL	89.26

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 12:59:36 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Chrysene (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	0	7	4	3	42.86%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	3	3.7	3.8	3.767	3.8	0.0577
Statistics (Non-Detects Only)	4	1.7	51.5	17.85	9.1	22.93
Statistics (All: NDs treated as DL value)	7	1.7	51.5	11.81	3.8	17.87
Statistics (All: NDs treated as DL/2 value)	7	1.7	51.5	11.01	1.9	18.32
Statistics (Normal ROS Imputed Data)	7	-13.77	51.5	7.235	1.7	21.28
Statistics (Gamma ROS Imputed Data)	7	0.01	51.5	10.2	1.7	18.81
Statistics (Lognormal ROS Imputed Data)	7	0.756	51.5	10.8	2.126	18.45

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.831	0.374	21.48	2.171	1.444	0.665
Statistics (NDs = DL)	0.887	0.602	13.32	1.809	1.116	0.617
Statistics (NDs = DL/2)	0.684	0.486	16.09	1.512	1.311	0.867
Statistics (Gamma ROS Estimates)	0.235	0.229	43.46	-0.733	3.763	-5.136
Statistics (Lognormal ROS Estimates)	--	--	--	1.349	1.478	1.096

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.891	0.762	0.764	0.897

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.801	0.748	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.605	0.803	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.604	0.803	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.827	0.803	Data Appear Normal
Lilliefors (Detects Only)	0.334	0.375	Data Appear Normal
Lilliefors (NDs = DL)	0.359	0.304	Data Not Normal
Lilliefors (NDs = DL/2)	0.339	0.304	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.252	0.304	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.999	0.947	0.965	0.998

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.258	0.669	
Kolmogorov-Smirnov (Detects Only)	0.209	0.404	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.839	0.731	

Kolmogorov-Smirnov (NDs = DL)	0.334	0.321	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.914	0.74	
Kolmogorov-Smirnov (NDs = DL/2)	0.327	0.324	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.449	0.809	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.275	0.34	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.999	0.924	0.893	0.962

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.998	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.87	0.803	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.792	0.803	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.924	0.803	Data Appear Lognormal
Lilliefors (Detects Only)	0.143	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.271	0.304	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.318	0.304	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.228	0.304	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

SIM-Chrysene (ss)

Raw Statistics

Number of Valid Observations	18
Number of Missing Observations	2
Number of Distinct Observations	18
Minimum	1.1
Maximum	210
Mean of Raw Data	54.49
Standard Deviation of Raw Data	62.32
Khat	0.717
Theta hat	75.97
Kstar	0.635
Theta star	85.85
Mean of Log Transformed Data	3.158
Standard Deviation of Log Transformed Data	1.507

Normal GOF Test Results

Correlation Coefficient R	0.905
Shapiro Wilk Test Statistic	0.815
Shapiro Wilk Critical (0.05) Value	0.897
Approximate Shapiro Wilk P Value	0.00202
Lilliefors Test Statistic	0.25
Lilliefors Critical (0.05) Value	0.202

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.983

A-D Test Statistic	0.511
A-D Critical (0.05) Value	0.781
K-S Test Statistic	0.219
K-S Critical(0.05) Value	0.212

Data follow Appr. Gamma Distribution at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.977
Shapiro Wilk Test Statistic	0.946
Shapiro Wilk Critical (0.05) Value	0.897
Approximate Shapiro Wilk P Value	0.41
Lilliefors Test Statistic	0.163
Lilliefors Critical (0.05) Value	0.202

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 12:58:43 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Chrysene (sb)

General Statistics

Total Number of Observations	7	Number of Missing Observations	0
Number of Distinct Observations	6		
Number of Detects	4	Number of Non-Detects	3
Number of Distinct Detects	4	Number of Distinct Non-Detects	2
Minimum Detect	1.7	Minimum Non-Detect	3.7
Maximum Detect	51.5	Maximum Non-Detect	3.8
Variance Detected	525.6	Percent Non-Detects	42.86%
Mean Detected	17.85	SD Detected	22.93
Mean of Detected Logged Data	2.171	SD of Detected Logged Data	1.444

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.801	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.334	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	10.93	KM SD	17
95% UTL95% Coverage	68.72	95% KM UPL (t)	46.25
90% KM Percentile (z)	32.72	95% KM Percentile (z)	38.9
99% KM Percentile (z)	50.48	95% KM USL	43.88

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	11.01	SD	18.32
95% UTL95% Coverage	73.28	95% UPL (t)	49.06
90% Percentile (z)	34.49	95% Percentile (z)	41.14
99% Percentile (z)	53.63	95% USL	46.51

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.258	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.669	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.209	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.404	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.831	k star (bias corrected MLE)	0.374
Theta hat (MLE)	21.48	Theta star (bias corrected MLE)	47.67
nu hat (MLE)	6.649	nu star (bias corrected)	2.996
MLE Mean (bias corrected)	17.85		
MLE Sd (bias corrected)	29.17	95% Percentile of Chisquare (2kstar)	3.183

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	10.2
Maximum	51.5	Median	1.7
SD	18.81	CV	1.843
k hat (MLE)	0.235	k star (bias corrected MLE)	0.229
Theta hat (MLE)	43.46	Theta star (bias corrected MLE)	44.48
nu hat (MLE)	3.287	nu star (bias corrected)	3.212
MLE Mean (bias corrected)	10.2	MLE Sd (bias corrected)	21.3
95% Percentile of Chisquare (2kstar)	2.277	90% Percentile	30.78
95% Percentile	50.65	99% Percentile	104.2

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	206	343.6	95% Approx. Gamma UPL	71.23	90.65
95% Gamma USL	62.09	76.47			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	10.93	SD (KM)	17
Variance (KM)	289.1	SE of Mean (KM)	7.421
k hat (KM)	0.413	k star (KM)	0.331
nu hat (KM)	5.783	nu star (KM)	4.638
theta hat (KM)	26.46	theta star (KM)	32.99
80% gamma percentile (KM)	17.13	90% gamma percentile (KM)	31.82
95% gamma percentile (KM)	48.4	99% gamma percentile (KM)	90.99

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	110.7	128.3	95% Approx. Gamma UPL	47.95	49.22
95% KM Gamma Percentile	34.35	33.97	95% Gamma USL	43.24	43.84

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.998	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.143	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	10.8	Mean in Log Scale	1.349
SD in Original Scale	18.45	SD in Log Scale	1.478

95% UTL95% Coverage	585.7	95% BCA UTL95% Coverage	51.5
95% Bootstrap (%) UTL95% Coverage	51.5	95% UPL (t)	83.03
90% Percentile (z)	25.61	95% Percentile (z)	43.81
99% Percentile (z)	120	95% USL	67.59

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.468	95% KM UTL (Lognormal)95% Coverage	300
KM SD of Logged Data	1.246	95% KM UPL (Lognormal)	57.79
95% KM Percentile Lognormal (z)	33.71	95% KM USL (Lognormal)	48.59

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	11.01	Mean in Log Scale	1.512
SD in Original Scale	18.32	SD in Log Scale	1.311
95% UTL95% Coverage	390.8	95% UPL (t)	69.09
90% Percentile (z)	24.34	95% Percentile (z)	39.19
99% Percentile (z)	95.76	95% USL	57.57

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	7	95% UTL with95% Coverage	51.5
Approx, f used to compute achieved CC	0.368	Approximate Actual Confidence Coefficient achieved by UTL	0.302
Approximate Sample Size needed to achieve specified CC	59	95% UPL	51.5
95% USL	51.5	95% KM Chebyshev UPL	90.16

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

SIM-Chrysene (ss)

General Statistics

Total Number of Observations	18	Number of Distinct Observations	18
		Number of Missing Observations	2
Minimum	1.1	First Quartile	8.388
Second Largest	160	Median	23.25
Maximum	210	Third Quartile	78.75
Mean	54.49	SD	62.32
Coefficient of Variation	1.144	Skewness	1.293
Mean of logged Data	3.158	SD of logged Data	1.507

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.453	d2max (for USL)	2.504

Normal GOF Test

Shapiro Wilk Test Statistic	0.815	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.25	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level	

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	207.4	90% Percentile (z)		134.4
	95% UPL (t)	165.9	95% Percentile (z)		157
	95% USL	210.5	99% Percentile (z)		199.5

Gamma GOF Test

A-D Test Statistic	0.511	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.781	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.219	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.212	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.717	k star (bias corrected MLE)	0.635
Theta hat (MLE)	75.97	Theta star (bias corrected MLE)	85.85
nu hat (MLE)	25.82	nu star (bias corrected)	22.85
MLE Mean (bias corrected)	54.49	MLE Sd (bias corrected)	68.4

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		204.2	90% Percentile		139.9
95% Hawkins Wixley (HW) Approx. Gamma UPL		220.4	95% Percentile		192.1
95% WH Approx. Gamma UTL with	95% Coverage	326.7	99% Percentile		317.8
95% HW Approx. Gamma UTL with	95% Coverage	379.4			
	95% WH USL	337.8	95% HW USL		394.4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.946	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.163	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	948.2	90% Percentile (z)		162.3
	95% UPL (t)	347.7	95% Percentile (z)		280.6
	95% USL	1024	99% Percentile (z)		783.5

Nonparametric Distribution Free Background Statistics

Data appear Approximate Gamma Distribution at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		18	95% UTL with	95% Coverage	210
Approx, f used to compute achieved CC		0.947	Approximate Actual Confidence Coefficient achieved by UTL		0.603
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	210	95% BCA Bootstrap UTL with	95% Coverage	210
	95% UPL	210		90% Percentile	146
	90% Chebyshev UPL	246.6		95% Percentile	167.5
	95% Chebyshev UPL	333.6		99% Percentile	201.5
	95% USL	210			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.

Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 1:08:20 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Dibenzo(a,h)anthracene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	1	26	18	8	30.77%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	8	3.6	4	3.8	3.8	0.16
Statistics (Non-Detects Only)	18	0.93	42	10.63	6.525	11.84
Statistics (All: NDs treated as DL value)	26	0.93	42	8.528	3.95	10.28
Statistics (All: NDs treated as DL/2 value)	26	0.93	42	7.943	1.975	10.59
Statistics (Normal ROS Imputed Data)	26	-2.7	42	7.561	3.879	10.95
Statistics (Gamma ROS Imputed Data)	26	0.01	42	7.511	1.352	10.87
Statistics (Lognormal ROS Imputed Data)	26	0.93	42	7.829	2.158	10.66

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.806	0.709	13.18	1.628	1.363	0.837
Statistics (NDs = DL)	0.958	0.873	8.901	1.538	1.133	0.737
Statistics (NDs = DL/2)	0.794	0.728	9.999	1.325	1.217	0.918
Statistics (Gamma ROS Estimates)	0.38	0.362	19.75	0.272	2.71	9.952
Statistics (Lognormal ROS Estimates)	--	--	--	1.238	1.289	1.042

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.906	0.85	0.836	0.885

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.818	0.897	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.73	0.92	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.705	0.92	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.789	0.92	Data Not Normal
Lilliefors (Detects Only)	0.206	0.202	Data Not Normal
Lilliefors (NDs = DL)	0.273	0.17	Data Not Normal
Lilliefors (NDs = DL/2)	0.29	0.17	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.232	0.17	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.994	0.987	0.988	0.989

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.666	0.775	
Kolmogorov-Smirnov (Detects Only)	0.221	0.211	Detected Data appear Approximate Gamma Distri
Anderson-Darling (NDs = DL)	0.905	0.775	

Kolmogorov-Smirnov (NDs = DL)	0.194	0.177	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.734	0.782	
Kolmogorov-Smirnov (NDs = DL/2)	0.302	0.178	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.709	0.834	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.174	0.184	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.952	0.974	0.944	0.937

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.883	0.897	Data Not Lognormal
Shapiro-Wilk (NDs = DL)	0.934	0.92	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.875	0.92	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.859	0.92	Data Not Lognormal
Lilliefors (Detects Only)	0.217	0.202	Data Not Lognormal
Lilliefors (NDs = DL)	0.141	0.17	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.275	0.17	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.219	0.17	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 1:06:53 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Dibenzo(a,h)anthracene

General Statistics

Total Number of Observations	26	Number of Missing Observations	1
Number of Distinct Observations	22		
Number of Detects	18	Number of Non-Detects	8
Number of Distinct Detects	17	Number of Distinct Non-Detects	5
Minimum Detect	0.93	Minimum Non-Detect	3.6
Maximum Detect	42	Maximum Non-Detect	4
Variance Detected	140.1	Percent Non-Detects	30.77%
Mean Detected	10.63	SD Detected	11.84
Mean of Detected Logged Data	1.628	SD of Detected Logged Data	1.363

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.275	d2max (for USL)	2.681

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.818	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.206	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	7.705	KM SD	10.53
95% UTL95% Coverage	31.66	95% KM UPL (t)	26.03
90% KM Percentile (z)	21.2	95% KM Percentile (z)	25.02
99% KM Percentile (z)	32.2	95% KM USL	35.93

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	7.943	SD	10.59
95% UTL95% Coverage	32.04	95% UPL (t)	26.38
90% Percentile (z)	21.52	95% Percentile (z)	25.36
99% Percentile (z)	32.58	95% USL	36.33

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.666	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.775	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.221	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.211	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.806	k star (bias corrected MLE)	0.709
Theta hat (MLE)	13.18	Theta star (bias corrected MLE)	14.99
nu hat (MLE)	29.03	nu star (bias corrected)	25.52
MLE Mean (bias corrected)	10.63		
MLE Sd (bias corrected)	12.62	95% Percentile of Chisquare (2kstar)	4.804

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	7.511
Maximum	42	Median	1.352
SD	10.87	CV	1.447
k hat (MLE)	0.38	k star (bias corrected MLE)	0.362
Theta hat (MLE)	19.75	Theta star (bias corrected MLE)	20.74
nu hat (MLE)	19.78	nu star (bias corrected)	18.83
MLE Mean (bias corrected)	7.511	MLE Sd (bias corrected)	12.48
95% Percentile of Chisquare (2kstar)	3.113	90% Percentile	21.57
95% Percentile	32.29	99% Percentile	59.52

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	49.28	61.87	95% Approx. Gamma UPL	31.32	35.85
95% Gamma USL	66.76	89.56			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.705	SD (KM)	10.53
Variance (KM)	110.9	SE of Mean (KM)	2.125
k hat (KM)	0.536	k star (KM)	0.499
nu hat (KM)	27.85	nu star (KM)	25.97
theta hat (KM)	14.39	theta star (KM)	15.43
80% gamma percentile (KM)	12.65	90% gamma percentile (KM)	20.85
95% gamma percentile (KM)	29.61	99% gamma percentile (KM)	51.16

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	39.22	42.25	95% Approx. Gamma UPL	26.52	27.16
95% KM Gamma Percentile	24.58	24.95	95% Gamma USL	51.19	57.36

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.883	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.217	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.202	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	7.829	Mean in Log Scale	1.238
SD in Original Scale	10.66	SD in Log Scale	1.289

95% UTL95% Coverage	64.8	95% BCA UTL95% Coverage	42
95% Bootstrap (%) UTL95% Coverage	42	95% UPL (t)	32.53
90% Percentile (z)	18	95% Percentile (z)	28.75
99% Percentile (z)	69.23	95% USL	109.4

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.16	95% KM UTL (Lognormal)95% Coverage	62.81
KM SD of Logged Data	1.31	95% KM UPL (Lognormal)	31.19
95% KM Percentile Lognormal (z)	27.51	95% KM USL (Lognormal)	106.9

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	7.943	Mean in Log Scale	1.325
SD in Original Scale	10.59	SD in Log Scale	1.217
95% UTL95% Coverage	59.88	95% UPL (t)	31.26
90% Percentile (z)	17.88	95% Percentile (z)	27.82
99% Percentile (z)	63.74	95% USL	98.11

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	26	95% UTL with95% Coverage	42
Approx, f used to compute achieved CC	1.368	Approximate Actual Confidence Coefficient achieved by UTL	0.736
Approximate Sample Size needed to achieve specified CC	59	95% UPL	37.8
95% USL	42	95% KM Chebyshev UPL	54.47

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 1:20:53 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Fluoranthene (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	0	7	4	3	42.86%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	3	3.7	3.8	3.767	3.8	0.0577
Statistics (Non-Detects Only)	4	1.4	35.5	14.13	9.8	14.82
Statistics (All: NDs treated as DL value)	7	1.4	35.5	9.686	3.8	11.85
Statistics (All: NDs treated as DL/2 value)	7	1.4	35.5	8.879	1.9	12.36
Statistics (Normal ROS Imputed Data)	7	-7.896	35.5	6.732	1.4	14.22
Statistics (Gamma ROS Imputed Data)	7	0.01	35.5	8.076	1.4	12.91
Statistics (Lognormal ROS Imputed Data)	7	0.795	35.5	8.684	2.135	12.49

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.072	0.435	13.17	2.114	1.337	0.632
Statistics (NDs = DL)	1.149	0.752	8.427	1.776	1.035	0.583
Statistics (NDs = DL/2)	0.838	0.574	10.6	1.479	1.233	0.833
Statistics (Gamma ROS Estimates)	0.249	0.238	32.43	-0.766	3.714	-4.85
Statistics (Lognormal ROS Estimates)	--	--	--	1.327	1.392	1.049

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.921	0.818	0.815	0.917

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.862	0.748	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.691	0.803	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.68	0.803	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.859	0.803	Data Appear Normal
Lilliefors (Detects Only)	0.333	0.375	Data Appear Normal
Lilliefors (NDs = DL)	0.313	0.304	Data Not Normal
Lilliefors (NDs = DL/2)	0.289	0.304	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.239	0.304	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.988	0.96	0.975	0.991

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.256	0.666	
Kolmogorov-Smirnov (Detects Only)	0.217	0.402	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.506	0.726	

Kolmogorov-Smirnov (NDs = DL)	0.276	0.319	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.711	0.733	
Kolmogorov-Smirnov (NDs = DL/2)	0.339	0.322	Detected Data appear Approximate Gamma Distri
Anderson-Darling (Gamma ROS Estimates)	0.521	0.804	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.281	0.339	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.97	0.963	0.921	0.96

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.955	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.942	0.803	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.839	0.803	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.912	0.803	Data Appear Lognormal
Lilliefors (Detects Only)	0.261	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.237	0.304	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.323	0.304	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.23	0.304	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

SIM-Fluoranthene (ss)

Raw Statistics

Number of Valid Observations	19
Number of Missing Observations	1
Number of Distinct Observations	18
Minimum	0.76
Maximum	460
Mean of Raw Data	104.1
Standard Deviation of Raw Data	133.6
Khat	0.584
Theta hat	178.3
Kstar	0.527
Theta star	197.7
Mean of Log Transformed Data	3.583
Standard Deviation of Log Transformed Data	1.731

Normal GOF Test Results

Correlation Coefficient R	0.879
Shapiro Wilk Test Statistic	0.771
Shapiro Wilk Critical (0.05) Value	0.901
Approximate Shapiro Wilk P Value	2.4967E-4
Lilliefors Test Statistic	0.247
Lilliefors Critical (0.05) Value	0.197

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.982

A-D Test Statistic	0.553
A-D Critical (0.05) Value	0.795
K-S Test Statistic	0.208
K-S Critical(0.05) Value	0.209

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.974
Shapiro Wilk Test Statistic	0.945
Shapiro Wilk Critical (0.05) Value	0.901
Approximate Shapiro Wilk P Value	0.349
Lilliefors Test Statistic	0.154
Lilliefors Critical (0.05) Value	0.197

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 1:19:38 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Fluoranthene (sb)

General Statistics

Total Number of Observations	7	Number of Missing Observations	0
Number of Distinct Observations	6		
Number of Detects	4	Number of Non-Detects	3
Number of Distinct Detects	4	Number of Distinct Non-Detects	2
Minimum Detect	1.4	Minimum Non-Detect	3.7
Maximum Detect	35.5	Maximum Non-Detect	3.8
Variance Detected	219.7	Percent Non-Detects	42.86%
Mean Detected	14.13	SD Detected	14.82
Mean of Detected Logged Data	2.114	SD of Detected Logged Data	1.337

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.862	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.333	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	8.671	KM SD	11.57
95% UTL95% Coverage	47.99	95% KM UPL (t)	32.7
90% KM Percentile (z)	23.5	95% KM Percentile (z)	27.7
99% KM Percentile (z)	35.58	95% KM USL	31.09

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	8.879	SD	12.36
95% UTL95% Coverage	50.88	95% UPL (t)	34.55
90% Percentile (z)	24.71	95% Percentile (z)	29.2
99% Percentile (z)	37.62	95% USL	32.83

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.256	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.666	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.217	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.402	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.072	k star (bias corrected MLE)	0.435
Theta hat (MLE)	13.17	Theta star (bias corrected MLE)	32.49
nu hat (MLE)	8.578	nu star (bias corrected)	3.478
MLE Mean (bias corrected)	14.13		
MLE Sd (bias corrected)	21.42	95% Percentile of Chisquare (2kstar)	3.509

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	8.076
Maximum	35.5	Median	1.4
SD	12.91	CV	1.599
k hat (MLE)	0.249	k star (bias corrected MLE)	0.238
Theta hat (MLE)	32.43	Theta star (bias corrected MLE)	34
nu hat (MLE)	3.486	nu star (bias corrected)	3.325
MLE Mean (bias corrected)	8.076	MLE Sd (bias corrected)	16.57
95% Percentile of Chisquare (2kstar)	2.334	90% Percentile	24.32
95% Percentile	39.68	99% Percentile	80.88

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	164.1	281.3	95% Approx. Gamma UPL	57.7	75.53
95% Gamma USL	50.43	63.88			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	8.671	SD (KM)	11.57
Variance (KM)	133.8	SE of Mean (KM)	5.049
k hat (KM)	0.562	k star (KM)	0.416
nu hat (KM)	7.867	nu star (KM)	5.829
theta hat (KM)	15.43	theta star (KM)	20.83
80% gamma percentile (KM)	14.06	90% gamma percentile (KM)	24.32
95% gamma percentile (KM)	35.53	99% gamma percentile (KM)	63.62

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	83.54	99.03	95% Approx. Gamma UPL	37.27	39.16
95% KM Gamma Percentile	27.07	27.4	95% Gamma USL	33.75	35.03

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.955	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.261	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	8.684	Mean in Log Scale	1.327
SD in Original Scale	12.49	SD in Log Scale	1.392

95% UTL95% Coverage	428	95% BCA UTL95% Coverage	35.5
95% Bootstrap (%) UTL95% Coverage	35.5	95% UPL (t)	67.97
90% Percentile (z)	22.45	95% Percentile (z)	37.22
99% Percentile (z)	96.13	95% USL	56

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.352	95% KM UTL (Lognormal)95% Coverage	262.3
KM SD of Logged Data	1.241	95% KM UPL (Lognormal)	50.89
95% KM Percentile Lognormal (z)	29.76	95% KM USL (Lognormal)	42.81

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	8.879	Mean in Log Scale	1.479
SD in Original Scale	12.36	SD in Log Scale	1.233
95% UTL95% Coverage	290	95% UPL (t)	56.85
90% Percentile (z)	21.31	95% Percentile (z)	33.35
99% Percentile (z)	77.28	95% USL	47.88

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	7	95% UTL with95% Coverage	35.5
Approx, f used to compute achieved CC	0.368	Approximate Actual Confidence Coefficient achieved by UTL	0.302
Approximate Sample Size needed to achieve specified CC	59	95% UPL	35.5
95% USL	35.5	95% KM Chebyshev UPL	62.58

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

SIM-Fluoranthene (ss)

General Statistics

Total Number of Observations	19	Number of Distinct Observations	18
		Number of Missing Observations	1
Minimum	0.76	First Quartile	9.25
Second Largest	330	Median	55
Maximum	460	Third Quartile	160
Mean	104.1	SD	133.6
Coefficient of Variation	1.284	Skewness	1.482
Mean of logged Data	3.583	SD of logged Data	1.731

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.423	d2max (for USL)	2.531

Normal GOF Test

Shapiro Wilk Test Statistic	0.771	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.901	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.247	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.197	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	427.9	90% Percentile (z)		275.4
	95% UPL (t)	341.8	95% Percentile (z)		323.9
	95% USL	442.3	99% Percentile (z)		415

Gamma GOF Test

A-D Test Statistic	0.553	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.795	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.208	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.209	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.584	k star (bias corrected MLE)	0.527
Theta hat (MLE)	178.3	Theta star (bias corrected MLE)	197.7
nu hat (MLE)	22.18	nu star (bias corrected)	20.01
MLE Mean (bias corrected)	104.1	MLE Sd (bias corrected)	143.5

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		410.1	90% Percentile		278.6
95% Hawkins Wixley (HW) Approx. Gamma UPL		444.9	95% Percentile		392.6
95% WH Approx. Gamma UTL with	95% Coverage	666.6	99% Percentile		671.5
95% HW Approx. Gamma UTL with	95% Coverage	783.6			
	95% WH USL	718.1	95% HW USL		855.4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.901	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.154	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.197	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	2386	90% Percentile (z)		330.7
	95% UPL (t)	782.6	95% Percentile (z)		620.3
	95% USL	2878	99% Percentile (z)		2018

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		19	95% UTL with	95% Coverage	460
Approx, f used to compute achieved CC		1	Approximate Actual Confidence Coefficient achieved by UTL		0.623
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	460	95% BCA Bootstrap UTL with	95% Coverage	460
	95% UPL	460		90% Percentile	282
	90% Chebyshev UPL	515.4		95% Percentile	343
	95% Chebyshev UPL	701.7		99% Percentile	436.6
	95% USL	460			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.

Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 1:35:56 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Fluorene (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	0	7	2	5	71.43%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	5	3.6	4	3.78	3.8	0.148
Statistics (Non-Detects Only)	2	0.83	1.3	1.065	1.065	0.332
Statistics (All: NDs treated as DL value)	7	0.83	4	3.004	3.7	1.337
Statistics (All: NDs treated as DL/2 value)	7	0.83	2	1.654	1.85	0.429
Statistics (Normal ROS Imputed Data)	7	0.83	1.3	1.065	1.065	0.192
Statistics (Gamma ROS Imputed Data)	7	N/A	N/A	N/A	N/A	N/A
Statistics (Lognormal ROS Imputed Data)	7	0.83	1.3	1.054	1.039	0.192

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	N/A	N/A	N/A	N/A	N/A	N/A
Statistics (NDs = DL)	3.735	2.229	0.804	0.96	0.644	0.671
Statistics (NDs = DL/2)	13.24	7.66	0.125	0.465	0.321	0.69
Statistics (Gamma ROS Estimates)	N/A	N/A	N/A	N/A	N/A	N/A
Statistics (Lognormal ROS Estimates)	--	--	--	0.038	0.183	4.818

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	1	0.849	0.877	0.938

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (NDs = DL)	0.711	0.803	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.775	0.803	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.858	0.803	Data Appear Normal
Lilliefors (Detects Only)	N/A	N/A	
Lilliefors (NDs = DL)	0.386	0.304	Data Not Normal
Lilliefors (NDs = DL/2)	0.347	0.304	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.214	0.304	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	N/A	0.744	0.823	0.934

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	N/A	N/A	
Kolmogorov-Smirnov (Detects Only)	N/A	N/A	
Anderson-Darling (NDs = DL)	1.192	0.71	
Kolmogorov-Smirnov (NDs = DL)	0.417	0.313	Data Not Gamma Distributed

Anderson-Darling (NDs = DL/2)	0.943	0.708	
Kolmogorov-Smirnov (NDs = DL/2)	0.371	0.312	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	N/A	0.708	
Kolmogorov-Smirnov (Gamma ROS Est.)	N/A	0.311	

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	1	0.834	0.847	N/A

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (NDs = DL)	0.693	0.803	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.729	0.803	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.858	0.803	Data Appear Lognormal
Lilliefors (Detects Only)	N/A	N/A	
Lilliefors (NDs = DL)	0.405	0.304	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.363	0.304	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.214	0.304	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

SIM-Fluorene (ss)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	20	0	20	13	7	35.00%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	7	3.6	4.1	3.864	3.9	0.197
Statistics (Non-Detects Only)	13	0.82	18	6.175	5	5.154
Statistics (All: NDs treated as DL value)	20	0.82	18	5.366	4	4.25
Statistics (All: NDs treated as DL/2 value)	20	0.82	18	4.69	2.025	4.592
Statistics (Normal ROS Imputed Data)	20	-0.902	18	4.406	2.451	4.84
Statistics (Gamma ROS Imputed Data)	20	0.01	18	4.34	1.776	4.849
Statistics (Lognormal ROS Imputed Data)	20	0.82	18	4.528	1.895	4.703

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.407	1.134	4.389	1.425	1.008	0.708
Statistics (NDs = DL)	1.928	1.672	2.784	1.399	0.803	0.574
Statistics (NDs = DL/2)	1.428	1.248	3.283	1.156	0.886	0.766
Statistics (Gamma ROS Estimates)	0.712	0.638	6.096	0.621	1.766	2.843
Statistics (Lognormal ROS Estimates)	--	--	--	1.05	0.97	0.924

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.949	0.897	0.879	0.916

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.898	0.866	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.814	0.905	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.778	0.905	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.845	0.905	Data Not Normal
Lilliefors (Detects Only)	0.152	0.234	Data Appear Normal

Lilliefors (NDs = DL)	0.267	0.192	Data Not Normal
Lilliefors (NDs = DL/2)	0.267	0.192	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.187	0.192	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.993	0.976	0.985	0.993

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.262	0.752	
Kolmogorov-Smirnov (Detects Only)	0.156	0.241	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.665	0.753	
Kolmogorov-Smirnov (NDs = DL)	0.194	0.196	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.894	0.759	
Kolmogorov-Smirnov (NDs = DL/2)	0.267	0.198	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.391	0.783	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.149	0.202	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.975	0.966	0.972	0.963

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.936	0.866	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.934	0.905	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.936	0.905	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.913	0.905	Data Appear Lognormal
Lilliefors (Detects Only)	0.157	0.234	Data Appear Lognormal
Lilliefors (NDs = DL)	0.242	0.192	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.24	0.192	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.197	0.192	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 1:34:24 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Fluorene (sb)

General Statistics

Total Number of Observations	7	Number of Missing Observations	0
Number of Distinct Observations	6		
Number of Detects	2	Number of Non-Detects	5
Number of Distinct Detects	2	Number of Distinct Non-Detects	4
Minimum Detect	0.83	Minimum Non-Detect	3.6
Maximum Detect	1.3	Maximum Non-Detect	4
Variance Detected	0.11	Percent Non-Detects	71.43%
Mean Detected	1.065	SD Detected	0.332
Mean of Detected Logged Data	0.038	SD of Detected Logged Data	0.317

Warning: Data set has only 2 Detected Values.

This is not enough to compute meaningful or reliable statistics and estimates.

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	1.065	KM SD	0.235
95% UTL95% Coverage	1.864	95% KM UPL (t)	1.553
90% KM Percentile (z)	1.366	95% KM Percentile (z)	1.452
99% KM Percentile (z)	1.612	95% KM USL	1.52

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	1.654	SD	0.429
95% UTL95% Coverage	3.113	95% UPL (t)	2.546
90% Percentile (z)	2.204	95% Percentile (z)	2.36
99% Percentile (z)	2.653	95% USL	2.486

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	20.2	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.0527	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	80.8	nu star (bias corrected)	N/A

MLE Mean (bias corrected)	N/A		
MLE Sd (bias corrected)	N/A	95% Percentile of Chisquare (2kstar)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.065	SD (KM)	0.235
Variance (KM)	0.0552	SE of Mean (KM)	0.235
k hat (KM)	20.54	k star (KM)	11.83
nu hat (KM)	287.5	nu star (KM)	165.6
theta hat (KM)	0.0519	theta star (KM)	0.09
80% gamma percentile (KM)	1.313	90% gamma percentile (KM)	1.476
95% gamma percentile (KM)	1.62	99% gamma percentile (KM)	1.914

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	2.064	2.099	95% Approx. Gamma UPL	1.614	1.624
95% KM Gamma Percentile	1.483	1.487	95% Gamma USL	1.571	1.579

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	1.054	Mean in Log Scale	0.038
SD in Original Scale	0.192	SD in Log Scale	0.183
95% UTL95% Coverage	1.936	95% BCA UTL95% Coverage	N/A
95% Bootstrap (%) UTL95% Coverage	N/A	95% UPL (t)	1.52
90% Percentile (z)	1.314	95% Percentile (z)	1.404
99% Percentile (z)	1.591	95% USL	1.481

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	0.038	95% KM UTL (Lognormal)95% Coverage	2.227
KM SD of Logged Data	0.224	95% KM UPL (Lognormal)	1.655
95% KM Percentile Lognormal (z)	1.502	95% KM USL (Lognormal)	1.605

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	1.654	Mean in Log Scale	0.465
SD in Original Scale	0.429	SD in Log Scale	0.321
95% UTL95% Coverage	4.738	95% UPL (t)	3.101
90% Percentile (z)	2.402	95% Percentile (z)	2.699
99% Percentile (z)	3.358	95% USL	2.965

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	7	95% UTL with95% Coverage	4
Approx, f used to compute achieved CC	0.368	Approximate Actual Confidence Coefficient achieved by UTL	0.302
Approximate Sample Size needed to achieve specified CC	59	95% UPL	4
95% USL	4	95% KM Chebyshev UPL	2.16

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.

Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers

and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

SIM-Fluorene (ss)

General Statistics

Total Number of Observations	20	Number of Missing Observations	0
Number of Distinct Observations	17		
Number of Detects	13	Number of Non-Detects	7
Number of Distinct Detects	13	Number of Distinct Non-Detects	5
Minimum Detect	0.82	Minimum Non-Detect	3.6
Maximum Detect	18	Maximum Non-Detect	4.1
Variance Detected	26.56	Percent Non-Detects	35%
Mean Detected	6.175	SD Detected	5.154
Mean of Detected Logged Data	1.425	SD of Detected Logged Data	1.008

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.396	d2max (for USL)	2.557

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.898	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.866	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.152	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.234	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	4.516	KM SD	4.614
95% UTL95% Coverage	15.57	95% KM UPL (t)	12.69
90% KM Percentile (z)	10.43	95% KM Percentile (z)	12.11
99% KM Percentile (z)	15.25	95% KM USL	16.31

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	4.69	SD	4.592
95% UTL95% Coverage	15.69	95% UPL (t)	12.83
90% Percentile (z)	10.57	95% Percentile (z)	12.24
99% Percentile (z)	15.37	95% USL	16.43

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.262	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.752	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.156	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.241	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.407	k star (bias corrected MLE)	1.134
Theta hat (MLE)	4.389	Theta star (bias corrected MLE)	5.447
nu hat (MLE)	36.58	nu star (bias corrected)	29.47
MLE Mean (bias corrected)	6.175		
MLE Sd (bias corrected)	5.8	95% Percentile of Chisquare (2kstar)	6.499

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	4.34
Maximum	18	Median	1.776
SD	4.849	CV	1.117
k hat (MLE)	0.712	k star (bias corrected MLE)	0.638
Theta hat (MLE)	6.096	Theta star (bias corrected MLE)	6.797
nu hat (MLE)	28.48	nu star (bias corrected)	25.54
MLE Mean (bias corrected)	4.34	MLE Sd (bias corrected)	5.431
95% Percentile of Chisquare (2kstar)	4.493	90% Percentile	11.13
95% Percentile	15.27	99% Percentile	25.23

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	24.39	29.15	95% Approx. Gamma UPL	15.8	17.55
95% Gamma USL	27.02	32.89			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.516	SD (KM)	4.614
Variance (KM)	21.29	SE of Mean (KM)	1.085
k hat (KM)	0.958	k star (KM)	0.848
nu hat (KM)	38.32	nu star (KM)	33.9
theta hat (KM)	4.715	theta star (KM)	5.328
80% gamma percentile (KM)	7.356	90% gamma percentile (KM)	10.83
95% gamma percentile (KM)	14.35	99% gamma percentile (KM)	22.63

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	19.88	21.31	95% Approx. Gamma UPL	13.65	14.03
95% KM Gamma Percentile	12.56	12.81	95% Gamma USL	21.74	23.58

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.936	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.866	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.157	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.234	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	4.528	Mean in Log Scale	1.05
SD in Original Scale	4.703	SD in Log Scale	0.97
95% UTL95% Coverage	29.21	95% BCA UTL95% Coverage	18
95% Bootstrap (%) UTL95% Coverage	18	95% UPL (t)	15.94
90% Percentile (z)	9.907	95% Percentile (z)	14.09
99% Percentile (z)	27.3	95% USL	34.13

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.013	95% KM UTL (Lognormal)95% Coverage	29.89
KM SD of Logged Data	0.995	95% KM UPL (Lognormal)	16.06
95% KM Percentile Lognormal (z)	14.15	95% KM USL (Lognormal)	35.07

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	4.69	Mean in Log Scale	1.156
SD in Original Scale	4.592	SD in Log Scale	0.886
95% UTL95% Coverage	26.52	95% UPL (t)	15.26
90% Percentile (z)	9.885	95% Percentile (z)	13.64
99% Percentile (z)	24.93	95% USL	30.57

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	20	95% UTL with95% Coverage	18
Approx, f used to compute achieved CC	1.053	Approximate Actual Confidence Coefficient achieved by UTL	0.642
Approximate Sample Size needed to achieve specified CC	59	95% UPL	17.75
95% USL	18	95% KM Chebyshev UPL	25.13

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 1:41:19 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Indeno(1,2,3-cd)pyrene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	3	24	20	4	16.67%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	4	3.6	3.8	3.725	3.75	0.0957
Statistics (Non-Detects Only)	20	1.1	68	17.65	4.75	20.9
Statistics (All: NDs treated as DL value)	24	1.1	68	15.33	3.8	19.72
Statistics (All: NDs treated as DL/2 value)	24	1.1	68	15.02	2.95	19.92
Statistics (Normal ROS Imputed Data)	24	-3.282	68	15.12	3.8	19.92
Statistics (Gamma ROS Imputed Data)	24	0.01	68	14.87	3.109	20.03
Statistics (Lognormal ROS Imputed Data)	24	1.1	68	15.16	3.528	19.83

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.743	0.665	23.76	2.063	1.372	0.665
Statistics (NDs = DL)	0.756	0.689	20.27	1.939	1.279	0.66
Statistics (NDs = DL/2)	0.684	0.627	21.95	1.823	1.362	0.747
Statistics (Gamma ROS Estimates)	0.53	0.491	28.08	1.51	1.975	1.308
Statistics (Lognormal ROS Estimates)	--	--	--	1.881	1.32	0.702

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.887	0.853	0.85	0.871

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.78	0.905	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.724	0.916	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.72	0.916	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.757	0.916	Data Not Normal
Lilliefors (Detects Only)	0.276	0.192	Data Not Normal
Lilliefors (NDs = DL)	0.323	0.177	Data Not Normal
Lilliefors (NDs = DL/2)	0.316	0.177	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.276	0.177	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.974	0.975	0.974	0.973

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	1.126	0.78	
Kolmogorov-Smirnov (Detects Only)	0.232	0.201	Data Not Gamma Distributed
Anderson-Darling (NDs = DL)	1.712	0.782	

Kolmogorov-Smirnov (NDs = DL)	0.281	0.185	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.942	0.789	
Kolmogorov-Smirnov (NDs = DL/2)	0.263	0.186	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.81	0.804	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.199	0.188	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.95	0.945	0.927	0.937

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.885	0.905	Data Not Lognormal
Shapiro-Wilk (NDs = DL)	0.88	0.916	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.845	0.916	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.864	0.916	Data Not Lognormal
Lilliefors (Detects Only)	0.194	0.192	Data Not Lognormal
Lilliefors (NDs = DL)	0.223	0.177	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.229	0.177	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.208	0.177	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 1:40:29 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Indeno(1,2,3-cd)pyrene

General Statistics

Total Number of Observations	24	Number of Missing Observations	3
Number of Distinct Observations	21		
Number of Detects	20	Number of Non-Detects	4
Number of Distinct Detects	18	Number of Distinct Non-Detects	3
Minimum Detect	1.1	Minimum Non-Detect	3.6
Maximum Detect	68	Maximum Non-Detect	3.8
Variance Detected	436.7	Percent Non-Detects	16.67%
Mean Detected	17.65	SD Detected	20.9
Mean of Detected Logged Data	2.063	SD of Detected Logged Data	1.372

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.309	d2max (for USL)	2.644

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.78	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.905	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.276	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.192	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	15.08	KM SD	19.46
95% UTL95% Coverage	60.01	95% KM UPL (t)	49.12
90% KM Percentile (z)	40.02	95% KM Percentile (z)	47.09
99% KM Percentile (z)	60.35	95% KM USL	66.53

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	15.02	SD	19.92
95% UTL95% Coverage	61.01	95% UPL (t)	49.86
90% Percentile (z)	40.55	95% Percentile (z)	47.78
99% Percentile (z)	61.36	95% USL	67.69

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.126	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.78	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.232	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.201	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.743	k star (bias corrected MLE)	0.665
Theta hat (MLE)	23.76	Theta star (bias corrected MLE)	26.55
nu hat (MLE)	29.71	nu star (bias corrected)	26.58
MLE Mean (bias corrected)	17.65		
MLE Sd (bias corrected)	21.65	95% Percentile of Chisquare (2kstar)	4.61

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	14.87
Maximum	68	Median	3.109
SD	20.03	CV	1.347
k hat (MLE)	0.53	k star (bias corrected MLE)	0.491
Theta hat (MLE)	28.08	Theta star (bias corrected MLE)	30.28
nu hat (MLE)	25.42	nu star (bias corrected)	23.57
MLE Mean (bias corrected)	14.87	MLE Sd (bias corrected)	21.22
95% Percentile of Chisquare (2kstar)	3.797	90% Percentile	40.38
95% Percentile	57.49	99% Percentile	99.64

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	89	104.1	95% Approx. Gamma UPL	57.47	62.46
95% Gamma USL	112.5	137.4			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	15.08	SD (KM)	19.46
Variance (KM)	378.6	SE of Mean (KM)	4.075
k hat (KM)	0.601	k star (KM)	0.554
nu hat (KM)	28.85	nu star (KM)	26.57
theta hat (KM)	25.1	theta star (KM)	27.25
80% gamma percentile (KM)	24.85	90% gamma percentile (KM)	39.94
95% gamma percentile (KM)	55.87	99% gamma percentile (KM)	94.69

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	78.44	85.28	95% Approx. Gamma UPL	52.31	53.89
95% KM Gamma Percentile	48.19	49.17	95% Gamma USL	97.61	109.6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.885	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.905	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.194	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.192	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	15.16	Mean in Log Scale	1.881
SD in Original Scale	19.83	SD in Log Scale	1.32

95% UTL95% Coverage	138.2	95% BCA UTL95% Coverage	68
95% Bootstrap (%) UTL95% Coverage	68	95% UPL (t)	66.02
90% Percentile (z)	35.61	95% Percentile (z)	57.53
99% Percentile (z)	141.4	95% USL	215.1

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.85	95% KM UTL (Lognormal)95% Coverage	132.8
KM SD of Logged Data	1.316	95% KM UPL (Lognormal)	63.55
95% KM Percentile Lognormal (z)	55.4	95% KM USL (Lognormal)	206.3

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	15.02	Mean in Log Scale	1.823
SD in Original Scale	19.92	SD in Log Scale	1.362
95% UTL95% Coverage	143.9	95% UPL (t)	67.12
90% Percentile (z)	35.49	95% Percentile (z)	58.22
99% Percentile (z)	147.3	95% USL	227.1

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	24	95% UTL with95% Coverage	68
Approx, f used to compute achieved CC	1.263	Approximate Actual Confidence Coefficient achieved by UTL	0.708
Approximate Sample Size needed to achieve specified CC	59	95% UPL	65.25
95% USL	68	95% KM Chebyshev UPL	101.6

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 1:46:09 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Naphthalene

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	4	23	15	8	34.78%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	8	3.6	4	3.838	3.85	0.141
Statistics (Non-Detects Only)	15	0.75	13	4.737	3.5	3.989
Statistics (All: NDs treated as DL value)	23	0.75	13	4.424	3.8	3.213
Statistics (All: NDs treated as DL/2 value)	23	0.75	13	3.757	2	3.466
Statistics (Normal ROS Imputed Data)	23	0.75	13	3.857	3.2	3.473
Statistics (Gamma ROS Imputed Data)	23	0.75	13	3.69	2.529	3.533
Statistics (Lognormal ROS Imputed Data)	23	0.75	13	3.731	2.356	3.492

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.565	1.297	3.026	1.203	0.904	0.752
Statistics (NDs = DL)	2.282	2.013	1.939	1.252	0.725	0.579
Statistics (NDs = DL/2)	1.749	1.55	2.148	1.011	0.77	0.762
Statistics (Gamma ROS Estimates)	1.505	1.338	2.452	0.938	0.86	0.917
Statistics (Lognormal ROS Estimates)	--	--	--	0.985	0.8	0.812

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.928	0.887	0.857	0.886

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.851	0.881	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.79	0.914	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.734	0.914	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.783	0.914	Data Not Normal
Lilliefors (Detects Only)	0.22	0.22	Data Not Normal
Lilliefors (NDs = DL)	0.31	0.18	Data Not Normal
Lilliefors (NDs = DL/2)	0.259	0.18	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.243	0.18	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.978	0.952	0.959	0.973

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.296	0.753	
Kolmogorov-Smirnov (Detects Only)	0.117	0.225	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.039	0.753	

Kolmogorov-Smirnov (NDs = DL)	0.225	0.184	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.211	0.757	
Kolmogorov-Smirnov (NDs = DL/2)	0.253	0.184	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.671	0.76	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.115	0.185	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.987	0.956	0.968	0.98

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.958	0.881	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.915	0.914	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.932	0.914	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.952	0.914	Data Appear Lognormal
Lilliefors (Detects Only)	0.106	0.22	Data Appear Lognormal
Lilliefors (NDs = DL)	0.196	0.18	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.225	0.18	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.0958	0.18	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 1:44:49 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Naphthalene

General Statistics

Total Number of Observations	23	Number of Missing Observations	4
Number of Distinct Observations	19		
Number of Detects	15	Number of Non-Detects	8
Number of Distinct Detects	15	Number of Distinct Non-Detects	5
Minimum Detect	0.75	Minimum Non-Detect	3.6
Maximum Detect	13	Maximum Non-Detect	4
Variance Detected	15.91	Percent Non-Detects	34.78%
Mean Detected	4.737	SD Detected	3.989
Mean of Detected Logged Data	1.203	SD of Detected Logged Data	0.904

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.328	d2max (for USL)	2.624

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.851	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.881	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.22	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.22	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	3.789	KM SD	3.427
95% UTL95% Coverage	11.77	95% KM UPL (t)	9.8
90% KM Percentile (z)	8.181	95% KM Percentile (z)	9.426
99% KM Percentile (z)	11.76	95% KM USL	12.78

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	3.757	SD	3.466
95% UTL95% Coverage	11.82	95% UPL (t)	9.836
90% Percentile (z)	8.198	95% Percentile (z)	9.457
99% Percentile (z)	11.82	95% USL	12.85

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.296	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.753	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.117	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.225	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.565	k star (bias corrected MLE)	1.297
Theta hat (MLE)	3.026	Theta star (bias corrected MLE)	3.653
nu hat (MLE)	46.96	nu star (bias corrected)	38.9
MLE Mean (bias corrected)	4.737		
MLE Sd (bias corrected)	4.159	95% Percentile of Chisquare (2kstar)	7.097

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.75	Mean	3.69
Maximum	13	Median	2.529
SD	3.533	CV	0.957
k hat (MLE)	1.505	k star (bias corrected MLE)	1.338
Theta hat (MLE)	2.452	Theta star (bias corrected MLE)	2.759
nu hat (MLE)	69.23	nu star (bias corrected)	61.53
MLE Mean (bias corrected)	3.69	MLE Sd (bias corrected)	3.191
95% Percentile of Chisquare (2kstar)	7.244	90% Percentile	7.909
95% Percentile	9.992	99% Percentile	14.73

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	14.16	14.88	95% Approx. Gamma UPL	10.27	10.47
95% Gamma USL	16.5	17.64			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.789	SD (KM)	3.427
Variance (KM)	11.74	SE of Mean (KM)	0.762
k hat (KM)	1.223	k star (KM)	1.092
nu hat (KM)	56.25	nu star (KM)	50.25
theta hat (KM)	3.099	theta star (KM)	3.469
80% gamma percentile (KM)	6.053	90% gamma percentile (KM)	8.537
95% gamma percentile (KM)	11	99% gamma percentile (KM)	16.7

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	13.97	14.68	95% Approx. Gamma UPL	10.22	10.42
95% KM Gamma Percentile	9.589	9.729	95% Gamma USL	16.22	17.33

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.881	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.106	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.22	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	3.731	Mean in Log Scale	0.985
SD in Original Scale	3.492	SD in Log Scale	0.8

95% UTL95% Coverage	17.23	95% BCA UTL95% Coverage	12.9
95% Bootstrap (%) UTL95% Coverage	13	95% UPL (t)	10.89
90% Percentile (z)	7.464	95% Percentile (z)	9.98
99% Percentile (z)	17.21	95% USL	21.83

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	0.977	95% KM UTL (Lognormal)95% Coverage	18.65
KM SD of Logged Data	0.837	95% KM UPL (Lognormal)	11.53
95% KM Percentile Lognormal (z)	10.53	95% KM USL (Lognormal)	23.89

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	3.757	Mean in Log Scale	1.011
SD in Original Scale	3.466	SD in Log Scale	0.77
95% UTL95% Coverage	16.52	95% UPL (t)	10.61
90% Percentile (z)	7.376	95% Percentile (z)	9.758
99% Percentile (z)	16.49	95% USL	20.74

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	23	95% UTL with95% Coverage	13
Approx, f used to compute achieved CC	1.211	Approximate Actual Confidence Coefficient achieved by UTL	0.693
Approximate Sample Size needed to achieve specified CC	59	95% UPL	12.8
95% USL	13	95% KM Chebyshev UPL	19.05

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 1:53:25 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Phenanthrene (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	0	7	4	3	42.86%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	3	3.7	3.8	3.767	3.8	0.0577
Statistics (Non-Detects Only)	4	1.7	16	7.95	7.05	6.017
Statistics (All: NDs treated as DL value)	7	1.7	16	6.157	3.8	4.807
Statistics (All: NDs treated as DL/2 value)	7	1.7	16	5.35	1.9	5.35
Statistics (Normal ROS Imputed Data)	7	-1.878	16	4.65	2.267	6.039
Statistics (Gamma ROS Imputed Data)	7	0.01	16	4.89	1.87	5.742
Statistics (Lognormal ROS Imputed Data)	7	1.141	16	5.272	2.3	5.419

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.943	0.652	4.091	1.794	0.941	0.525
Statistics (NDs = DL)	2.386	1.459	2.58	1.594	0.711	0.446
Statistics (NDs = DL/2)	1.458	0.929	3.669	1.297	0.91	0.702
Statistics (Gamma ROS Estimates)	0.519	0.392	9.416	0.371	2.468	6.648
Statistics (Lognormal ROS Estimates)	--	--	--	1.236	0.984	0.796

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.98	0.89	0.869	0.952

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.967	0.748	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.809	0.803	Data Appear Normal
Shapiro-Wilk (NDs = DL/2)	0.759	0.803	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.911	0.803	Data Appear Normal
Lilliefors (Detects Only)	0.227	0.375	Data Appear Normal
Lilliefors (NDs = DL)	0.26	0.304	Data Appear Normal
Lilliefors (NDs = DL/2)	0.312	0.304	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.225	0.304	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.985	0.972	0.98	0.988

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.212	0.661	
Kolmogorov-Smirnov (Detects Only)	0.182	0.398	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.387	0.714	

Kolmogorov-Smirnov (NDs = DL)	0.251	0.315	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.734	0.722	
Kolmogorov-Smirnov (NDs = DL/2)	0.351	0.317	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.212	0.75	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.151	0.327	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.978	0.969	0.91	0.963

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.964	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.954	0.803	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.812	0.803	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.914	0.803	Data Appear Lognormal
Lilliefors (Detects Only)	0.235	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.213	0.304	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.335	0.304	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.23	0.304	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

SIM-Phenanthrene (ss)

Raw Statistics

Number of Valid Observations	20
Number of Distinct Observations	20
Minimum	0.98
Maximum	290
Mean of Raw Data	74.26
Standard Deviation of Raw Data	85.36
Khat	0.643
Theta hat	115.6
Kstar	0.58
Theta star	128.1
Mean of Log Transformed Data	3.356
Standard Deviation of Log Transformed Data	1.673

Normal GOF Test Results

Correlation Coefficient R	0.909
Shapiro Wilk Test Statistic	0.821
Shapiro Wilk Critical (0.05) Value	0.905
Approximate Shapiro Wilk P Value	0.00141
Lilliefors Test Statistic	0.226
Lilliefors Critical (0.05) Value	0.192

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.978
A-D Test Statistic	0.373

A-D Critical (0.05) Value	0.789
K-S Test Statistic	0.135
K-S Critical(0.05) Value	0.203

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.978
Shapiro Wilk Test Statistic	0.944
Shapiro Wilk Critical (0.05) Value	0.905
Approximate Shapiro Wilk P Value	0.332
Lilliefors Test Statistic	0.159
Lilliefors Critical (0.05) Value	0.192

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 1:52:15 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Phenanthrene (sb)

General Statistics

Total Number of Observations	7	Number of Missing Observations	0
Number of Distinct Observations	6		
Number of Detects	4	Number of Non-Detects	3
Number of Distinct Detects	4	Number of Distinct Non-Detects	2
Minimum Detect	1.7	Minimum Non-Detect	3.7
Maximum Detect	16	Maximum Non-Detect	3.8
Variance Detected	36.2	Percent Non-Detects	42.86%
Mean Detected	7.95	SD Detected	6.017
Mean of Detected Logged Data	1.794	SD of Detected Logged Data	0.941

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.227	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	5.271	KM SD	5.008
95% UTL95% Coverage	22.29	95% KM UPL (t)	15.68
90% KM Percentile (z)	11.69	95% KM Percentile (z)	13.51
99% KM Percentile (z)	16.92	95% KM USL	14.98

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	5.35	SD	5.35
95% UTL95% Coverage	23.53	95% UPL (t)	16.46
90% Percentile (z)	12.21	95% Percentile (z)	14.15
99% Percentile (z)	17.79	95% USL	15.72

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.212	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.661	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.182	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.398	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.943	k star (bias corrected MLE)	0.652
Theta hat (MLE)	4.091	Theta star (bias corrected MLE)	12.18
nu hat (MLE)	15.55	nu star (bias corrected)	5.22
MLE Mean (bias corrected)	7.95		
MLE Sd (bias corrected)	9.842	95% Percentile of Chisquare (2kstar)	4.556

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	4.89
Maximum	16	Median	1.87
SD	5.742	CV	1.174
k hat (MLE)	0.519	k star (bias corrected MLE)	0.392
Theta hat (MLE)	9.416	Theta star (bias corrected MLE)	12.47
nu hat (MLE)	7.27	nu star (bias corrected)	5.488
MLE Mean (bias corrected)	4.89	MLE Sd (bias corrected)	7.81
95% Percentile of Chisquare (2kstar)	3.28	90% Percentile	13.86
95% Percentile	20.46	99% Percentile	37.09

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	65.84	99.54	95% Approx. Gamma UPL	27.33	34.06
95% Gamma USL	24.5	29.86			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	5.271	SD (KM)	5.008
Variance (KM)	25.08	SE of Mean (KM)	2.186
k hat (KM)	1.108	k star (KM)	0.728
nu hat (KM)	15.51	nu star (KM)	10.2
theta hat (KM)	4.758	theta star (KM)	7.238
80% gamma percentile (KM)	8.653	90% gamma percentile (KM)	13.11
95% gamma percentile (KM)	17.69	99% gamma percentile (KM)	28.58

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	35.14	39.44	95% Approx. Gamma UPL	17.97	18.61
95% KM Gamma Percentile	13.9	14.06	95% Gamma USL	16.58	17.04

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.235	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	5.272	Mean in Log Scale	1.236
SD in Original Scale	5.419	SD in Log Scale	0.984

95% UTL95% Coverage	97.71	95% BCA UTL95% Coverage	16
95% Bootstrap (%) UTL95% Coverage	16	95% UPL (t)	26.6
90% Percentile (z)	12.15	95% Percentile (z)	17.38
99% Percentile (z)	33.99	95% USL	23.19

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.253	95% KM UTL (Lognormal)95% Coverage	69.21
KM SD of Logged Data	0.878	95% KM UPL (Lognormal)	21.69
95% KM Percentile Lognormal (z)	14.83	95% KM USL (Lognormal)	19.19

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	5.35	Mean in Log Scale	1.297
SD in Original Scale	5.35	SD in Log Scale	0.91
95% UTL95% Coverage	80.69	95% UPL (t)	24.23
90% Percentile (z)	11.74	95% Percentile (z)	16.34
99% Percentile (z)	30.39	95% USL	21.35

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	7	95% UTL with95% Coverage	16
Approx, f used to compute achieved CC	0.368	Approximate Actual Confidence Coefficient achieved by UTL	0.302
Approximate Sample Size needed to achieve specified CC	59	95% UPL	16
95% USL	16	95% KM Chebyshev UPL	28.61

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

SIM-Phenanthrene (ss)

General Statistics

Total Number of Observations	20	Number of Distinct Observations	20
Minimum	0.98	First Quartile	6.338
Second Largest	220	Median	35
Maximum	290	Third Quartile	104.5
Mean	74.26	SD	85.36
Coefficient of Variation	1.149	Skewness	1.268
Mean of logged Data	3.356	SD of logged Data	1.673

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.396	d2max (for USL)	2.557

Normal GOF Test

Shapiro Wilk Test Statistic	0.821	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.905	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.226	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.192	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	278.8	90% Percentile (z)		183.6
	95% UPL (t)	225.5	95% Percentile (z)		214.7
	95% USL	292.5	99% Percentile (z)		272.8

Gamma GOF Test

A-D Test Statistic	0.373	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.789	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.135	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.643	k star (bias corrected MLE)	0.58
Theta hat (MLE)	115.6	Theta star (bias corrected MLE)	128.1
nu hat (MLE)	25.7	nu star (bias corrected)	23.18
MLE Mean (bias corrected)	74.26	MLE Sd (bias corrected)	97.55

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		284.8	90% Percentile 194.6
95% Hawkins Wixley (HW) Approx. Gamma UPL		312.1	95% Percentile 270.6
95% WH Approx. Gamma UTL with	95% Coverage	450	99% Percentile 454.8
95% HW Approx. Gamma UTL with	95% Coverage	532	
	95% WH USL	500.9	95% HW USL 603.7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.944	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.905	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.159	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.192	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	1579	90% Percentile (z)		244.6
	95% UPL (t)	555.6	95% Percentile (z)		449.2
	95% USL	2065	99% Percentile (z)		1405

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		20	95% UTL with	95% Coverage	290
Approx, f used to compute achieved CC		1.053	Approximate Actual Confidence Coefficient achieved by UTL		0.642
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	290	95% BCA Bootstrap UTL with	95% Coverage	290
	95% UPL	286.5		90% Percentile	211
	90% Chebyshev UPL	336.7		95% Percentile	223.5
	95% Chebyshev UPL	455.5		99% Percentile	276.7
	95% USL	290			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers

and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 2:00:48 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

SIM-Pyrene (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	0	7	4	3	42.86%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	3	3.7	3.8	3.767	3.8	0.0577
Statistics (Non-Detects Only)	4	1.5	40.5	16	11	16.96
Statistics (All: NDs treated as DL value)	7	1.5	40.5	10.76	3.8	13.66
Statistics (All: NDs treated as DL/2 value)	7	1.5	40.5	9.95	1.9	14.17
Statistics (Normal ROS Imputed Data)	7	-9.068	40.5	7.584	1.505	16.23
Statistics (Gamma ROS Imputed Data)	7	0.01	40.5	9.147	1.5	14.72
Statistics (Lognormal ROS Imputed Data)	7	0.852	40.5	9.807	2.329	14.27

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.046	0.428	15.3	2.224	1.362	0.612
Statistics (NDs = DL)	1.068	0.705	10.08	1.839	1.076	0.585
Statistics (NDs = DL/2)	0.787	0.545	12.64	1.542	1.285	0.833
Statistics (Gamma ROS Estimates)	0.244	0.235	37.42	-0.703	3.775	-5.37
Statistics (Lognormal ROS Estimates)	--	--	--	1.423	1.417	0.995

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.916	0.815	0.812	0.915

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.854	0.748	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.685	0.803	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.676	0.803	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.854	0.803	Data Appear Normal
Lilliefors (Detects Only)	0.343	0.375	Data Appear Normal
Lilliefors (NDs = DL)	0.321	0.304	Data Not Normal
Lilliefors (NDs = DL/2)	0.3	0.304	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.25	0.304	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.986	0.961	0.974	0.99

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.273	0.666	
Kolmogorov-Smirnov (Detects Only)	0.228	0.402	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.529	0.727	

Kolmogorov-Smirnov (NDs = DL)	0.288	0.319	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.746	0.735	
Kolmogorov-Smirnov (NDs = DL/2)	0.344	0.322	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.527	0.806	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.281	0.339	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.965	0.961	0.913	0.959

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.947	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.934	0.803	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.822	0.803	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.909	0.803	Data Appear Lognormal
Lilliefors (Detects Only)	0.273	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.252	0.304	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.33	0.304	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.23	0.304	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

SIM-Pyrene (ss)

Raw Statistics

Number of Valid Observations	19
Number of Missing Observations	1
Number of Distinct Observations	17
Minimum	0.84
Maximum	460
Mean of Raw Data	106.6
Standard Deviation of Raw Data	139.8
Khat	0.589
Theta hat	181
Kstar	0.531
Theta star	200.7
Mean of Log Transformed Data	3.616
Standard Deviation of Log Transformed Data	1.695

Normal GOF Test Results

Correlation Coefficient R	0.866
Shapiro Wilk Test Statistic	0.748
Shapiro Wilk Critical (0.05) Value	0.901
Approximate Shapiro Wilk P Value	1.0527E-4
Lilliefors Test Statistic	0.304
Lilliefors Critical (0.05) Value	0.197

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.972

A-D Test Statistic	0.639
A-D Critical (0.05) Value	0.794
K-S Test Statistic	0.196
K-S Critical(0.05) Value	0.209

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.974
Shapiro Wilk Test Statistic	0.946
Shapiro Wilk Critical (0.05) Value	0.901
Approximate Shapiro Wilk P Value	0.364
Lilliefors Test Statistic	0.139
Lilliefors Critical (0.05) Value	0.197

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 2:00:00 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SIM-Pyrene (sb)

General Statistics

Total Number of Observations	7	Number of Missing Observations	0
Number of Distinct Observations	6		
Number of Detects	4	Number of Non-Detects	3
Number of Distinct Detects	4	Number of Distinct Non-Detects	2
Minimum Detect	1.5	Minimum Non-Detect	3.7
Maximum Detect	40.5	Maximum Non-Detect	3.8
Variance Detected	287.5	Percent Non-Detects	42.86%
Mean Detected	16	SD Detected	16.96
Mean of Detected Logged Data	2.224	SD of Detected Logged Data	1.362

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.854	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.343	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	9.786	KM SD	13.22
95% UTL95% Coverage	54.71	95% KM UPL (t)	37.24
90% KM Percentile (z)	26.72	95% KM Percentile (z)	31.53
99% KM Percentile (z)	40.53	95% KM USL	35.4

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	9.95	SD	14.17
95% UTL95% Coverage	58.1	95% UPL (t)	39.38
90% Percentile (z)	28.1	95% Percentile (z)	33.25
99% Percentile (z)	42.91	95% USL	37.41

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.273	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.666	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.228	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.402	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.046	k star (bias corrected MLE)	0.428
Theta hat (MLE)	15.3	Theta star (bias corrected MLE)	37.37
nu hat (MLE)	8.367	nu star (bias corrected)	3.425
MLE Mean (bias corrected)	16		
MLE Sd (bias corrected)	24.45	95% Percentile of Chisquare (2kstar)	3.475

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	9.147
Maximum	40.5	Median	1.5
SD	14.72	CV	1.61
k hat (MLE)	0.244	k star (bias corrected MLE)	0.235
Theta hat (MLE)	37.42	Theta star (bias corrected MLE)	38.94
nu hat (MLE)	3.422	nu star (bias corrected)	3.289
MLE Mean (bias corrected)	9.147	MLE Sd (bias corrected)	18.87
95% Percentile of Chisquare (2kstar)	2.316	90% Percentile	27.56
95% Percentile	45.09	99% Percentile	92.18

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	187	321.9	95% Approx. Gamma UPL	65.56	85.98
95% Gamma USL	57.27	72.67			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	9.786	SD (KM)	13.22
Variance (KM)	174.7	SE of Mean (KM)	5.769
k hat (KM)	0.548	k star (KM)	0.408
nu hat (KM)	7.674	nu star (KM)	5.718
theta hat (KM)	17.85	theta star (KM)	23.96
80% gamma percentile (KM)	15.83	90% gamma percentile (KM)	27.54
95% gamma percentile (KM)	40.37	99% gamma percentile (KM)	72.55

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	96.04	114.4	95% Approx. Gamma UPL	42.54	44.78
95% KM Gamma Percentile	30.8	31.19	95% Gamma USL	38.48	40

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.273	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	9.807	Mean in Log Scale	1.423
SD in Original Scale	14.27	SD in Log Scale	1.417

95% UTL95% Coverage	512.6	95% BCA UTL95% Coverage	40.5
95% Bootstrap (%) UTL95% Coverage	40.5	95% UPL (t)	78.79
90% Percentile (z)	25.51	95% Percentile (z)	42.69
99% Percentile (z)	112.1	95% USL	64.69

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.444	95% KM UTL (Lognormal)95% Coverage	314.1
KM SD of Logged Data	1.267	95% KM UPL (Lognormal)	58.89
95% KM Percentile Lognormal (z)	34.05	95% KM USL (Lognormal)	49.37

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	9.95	Mean in Log Scale	1.542
SD in Original Scale	14.17	SD in Log Scale	1.285
95% UTL95% Coverage	368.1	95% UPL (t)	67.39
90% Percentile (z)	24.24	95% Percentile (z)	38.66
99% Percentile (z)	92.79	95% USL	56.35

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	7	95% UTL with95% Coverage	40.5
Approx, f used to compute achieved CC	0.368	Approximate Actual Confidence Coefficient achieved by UTL	0.302
Approximate Sample Size needed to achieve specified CC	59	95% UPL	40.5
95% USL	40.5	95% KM Chebyshev UPL	71.38

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

SIM-Pyrene (ss)

General Statistics

Total Number of Observations	19	Number of Distinct Observations	17
		Number of Missing Observations	1
Minimum	0.84	First Quartile	10.48
Second Largest	370	Median	55
Maximum	460	Third Quartile	151.5
Mean	106.6	SD	139.8
Coefficient of Variation	1.312	Skewness	1.462
Mean of logged Data	3.616	SD of logged Data	1.695

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.423	d2max (for USL)	2.531

Normal GOF Test

Shapiro Wilk Test Statistic	0.748	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.901	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.304	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.197	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	445.4	90% Percentile (z)		285.8
	95% UPL (t)	355.3	95% Percentile (z)		336.5
	95% USL	460.5	99% Percentile (z)		431.8

Gamma GOF Test

A-D Test Statistic	0.639	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.794	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.196	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.209	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.589	k star (bias corrected MLE)	0.531
Theta hat (MLE)	181	Theta star (bias corrected MLE)	200.7
nu hat (MLE)	22.37	nu star (bias corrected)	20.17
MLE Mean (bias corrected)	106.6	MLE Sd (bias corrected)	146.3

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		416.8	90% Percentile		284.7
95% Hawkins Wixley (HW) Approx. Gamma UPL		448.9	95% Percentile		400.7
95% WH Approx. Gamma UTL with	95% Coverage	677.1	99% Percentile		684.3
95% HW Approx. Gamma UTL with	95% Coverage	788.7			
	95% WH USL	729.4	95% HW USL		860.7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.946	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.901	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.139	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.197	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	2260	90% Percentile (z)		326.5
	95% UPL (t)	758.9	95% Percentile (z)		604.4
	95% USL	2715	99% Percentile (z)		1919

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		19	95% UTL with	95% Coverage	460
Approx, f used to compute achieved CC		1	Approximate Actual Confidence Coefficient achieved by UTL		0.623
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	460	95% BCA Bootstrap UTL with	95% Coverage	460
	95% UPL	460	90% Percentile		298
	90% Chebyshev UPL	536.9	95% Percentile		379
	95% Chebyshev UPL	731.9	99% Percentile		443.8
	95% USL	460			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.

Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:07:19 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

4,4'-DDD

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	16	11	40.74%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	11	3.6	4	3.791	3.8	0.151
Statistics (Non-Detects Only)	16	0.39	5	1.796	1.65	1.429
Statistics (All: NDs treated as DL value)	27	0.39	5	2.609	2.9	1.478
Statistics (All: NDs treated as DL/2 value)	27	0.39	5	1.836	1.85	1.088
Statistics (Normal ROS Imputed Data)	27	0.39	5	1.673	1.509	1.168
Statistics (Gamma ROS Imputed Data)	27	0.39	5	1.591	1.239	1.163
Statistics (Lognormal ROS Imputed Data)	27	0.39	5	1.544	1.111	1.162

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.772	1.481	1.014	0.277	0.837	3.016
Statistics (NDs = DL)	2.137	1.925	1.221	0.707	0.827	1.169
Statistics (NDs = DL/2)	2.885	2.589	0.637	0.425	0.661	1.557
Statistics (Gamma ROS Estimates)	2.332	2.097	0.682	0.235	0.694	2.956
Statistics (Lognormal ROS Estimates)	--	--	--	0.204	0.686	3.367

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.927	0.956	0.902	0.923

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.853	0.887	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.895	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.821	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.852	0.923	Data Not Normal
Lilliefors (Detects Only)	0.163	0.213	Data Appear Normal
Lilliefors (NDs = DL)	0.23	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.221	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.156	0.167	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.98	0.891	0.936	0.973

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.387	0.752	
Kolmogorov-Smirnov (Detects Only)	0.148	0.218	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.518	0.756	

Kolmogorov-Smirnov (NDs = DL)	0.246	0.17	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.56	0.752	
Kolmogorov-Smirnov (NDs = DL/2)	0.232	0.17	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.425	0.755	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.119	0.17	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.977	0.92	0.93	0.988

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.936	0.887	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.831	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.863	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.965	0.923	Data Appear Lognormal
Lilliefors (Detects Only)	0.153	0.213	Data Appear Lognormal
Lilliefors (NDs = DL)	0.238	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.268	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.112	0.167	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 7:09:38 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

4,4'-DDD

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	21		
Number of Detects	16	Number of Non-Detects	11
Number of Distinct Detects	16	Number of Distinct Non-Detects	5
Minimum Detect	0.39	Minimum Non-Detect	3.6
Maximum Detect	5	Maximum Non-Detect	4
Variance Detected	2.043	Percent Non-Detects	40.74%
Mean Detected	1.796	SD Detected	1.429
Mean of Detected Logged Data	0.277	SD of Detected Logged Data	0.837

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.853	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.163	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	1.618	KM SD	1.205
95% UTL95% Coverage	4.341	95% KM UPL (t)	3.711
90% KM Percentile (z)	3.162	95% KM Percentile (z)	3.6
99% KM Percentile (z)	4.421	95% KM USL	4.868

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	1.836	SD	1.088
95% UTL95% Coverage	4.295	95% UPL (t)	3.726
90% Percentile (z)	3.231	95% Percentile (z)	3.626
99% Percentile (z)	4.367	95% USL	4.772

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.387	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.752	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.148	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.218	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.772	k star (bias corrected MLE)	1.481
Theta hat (MLE)	1.014	Theta star (bias corrected MLE)	1.213
nu hat (MLE)	56.69	nu star (bias corrected)	47.39
MLE Mean (bias corrected)	1.796		
MLE Sd (bias corrected)	1.476	95% Percentile of Chisquare (2kstar)	7.749

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.39	Mean	1.591
Maximum	5	Median	1.239
SD	1.163	CV	0.731
k hat (MLE)	2.332	k star (bias corrected MLE)	2.097
Theta hat (MLE)	0.682	Theta star (bias corrected MLE)	0.758
nu hat (MLE)	125.9	nu star (bias corrected)	113.3
MLE Mean (bias corrected)	1.591	MLE Sd (bias corrected)	1.098
95% Percentile of Chisquare (2kstar)	9.801	90% Percentile	3.059
95% Percentile	3.717	99% Percentile	5.171

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	4.876	5.073	95% Approx. Gamma UPL	3.797	3.868
95% Gamma USL	5.923	6.282			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.618	SD (KM)	1.205
Variance (KM)	1.451	SE of Mean (KM)	0.276
k hat (KM)	1.804	k star (KM)	1.629
nu hat (KM)	97.44	nu star (KM)	87.94
theta hat (KM)	0.897	theta star (KM)	0.994
80% gamma percentile (KM)	2.481	90% gamma percentile (KM)	3.305
95% gamma percentile (KM)	4.102	99% gamma percentile (KM)	5.89

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	5.268	5.54	95% Approx. Gamma UPL	4.042	4.147
95% KM Gamma Percentile	3.849	3.932	95% Gamma USL	6.466	6.954

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.936	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.153	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	1.544	Mean in Log Scale	0.204
SD in Original Scale	1.162	SD in Log Scale	0.686

95% UTL95% Coverage	5.78	95% BCA UTL95% Coverage	5
95% Bootstrap (%) UTL95% Coverage	5	95% UPL (t)	4.037
90% Percentile (z)	2.954	95% Percentile (z)	3.79
99% Percentile (z)	6.049	95% USL	7.806

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	0.202	95% KM UTL (Lognormal)95% Coverage	6.948
KM SD of Logged Data	0.768	95% KM UPL (Lognormal)	4.648
95% KM Percentile Lognormal (z)	4.331	95% KM USL (Lognormal)	9.729

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	1.836	Mean in Log Scale	0.425
SD in Original Scale	1.088	SD in Log Scale	0.661
95% UTL95% Coverage	6.816	95% UPL (t)	4.823
90% Percentile (z)	3.569	95% Percentile (z)	4.538
99% Percentile (z)	7.122	95% USL	9.107

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	5
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	4.88
95% USL	5	95% KM Chebyshev UPL	6.966

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:12:26 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

4,4'-DDE

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	7	20	74.07%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	20	3.6	4.8	3.945	3.9	0.3
Statistics (Non-Detects Only)	7	0.185	3.9	1.396	0.52	1.56
Statistics (All: NDs treated as DL value)	27	0.185	4.8	3.284	3.8	1.387
Statistics (All: NDs treated as DL/2 value)	27	0.185	3.9	1.823	1.9	0.803
Statistics (Normal ROS Imputed Data)	27	-0.324	3.9	1.14	1.113	0.976
Statistics (Gamma ROS Imputed Data)	27	0.185	3.9	1.007	0.823	0.883
Statistics (Lognormal ROS Imputed Data)	27	0.183	3.9	0.849	0.593	0.882

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.932	0.628	1.498	-0.291	1.237	-4.256
Statistics (NDs = DL)	2.153	1.939	1.525	0.939	0.952	1.014
Statistics (NDs = DL/2)	3.019	2.708	0.604	0.426	0.737	1.731
Statistics (Gamma ROS Estimates)	1.84	1.66	0.547	-0.289	0.778	-2.695
Statistics (Lognormal ROS Estimates)	--	--	--	-0.501	0.784	-1.566

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.892	0.826	0.898	0.955

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.779	0.803	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.678	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.82	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.916	0.923	Data Not Normal
Lilliefors (Detects Only)	0.284	0.304	Data Appear Normal
Lilliefors (NDs = DL)	0.368	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.303	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.177	0.167	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.95	0.682	0.869	0.967

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.526	0.73	
Kolmogorov-Smirnov (Detects Only)	0.246	0.32	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	5.391	0.756	

Kolmogorov-Smirnov (NDs = DL)	0.42	0.17	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	3.683	0.752	
Kolmogorov-Smirnov (NDs = DL/2)	0.383	0.169	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.534	0.759	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.172	0.171	Detected Data appear Approximate Gamma Distri

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.956	0.752	0.811	0.976

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.889	0.803	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.568	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.669	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.947	0.923	Data Appear Lognormal
Lilliefors (Detects Only)	0.207	0.304	Data Appear Lognormal
Lilliefors (NDs = DL)	0.42	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.402	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.178	0.167	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:11:53 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

4,4'-DDE

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	16		
Number of Detects	7	Number of Non-Detects	20
Number of Distinct Detects	7	Number of Distinct Non-Detects	10
Minimum Detect	0.185	Minimum Non-Detect	3.6
Maximum Detect	3.9	Maximum Non-Detect	4.8
Variance Detected	2.435	Percent Non-Detects	74.07%
Mean Detected	1.396	SD Detected	1.56
Mean of Detected Logged Data	-0.291	SD of Detected Logged Data	1.237

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.779	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.284	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	1.141	KM SD	1.263
95% UTL95% Coverage	3.996	95% KM UPL (t)	3.336
90% KM Percentile (z)	2.76	95% KM Percentile (z)	3.219
99% KM Percentile (z)	4.08	95% KM USL	4.55

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	1.823	SD	0.803
95% UTL95% Coverage	3.637	95% UPL (t)	3.218
90% Percentile (z)	2.852	95% Percentile (z)	3.144
99% Percentile (z)	3.691	95% USL	3.989

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.526	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.73	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.246	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.32	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.932	k star (bias corrected MLE)	0.628
Theta hat (MLE)	1.498	Theta star (bias corrected MLE)	2.224
nu hat (MLE)	13.05	nu star (bias corrected)	8.789
MLE Mean (bias corrected)	1.396		
MLE Sd (bias corrected)	1.762	95% Percentile of Chisquare (2kstar)	4.445

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.185	Mean	1.007
Maximum	3.9	Median	0.823
SD	0.883	CV	0.877
k hat (MLE)	1.84	k star (bias corrected MLE)	1.66
Theta hat (MLE)	0.547	Theta star (bias corrected MLE)	0.607
nu hat (MLE)	99.36	nu star (bias corrected)	89.65
MLE Mean (bias corrected)	1.007	MLE Sd (bias corrected)	0.782
95% Percentile of Chisquare (2kstar)	8.363	90% Percentile	2.047
95% Percentile	2.536	99% Percentile	3.634

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	3.396	3.541	95% Approx. Gamma UPL	2.585	2.631
95% Gamma USL	4.193	4.469			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.141	SD (KM)	1.263
Variance (KM)	1.596	SE of Mean (KM)	0.49
k hat (KM)	0.816	k star (KM)	0.75
nu hat (KM)	44.09	nu star (KM)	40.52
theta hat (KM)	1.398	theta star (KM)	1.521
80% gamma percentile (KM)	1.871	90% gamma percentile (KM)	2.818
95% gamma percentile (KM)	3.789	99% gamma percentile (KM)	6.093

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	4.978	5.284	95% Approx. Gamma UPL	3.543	3.62
95% KM Gamma Percentile	3.323	3.374	95% Gamma USL	6.442	7.071

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.889	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.207	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	0.849	Mean in Log Scale	-0.501
SD in Original Scale	0.882	SD in Log Scale	0.784

95% UTL95% Coverage	3.565	95% BCA UTL95% Coverage	3.9
95% Bootstrap (%) UTL95% Coverage	3.9	95% UPL (t)	2.366
90% Percentile (z)	1.655	95% Percentile (z)	2.201
99% Percentile (z)	3.756	95% USL	5.027

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	-0.459	95% KM UTL (Lognormal)95% Coverage	7.052
KM SD of Logged Data	1.067	95% KM UPL (Lognormal)	4.035
95% KM Percentile Lognormal (z)	3.657	95% KM USL (Lognormal)	11.26

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	1.823	Mean in Log Scale	0.426
SD in Original Scale	0.803	SD in Log Scale	0.737
95% UTL95% Coverage	8.104	95% UPL (t)	5.51
90% Percentile (z)	3.939	95% Percentile (z)	5.149
99% Percentile (z)	8.51	95% USL	11.19

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	4.8
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	4.68
95% USL	4.8	95% KM Chebyshev UPL	6.749

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:19:42 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

4,4'-DDT

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	1	26	5	21	80.77%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	21	3.6	4.8	3.931	3.9	0.277
Statistics (Non-Detects Only)	5	0.24	2.7	1.176	1	1.013
Statistics (All: NDs treated as DL value)	26	0.24	4.8	3.401	3.8	1.205
Statistics (All: NDs treated as DL/2 value)	26	0.24	2.7	1.814	1.913	0.53
Statistics (Normal ROS Imputed Data)	26	-0.0846	2.7	1.176	1.176	0.731
Statistics (Gamma ROS Imputed Data)	26	0.0844	2.7	1.116	0.999	0.745
Statistics (Lognormal ROS Imputed Data)	26	0.222	2.972	1.05	0.812	0.772

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.494	0.731	0.787	-0.209	1.024	-4.908
Statistics (NDs = DL)	3.275	2.923	1.039	1.064	0.756	0.711
Statistics (NDs = DL/2)	5.628	5.004	0.322	0.504	0.545	1.081
Statistics (Gamma ROS Estimates)	1.907	1.712	0.585	-0.175	0.87	-4.966
Statistics (Lognormal ROS Estimates)	--	--	--	-0.209	0.748	-3.586

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.962	0.829	0.84	0.988

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.915	0.762	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.691	0.92	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.725	0.92	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.968	0.92	Data Appear Normal
Lilliefors (Detects Only)	0.195	0.343	Data Appear Normal
Lilliefors (NDs = DL)	0.373	0.17	Data Not Normal
Lilliefors (NDs = DL/2)	0.336	0.17	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.154	0.17	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.989	0.71	0.774	0.972

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.261	0.686	
Kolmogorov-Smirnov (Detects Only)	0.232	0.362	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	4.891	0.75	

Kolmogorov-Smirnov (NDs = DL)	0.421	0.172	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	4.584	0.746	
Kolmogorov-Smirnov (NDs = DL/2)	0.395	0.172	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.466	0.758	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.192	0.174	Detected Data appear Approximate Gamma Distri

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.978	0.728	0.716	0.986

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.938	0.762	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.542	0.92	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.533	0.92	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.957	0.92	Data Appear Lognormal
Lilliefors (Detects Only)	0.202	0.343	Data Appear Lognormal
Lilliefors (NDs = DL)	0.421	0.17	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.407	0.17	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.154	0.17	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:18:56 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

4,4'-DDT

General Statistics

Total Number of Observations	26	Number of Missing Observations	1
Number of Distinct Observations	15		
Number of Detects	5	Number of Non-Detects	21
Number of Distinct Detects	5	Number of Distinct Non-Detects	10
Minimum Detect	0.24	Minimum Non-Detect	3.6
Maximum Detect	2.7	Maximum Non-Detect	4.8
Variance Detected	1.027	Percent Non-Detects	80.77%
Mean Detected	1.176	SD Detected	1.013
Mean of Detected Logged Data	-0.209	SD of Detected Logged Data	1.024

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.275	d2max (for USL)	2.681

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.915	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.195	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	1.176	KM SD	0.906
95% UTL95% Coverage	3.238	95% KM UPL (t)	2.754
90% KM Percentile (z)	2.338	95% KM Percentile (z)	2.667
99% KM Percentile (z)	3.285	95% KM USL	3.606

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	1.814	SD	0.53
95% UTL95% Coverage	3.018	95% UPL (t)	2.735
90% Percentile (z)	2.492	95% Percentile (z)	2.685
99% Percentile (z)	3.045	95% USL	3.233

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.261	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.686	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.232	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.362	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.494	k star (bias corrected MLE)	0.731
Theta hat (MLE)	0.787	Theta star (bias corrected MLE)	1.609
nu hat (MLE)	14.94	nu star (bias corrected)	7.308
MLE Mean (bias corrected)	1.176		
MLE Sd (bias corrected)	1.376	95% Percentile of Chisquare (2kstar)	4.898

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0844	Mean	1.116
Maximum	2.7	Median	0.999
SD	0.745	CV	0.668
k hat (MLE)	1.907	k star (bias corrected MLE)	1.712
Theta hat (MLE)	0.585	Theta star (bias corrected MLE)	0.652
nu hat (MLE)	99.15	nu star (bias corrected)	89.04
MLE Mean (bias corrected)	1.116	MLE Sd (bias corrected)	0.853
95% Percentile of Chisquare (2kstar)	8.539	90% Percentile	2.251
95% Percentile	2.782	99% Percentile	3.969

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	3.767	4.08	95% Approx. Gamma UPL	2.866	3.009
95% Gamma USL	4.565	5.068			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.176	SD (KM)	0.906
Variance (KM)	0.822	SE of Mean (KM)	0.453
k hat (KM)	1.683	k star (KM)	1.515
nu hat (KM)	87.52	nu star (KM)	78.76
theta hat (KM)	0.699	theta star (KM)	0.776
80% gamma percentile (KM)	1.818	90% gamma percentile (KM)	2.445
95% gamma percentile (KM)	3.053	99% gamma percentile (KM)	4.427

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	4.341	4.668	95% Approx. Gamma UPL	3.225	3.355
95% KM Gamma Percentile	3.048	3.153	95% Gamma USL	5.343	5.897

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.938	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.202	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	1.05	Mean in Log Scale	-0.209
SD in Original Scale	0.772	SD in Log Scale	0.748

95% UTL95% Coverage	4.449	95% BCA UTL95% Coverage	2.972
95% Bootstrap (%) UTL95% Coverage	2.972	95% UPL (t)	2.984
90% Percentile (z)	2.117	95% Percentile (z)	2.777
99% Percentile (z)	4.623	95% USL	6.027

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	-0.209	95% KM UTL (Lognormal)95% Coverage	6.515
KM SD of Logged Data	0.915	95% KM UPL (Lognormal)	3.995
95% KM Percentile Lognormal (z)	3.659	95% KM USL (Lognormal)	9.448

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	1.814	Mean in Log Scale	0.504
SD in Original Scale	0.53	SD in Log Scale	0.545
95% UTL95% Coverage	5.718	95% UPL (t)	4.273
90% Percentile (z)	3.328	95% Percentile (z)	4.056
99% Percentile (z)	5.88	95% USL	7.133

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	26	95% UTL with95% Coverage	4.8
Approx, f used to compute achieved CC	1.368	Approximate Actual Confidence Coefficient achieved by UTL	0.736
Approximate Sample Size needed to achieve specified CC	59	95% UPL	4.625
95% USL	4.8	95% KM Chebyshev UPL	5.202

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:23:44 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Endrin

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	3	24	5	19	79.17%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	19	3.6	4.8	3.921	3.85	0.298
Statistics (Non-Detects Only)	5	0.25	0.56	0.378	0.36	0.129
Statistics (All: NDs treated as DL value)	24	0.25	4.8	3.183	3.8	1.494
Statistics (All: NDs treated as DL/2 value)	24	0.25	2.4	1.631	1.9	0.672
Statistics (Normal ROS Imputed Data)	24	0.215	0.56	0.378	0.378	0.0914
Statistics (Gamma ROS Imputed Data)	24	0.222	0.56	0.375	0.37	0.092
Statistics (Lognormal ROS Imputed Data)	24	0.234	0.56	0.371	0.361	0.0906

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	10.97	4.522	0.0344	-1.019	0.339	-0.333
Statistics (NDs = DL)	1.871	1.665	1.701	0.867	1.001	1.154
Statistics (NDs = DL/2)	3.09	2.731	0.528	0.319	0.718	2.253
Statistics (Gamma ROS Estimates)	17.27	15.14	0.0217	-1.01	0.249	-0.246
Statistics (Lognormal ROS Estimates)	--	--	--	-1.019	0.242	-0.237

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.974	0.819	0.834	0.975

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.933	0.762	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.665	0.916	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.692	0.916	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.944	0.916	Data Appear Normal
Lilliefors (Detects Only)	0.199	0.343	Data Appear Normal
Lilliefors (NDs = DL)	0.402	0.177	Data Not Normal
Lilliefors (NDs = DL/2)	0.391	0.177	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.208	0.177	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.988	0.675	0.727	0.973

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.268	0.679	
Kolmogorov-Smirnov (Detects Only)	0.229	0.358	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	4.916	0.757	

Kolmogorov-Smirnov (NDs = DL)	0.453	0.18	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	4.414	0.751	
Kolmogorov-Smirnov (NDs = DL/2)	0.434	0.179	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.724	0.743	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.198	0.178	Detected Data appear Approximate Gamma Distri

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.981	0.77	0.788	0.971

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.943	0.762	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.589	0.916	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.618	0.916	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.934	0.916	Data Appear Lognormal
Lilliefors (Detects Only)	0.204	0.343	Data Appear Lognormal
Lilliefors (NDs = DL)	0.452	0.177	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.438	0.177	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.208	0.177	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:22:56 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Endrin

General Statistics

Total Number of Observations	24	Number of Missing Observations	3
Number of Distinct Observations	15		
Number of Detects	5	Number of Non-Detects	19
Number of Distinct Detects	5	Number of Distinct Non-Detects	10
Minimum Detect	0.25	Minimum Non-Detect	3.6
Maximum Detect	0.56	Maximum Non-Detect	4.8
Variance Detected	0.0167	Percent Non-Detects	79.17%
Mean Detected	0.378	SD Detected	0.129
Mean of Detected Logged Data	-1.019	SD of Detected Logged Data	0.339

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.309	d2max (for USL)	2.644

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.933	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.199	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	0.378	KM SD	0.115
95% UTL95% Coverage	0.645	95% KM UPL (t)	0.58
90% KM Percentile (z)	0.526	95% KM Percentile (z)	0.568
99% KM Percentile (z)	0.647	95% KM USL	0.683

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	1.631	SD	0.672
95% UTL95% Coverage	3.182	95% UPL (t)	2.806
90% Percentile (z)	2.492	95% Percentile (z)	2.736
99% Percentile (z)	3.194	95% USL	3.407

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.268	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.679	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.229	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.358	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	10.97	k star (bias corrected MLE)	4.522
Theta hat (MLE)	0.0344	Theta star (bias corrected MLE)	0.0836
nu hat (MLE)	109.7	nu star (bias corrected)	45.22
MLE Mean (bias corrected)	0.378		
MLE Sd (bias corrected)	0.178	95% Percentile of Chisquare (2kstar)	16.98

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.222	Mean	0.375
Maximum	0.56	Median	0.37
SD	0.092	CV	0.245
k hat (MLE)	17.27	k star (bias corrected MLE)	15.14
Theta hat (MLE)	0.0217	Theta star (bias corrected MLE)	0.0248
nu hat (MLE)	828.8	nu star (bias corrected)	726.5
MLE Mean (bias corrected)	0.375	MLE Sd (bias corrected)	0.0964
95% Percentile of Chisquare (2kstar)	44.1	90% Percentile	0.503
95% Percentile	0.546	99% Percentile	0.635

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	0.621	0.626	95% Approx. Gamma UPL	0.551	0.554
95% Gamma USL	0.665	0.673			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.378	SD (KM)	0.115
Variance (KM)	0.0133	SE of Mean (KM)	0.0577
k hat (KM)	10.71	k star (KM)	9.403
nu hat (KM)	514.3	nu star (KM)	451.3
theta hat (KM)	0.0353	theta star (KM)	0.0402
80% gamma percentile (KM)	0.476	90% gamma percentile (KM)	0.542
95% gamma percentile (KM)	0.601	99% gamma percentile (KM)	0.722

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	0.69	0.698	95% Approx. Gamma UPL	0.599	0.602
95% KM Gamma Percentile	0.583	0.586	95% Gamma USL	0.749	0.761

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.204	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	0.371	Mean in Log Scale	-1.019
SD in Original Scale	0.0906	SD in Log Scale	0.242

95% UTL95% Coverage	0.63	95% BCA UTL95% Coverage	0.559
95% Bootstrap (%) UTL95% Coverage	0.56	95% UPL (t)	0.551
90% Percentile (z)	0.492	95% Percentile (z)	0.537
99% Percentile (z)	0.633	95% USL	0.684

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	-1.019	95% KM UTL (Lognormal)95% Coverage	0.727
KM SD of Logged Data	0.304	95% KM UPL (Lognormal)	0.614
95% KM Percentile Lognormal (z)	0.595	95% KM USL (Lognormal)	0.805

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	1.631	Mean in Log Scale	0.319
SD in Original Scale	0.672	SD in Log Scale	0.718
95% UTL95% Coverage	7.217	95% UPL (t)	4.829
90% Percentile (z)	3.451	95% Percentile (z)	4.48
99% Percentile (z)	7.308	95% USL	9.179

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	24	95% UTL with95% Coverage	4.8
Approx, f used to compute achieved CC	1.263	Approximate Actual Confidence Coefficient achieved by UTL	0.708
Approximate Sample Size needed to achieve specified CC	59	95% UPL	4.725
95% USL	4.8	95% KM Chebyshev UPL	0.892

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:26:17 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

gamma-BHC (Lindane)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	16	11	40.74%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	11	1.8	2.1	1.964	2	0.0924
Statistics (Non-Detects Only)	16	0.21	3.9	1.284	1.06	1.037
Statistics (All: NDs treated as DL value)	27	0.21	3.9	1.561	1.9	0.86
Statistics (All: NDs treated as DL/2 value)	27	0.21	3.9	1.161	1	0.802
Statistics (Normal ROS Imputed Data)	27	0.16	3.9	1.123	0.92	0.867
Statistics (Gamma ROS Imputed Data)	27	0.21	3.9	1.071	0.902	0.863
Statistics (Lognormal ROS Imputed Data)	27	0.21	3.9	1.052	0.807	0.858

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.7	1.423	0.755	-0.0718	0.862	-12.01
Statistics (NDs = DL)	2.497	2.244	0.625	0.232	0.754	3.252
Statistics (NDs = DL/2)	2.657	2.387	0.437	-0.0504	0.656	-13.01
Statistics (Gamma ROS Estimates)	1.954	1.762	0.548	-0.209	0.763	-3.654
Statistics (Lognormal ROS Estimates)	--	--	--	-0.214	0.728	-3.411

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.938	0.953	0.892	0.931

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.879	0.887	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.912	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.809	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.873	0.923	Data Not Normal
Lilliefors (Detects Only)	0.168	0.213	Data Appear Normal
Lilliefors (NDs = DL)	0.172	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.259	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.16	0.167	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.995	0.933	0.964	0.989

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.26	0.753	
Kolmogorov-Smirnov (Detects Only)	0.133	0.218	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.517	0.754	

Kolmogorov-Smirnov (NDs = DL)	0.226	0.17	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.77	0.753	
Kolmogorov-Smirnov (NDs = DL/2)	0.185	0.17	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.312	0.757	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.0915	0.171	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.99	0.925	0.974	0.994

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.969	0.887	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.854	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.954	0.923	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.983	0.923	Data Appear Lognormal
Lilliefors (Detects Only)	0.12	0.213	Data Appear Lognormal
Lilliefors (NDs = DL)	0.237	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.207	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.0822	0.167	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:25:40 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

gamma-BHC (Lindane)

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	18		
Number of Detects	16	Number of Non-Detects	11
Number of Distinct Detects	15	Number of Distinct Non-Detects	4
Minimum Detect	0.21	Minimum Non-Detect	1.8
Maximum Detect	3.9	Maximum Non-Detect	2.1
Variance Detected	1.075	Percent Non-Detects	40.74%
Mean Detected	1.284	SD Detected	1.037
Mean of Detected Logged Data	-0.0718	SD of Detected Logged Data	0.862

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.879	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.168	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	1.085	KM SD	0.862
95% UTL95% Coverage	3.034	95% KM UPL (t)	2.583
90% KM Percentile (z)	2.19	95% KM Percentile (z)	2.503
99% KM Percentile (z)	3.091	95% KM USL	3.412

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	1.161	SD	0.802
95% UTL95% Coverage	2.974	95% UPL (t)	2.555
90% Percentile (z)	2.189	95% Percentile (z)	2.481
99% Percentile (z)	3.028	95% USL	3.326

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.26	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.753	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.133	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.218	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.7	k star (bias corrected MLE)	1.423
Theta hat (MLE)	0.755	Theta star (bias corrected MLE)	0.903
nu hat (MLE)	54.4	nu star (bias corrected)	45.54
MLE Mean (bias corrected)	1.284		
MLE Sd (bias corrected)	1.077	95% Percentile of Chisquare (2kstar)	7.546

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.21	Mean	1.071
Maximum	3.9	Median	0.902
SD	0.863	CV	0.806
k hat (MLE)	1.954	k star (bias corrected MLE)	1.762
Theta hat (MLE)	0.548	Theta star (bias corrected MLE)	0.608
nu hat (MLE)	105.5	nu star (bias corrected)	95.15
MLE Mean (bias corrected)	1.071	MLE Sd (bias corrected)	0.807
95% Percentile of Chisquare (2kstar)	8.705	90% Percentile	2.146
95% Percentile	2.645	99% Percentile	3.76

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	3.532	3.694	95% Approx. Gamma UPL	2.704	2.761
95% Gamma USL	4.343	4.642			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.085	SD (KM)	0.862
Variance (KM)	0.743	SE of Mean (KM)	0.19
k hat (KM)	1.585	k star (KM)	1.433
nu hat (KM)	85.57	nu star (KM)	77.4
theta hat (KM)	0.685	theta star (KM)	0.757
80% gamma percentile (KM)	1.688	90% gamma percentile (KM)	2.287
95% gamma percentile (KM)	2.871	99% gamma percentile (KM)	4.193

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	3.608	3.786	95% Approx. Gamma UPL	2.754	2.818
95% KM Gamma Percentile	2.619	2.669	95% Gamma USL	4.446	4.772

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.12	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	1.052	Mean in Log Scale	-0.214
SD in Original Scale	0.858	SD in Log Scale	0.728

95% UTL95% Coverage	4.189	95% BCA UTL95% Coverage	3.9
95% Bootstrap (%) UTL95% Coverage	3.9	95% UPL (t)	2.862
90% Percentile (z)	2.054	95% Percentile (z)	2.676
99% Percentile (z)	4.396	95% USL	5.763

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	-0.215	95% KM UTL (Lognormal)95% Coverage	4.73
KM SD of Logged Data	0.783	95% KM UPL (Lognormal)	3.141
95% KM Percentile Lognormal (z)	2.923	95% KM USL (Lognormal)	6.663

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	1.161	Mean in Log Scale	-0.0504
SD in Original Scale	0.802	SD in Log Scale	0.656
95% UTL95% Coverage	4.187	95% UPL (t)	2.971
90% Percentile (z)	2.204	95% Percentile (z)	2.797
99% Percentile (z)	4.373	95% USL	5.581

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	3.9
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	3.46
95% USL	3.9	95% KM Chebyshev UPL	4.912

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:42:43 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

2,3,7,8-TCDD

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	13	14	5	9	64.29%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	9	0.18	0.22	0.199	0.2	0.0113
Statistics (Non-Detects Only)	5	0.29	0.71	0.446	0.39	0.163
Statistics (All: NDs treated as DL value)	14	0.18	0.71	0.288	0.205	0.152
Statistics (All: NDs treated as DL/2 value)	14	0.09	0.71	0.223	0.103	0.194
Statistics (Normal ROS Imputed Data)	14	-0.385	0.71	0.076	-0.0875	0.315
Statistics (Gamma ROS Imputed Data)	14	0.01	0.71	0.172	0.01	0.231
Statistics (Lognormal ROS Imputed Data)	14	0.0731	0.71	0.242	0.138	0.183

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	10.56	4.358	0.0422	-0.856	0.339	-0.396
Statistics (NDs = DL)	5.35	4.251	0.0537	-1.343	0.424	-0.315
Statistics (NDs = DL/2)	1.876	1.521	0.119	-1.788	0.747	-0.418
Statistics (Gamma ROS Estimates)	0.477	0.423	0.361	-3.098	1.85	-0.597
Statistics (Lognormal ROS Estimates)	--	--	--	-1.64	0.666	-0.406

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.943	0.838	0.85	0.951

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.898	0.762	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.713	0.874	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.724	0.874	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.903	0.874	Data Appear Normal
Lilliefors (Detects Only)	0.235	0.343	Data Appear Normal
Lilliefors (NDs = DL)	0.314	0.226	Data Not Normal
Lilliefors (NDs = DL/2)	0.363	0.226	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.235	0.226	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.978	0.921	0.956	0.956

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.282	0.679	
Kolmogorov-Smirnov (Detects Only)	0.227	0.358	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.434	0.738	

Kolmogorov-Smirnov (NDs = DL)	0.315	0.229	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.759	0.747	
Kolmogorov-Smirnov (NDs = DL/2)	0.372	0.232	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	1.723	0.798	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.369	0.242	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.978	0.89	0.874	0.952

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.962	0.762	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.792	0.874	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.751	0.874	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.903	0.874	Data Appear Lognormal
Lilliefors (Detects Only)	0.2	0.343	Data Appear Lognormal
Lilliefors (NDs = DL)	0.3	0.226	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.355	0.226	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.235	0.226	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:41:54 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

2,3,7,8-TCDD

General Statistics

Total Number of Observations	14	Number of Missing Observations	13
Number of Distinct Observations	11		
Number of Detects	5	Number of Non-Detects	9
Number of Distinct Detects	5	Number of Distinct Non-Detects	6
Minimum Detect	0.29	Minimum Non-Detect	0.18
Maximum Detect	0.71	Maximum Non-Detect	0.22
Variance Detected	0.0264	Percent Non-Detects	64.29%
Mean Detected	0.446	SD Detected	0.163
Mean of Detected Logged Data	-0.856	SD of Detected Logged Data	0.339

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.614	d2max (for USL)	2.372

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.898	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.235	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	0.275	KM SD	0.154
95% UTL95% Coverage	0.678	95% KM UPL (t)	0.558
90% KM Percentile (z)	0.473	95% KM Percentile (z)	0.529
99% KM Percentile (z)	0.634	95% KM USL	0.641

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	0.223	SD	0.194
95% UTL95% Coverage	0.732	95% UPL (t)	0.58
90% Percentile (z)	0.473	95% Percentile (z)	0.543
99% Percentile (z)	0.676	95% USL	0.684

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.282	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.679	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.227	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.358	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	10.56	k star (bias corrected MLE)	4.358
Theta hat (MLE)	0.0422	Theta star (bias corrected MLE)	0.102
nu hat (MLE)	105.6	nu star (bias corrected)	43.58
MLE Mean (bias corrected)	0.446		
MLE Sd (bias corrected)	0.214	95% Percentile of Chisquare (2kstar)	16.52

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.172
Maximum	0.71	Median	0.01
SD	0.231	CV	1.341
k hat (MLE)	0.477	k star (bias corrected MLE)	0.423
Theta hat (MLE)	0.361	Theta star (bias corrected MLE)	0.408
nu hat (MLE)	13.36	nu star (bias corrected)	11.83
MLE Mean (bias corrected)	0.172	MLE Sd (bias corrected)	0.265
95% Percentile of Chisquare (2kstar)	3.445	90% Percentile	0.482
95% Percentile	0.703	99% Percentile	1.255

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	1.429	1.736	95% Approx. Gamma UPL	0.772	0.84
95% Gamma USL	1.196	1.405			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.275	SD (KM)	0.154
Variance (KM)	0.0238	SE of Mean (KM)	0.0461
k hat (KM)	3.178	k star (KM)	2.545
nu hat (KM)	88.98	nu star (KM)	71.25
theta hat (KM)	0.0865	theta star (KM)	0.108
80% gamma percentile (KM)	0.4	90% gamma percentile (KM)	0.506
95% gamma percentile (KM)	0.606	99% gamma percentile (KM)	0.824

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	0.734	0.745	95% Approx. Gamma UPL	0.554	0.555
95% KM Gamma Percentile	0.516	0.515	95% Gamma USL	0.674	0.682

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.962	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.2	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	0.242	Mean in Log Scale	-1.64
SD in Original Scale	0.183	SD in Log Scale	0.666

95% UTL95% Coverage	1.107	95% BCA UTL95% Coverage	0.71
95% Bootstrap (%) UTL95% Coverage	0.71	95% UPL (t)	0.658
90% Percentile (z)	0.456	95% Percentile (z)	0.58
99% Percentile (z)	0.914	95% USL	0.942

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	-1.408	95% KM UTL (Lognormal)95% Coverage	0.793
KM SD of Logged Data	0.45	95% KM UPL (Lognormal)	0.558
95% KM Percentile Lognormal (z)	0.513	95% KM USL (Lognormal)	0.711

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	0.223	Mean in Log Scale	-1.788
SD in Original Scale	0.194	SD in Log Scale	0.747
95% UTL95% Coverage	1.179	95% UPL (t)	0.658
90% Percentile (z)	0.436	95% Percentile (z)	0.571
99% Percentile (z)	0.951	95% USL	0.983

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	14	95% UTL with95% Coverage	0.71
Approx, f used to compute achieved CC	0.737	Approximate Actual Confidence Coefficient achieved by UTL	0.512
Approximate Sample Size needed to achieve specified CC	59	95% UPL	0.71
95% USL	0.71	95% KM Chebyshev UPL	0.971

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:53:42 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

2,3,7,8-TCDF (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	3	4	2	2	50.00%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	2	0.22	0.24	0.23	0.23	0.0141
Statistics (Non-Detects Only)	2	0.54	1.1	0.82	0.82	0.396
Statistics (All: NDs treated as DL value)	4	0.22	1.1	0.525	0.39	0.41
Statistics (All: NDs treated as DL/2 value)	4	0.11	1.1	0.468	0.33	0.467
Statistics (Normal ROS Imputed Data)	4	-0.613	1.1	0.103	-0.0366	0.858
Statistics (Gamma ROS Imputed Data)	4	N/A	N/A	N/A	N/A	N/A
Statistics (Lognormal ROS Imputed Data)	4	0.125	1.1	0.472	0.332	0.462

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	N/A	N/A	N/A	N/A	N/A	N/A
Statistics (NDs = DL)	2.414	0.77	0.217	-0.866	0.758	-0.875
Statistics (NDs = DL/2)	1.247	0.478	0.375	-1.212	1.137	-0.938
Statistics (Gamma ROS Estimates)	N/A	N/A	N/A	N/A	N/A	N/A
Statistics (Lognormal ROS Estimates)	--	--	--	-1.171	1.091	-0.932

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	1	0.924	0.933	0.934

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (NDs = DL)	0.85	0.748	Data Appear Normal
Shapiro-Wilk (NDs = DL/2)	0.862	0.748	Data Appear Normal
Shapiro-Wilk (Normal ROS Estimates)	0.85	0.748	Data Appear Normal
Lilliefors (Detects Only)	N/A	N/A	
Lilliefors (NDs = DL)	0.256	0.375	Data Appear Normal
Lilliefors (NDs = DL/2)	0.272	0.375	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.298	0.375	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	N/A	0.993	0.986	0.951

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	N/A	N/A	
Kolmogorov-Smirnov (Detects Only)	N/A	N/A	
Anderson-Darling (NDs = DL)	0.386	0.66	
Kolmogorov-Smirnov (NDs = DL)	0.302	0.397	Data Appear Gamma Distributed

Anderson-Darling (NDs = DL/2)	0.412	0.665	
Kolmogorov-Smirnov (NDs = DL/2)	0.32	0.401	Data Appear Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	N/A	0.657	
Kolmogorov-Smirnov (Gamma ROS Est.)	N/A	0.394	

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	1	0.954	0.943	N/A

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (NDs = DL)	0.896	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.868	0.748	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.85	0.748	Data Appear Lognormal
Lilliefors (Detects Only)	N/A	N/A	
Lilliefors (NDs = DL)	0.271	0.375	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.288	0.375	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.298	0.375	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

2,3,7,8-TCDF (ss)

Raw Statistics

Number of Valid Observations	10
Number of Missing Observations	10
Number of Distinct Observations	10
Minimum	0.56
Maximum	4.6
Mean of Raw Data	2.112
Standard Deviation of Raw Data	1.588
Khat	1.764
Theta hat	1.197
Kstar	1.302
Theta star	1.622
Mean of Log Transformed Data	0.438
Standard Deviation of Log Transformed Data	0.867

Normal GOF Test Results

Correlation Coefficient R	0.943
Shapiro Wilk Test Statistic	0.862
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.131
Lilliefors Test Statistic	0.199
Lilliefors Critical (0.05) Value	0.262

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.949
A-D Test Statistic	0.573
A-D Critical (0.05) Value	0.737

K-S Test Statistic	0.207
K-S Critical(0.05) Value	0.27

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.947
Shapiro Wilk Test Statistic	0.865
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.159
Lilliefors Test Statistic	0.188
Lilliefors Critical (0.05) Value	0.262

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:48:39 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

2,3,7,8-TCDF (sb)

General Statistics

Total Number of Observations	4	Number of Missing Observations	3
Number of Distinct Observations	4		
Number of Detects	2	Number of Non-Detects	2
Number of Distinct Detects	2	Number of Distinct Non-Detects	2
Minimum Detect	0.54	Minimum Non-Detect	0.22
Maximum Detect	1.1	Maximum Non-Detect	0.24
Variance Detected	0.157	Percent Non-Detects	50%
Mean Detected	0.82	SD Detected	0.396
Mean of Detected Logged Data	-0.26	SD of Detected Logged Data	0.503

Warning: Data set has only 2 Detected Values.

This is not enough to compute meaningful or reliable statistics and estimates.

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	5.144	d2max (for USL)	1.462

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	0.52	KM SD	0.359
95% UTL95% Coverage	2.369	95% KM UPL (t)	1.466
90% KM Percentile (z)	0.981	95% KM Percentile (z)	1.111
99% KM Percentile (z)	1.356	95% KM USL	1.046

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	0.468	SD	0.467
95% UTL95% Coverage	2.869	95% UPL (t)	1.696
90% Percentile (z)	1.066	95% Percentile (z)	1.235
99% Percentile (z)	1.554	95% USL	1.15

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	8.229	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.0996	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	32.92	nu star (bias corrected)	N/A

MLE Mean (bias corrected)	N/A		
MLE Sd (bias corrected)	N/A	95% Percentile of Chisquare (2kstar)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.52	SD (KM)	0.359
Variance (KM)	0.129	SE of Mean (KM)	0.254
k hat (KM)	2.093	k star (KM)	0.69
nu hat (KM)	16.74	nu star (KM)	5.519
theta hat (KM)	0.248	theta star (KM)	0.754
80% gamma percentile (KM)	0.855	90% gamma percentile (KM)	1.31
95% gamma percentile (KM)	1.779	99% gamma percentile (KM)	2.901

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	4.709	5.586	95% Approx. Gamma UPL	1.862	1.961
95% KM Gamma Percentile	1.175	1.19	95% Gamma USL	1.07	1.077

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	0.472	Mean in Log Scale	-1.171
SD in Original Scale	0.462	SD in Log Scale	1.091
95% UTL95% Coverage	84.75	95% BCA UTL95% Coverage	N/A
95% Bootstrap (%) UTL95% Coverage	N/A	95% UPL (t)	5.468
90% Percentile (z)	1.255	95% Percentile (z)	1.865
99% Percentile (z)	3.921	95% USL	1.528

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	-0.887	95% KM UTL (Lognormal)95% Coverage	13.29
KM SD of Logged Data	0.675	95% KM UPL (Lognormal)	2.435
95% KM Percentile Lognormal (z)	1.251	95% KM USL (Lognormal)	1.106

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	0.468	Mean in Log Scale	-1.212
SD in Original Scale	0.467	SD in Log Scale	1.137
95% UTL95% Coverage	103.3	95% UPL (t)	5.93
90% Percentile (z)	1.278	95% Percentile (z)	1.932
99% Percentile (z)	4.193	95% USL	1.57

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	4	95% UTL with95% Coverage	1.1
Approx, f used to compute achieved CC	0.211	Approximate Actual Confidence Coefficient achieved by UTL	0.185
Approximate Sample Size needed to achieve specified CC	59	95% UPL	1.1
95% USL	1.1	95% KM Chebyshev UPL	2.272

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.

Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers

and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

2,3,7,8-TCDF (ss)

General Statistics

Total Number of Observations	10	Number of Distinct Observations	10
		Number of Missing Observations	10
Minimum	0.56	First Quartile	0.638
Second Largest	4.2	Median	1.65
Maximum	4.6	Third Quartile	3.325
Mean	2.112	SD	1.588
Coefficient of Variation	0.752	Skewness	0.483
Mean of logged Data	0.438	SD of logged Data	0.867

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.911	d2max (for USL)	2.176

Normal GOF Test

Shapiro Wilk Test Statistic	0.862	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.199	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with 95% Coverage	6.733	90% Percentile (z)	4.146
95% UPL (t)	5.164	95% Percentile (z)	4.723
95% USL	5.567	99% Percentile (z)	5.805

Gamma GOF Test

A-D Test Statistic	0.573	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.737	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.207	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.27	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.764	k star (bias corrected MLE)	1.302
Theta hat (MLE)	1.197	Theta star (bias corrected MLE)	1.622
nu hat (MLE)	35.29	nu star (bias corrected)	26.03
MLE Mean (bias corrected)	2.112	MLE Sd (bias corrected)	1.851

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	6.383	90% Percentile	4.556
95% Hawkins Wixley (HW) Approx. Gamma UPL	6.695	95% Percentile	5.771
95% WH Approx. Gamma UTL with 95% Coverage	10.52	99% Percentile	8.54
95% HW Approx. Gamma UTL with 95% Coverage	11.71		
95% WH USL	7.316	95% HW USL	7.786

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.865	**Shapiro Wilk Lognormal GOF Test**

5% Shapiro Wilk Critical Value	0.842	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.188	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.262	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	19.32	90% Percentile (z)	4.705
	95% UPL (t)	8.202	95% Percentile (z)	6.447
	95% USL	10.22	99% Percentile (z)	11.64

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		10	95% UTL with	95% Coverage	4.6
Approx, f used to compute achieved CC		0.526	Approximate Actual Confidence Coefficient achieved by UTL		0.401
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	4.6	95% BCA Bootstrap UTL with	95% Coverage	4.6
	95% UPL	4.6		90% Percentile	4.24
	90% Chebyshev UPL	7.107		95% Percentile	4.42
	95% Chebyshev UPL	9.37		99% Percentile	4.564
	95% USL	4.6			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:30:48 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

1,2,3,7,8-PeCDF

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	13	14	4	10	71.43%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	10	1.5	1.7	1.63	1.6	0.0675
Statistics (Non-Detects Only)	4	1.6	3.5	2.4	2.25	0.845
Statistics (All: NDs treated as DL value)	14	1.5	3.5	1.85	1.65	0.546
Statistics (All: NDs treated as DL/2 value)	14	0.75	3.5	1.268	0.85	0.847
Statistics (Normal ROS Imputed Data)	14	-2.142	3.5	0.296	-0.163	1.612
Statistics (Gamma ROS Imputed Data)	14	0.01	3.5	0.806	0.106	1.148
Statistics (Lognormal ROS Imputed Data)	14	0.348	3.5	1.196	0.792	0.912

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	11.17	2.959	0.215	0.83	0.346	0.417
Statistics (NDs = DL)	17.05	13.45	0.108	0.586	0.234	0.399
Statistics (NDs = DL/2)	3.563	2.847	0.356	0.0905	0.514	5.684
Statistics (Gamma ROS Estimates)	0.336	0.312	2.4	-2.229	2.554	-1.146
Statistics (Lognormal ROS Estimates)	--	--	--	-0.0439	0.669	-15.26

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.976	0.745	0.802	0.982

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.946	0.748	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.577	0.874	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.652	0.874	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.96	0.874	Data Appear Normal
Lilliefors (Detects Only)	0.223	0.375	Data Appear Normal
Lilliefors (NDs = DL)	0.394	0.226	Data Not Normal
Lilliefors (NDs = DL/2)	0.403	0.226	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.15	0.226	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.995	0.805	0.907	0.96

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.252	0.657	
Kolmogorov-Smirnov (Detects Only)	0.242	0.395	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	2.402	0.734	

Kolmogorov-Smirnov (NDs = DL)	0.389	0.228	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	2.16	0.741	
Kolmogorov-Smirnov (NDs = DL/2)	0.414	0.23	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	1.255	0.825	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.323	0.247	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.989	0.786	0.837	0.982

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.97	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.637	0.874	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.698	0.874	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.959	0.874	Data Appear Lognormal
Lilliefors (Detects Only)	0.207	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.379	0.226	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.403	0.226	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.15	0.226	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:28:46 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

1,2,3,7,8-PeCDF

General Statistics

Total Number of Observations	14	Number of Missing Observations	13
Number of Distinct Observations	7		
Number of Detects	4	Number of Non-Detects	10
Number of Distinct Detects	4	Number of Distinct Non-Detects	4
Minimum Detect	1.6	Minimum Non-Detect	1.5
Maximum Detect	3.5	Maximum Non-Detect	1.7
Variance Detected	0.713	Percent Non-Detects	71.43%
Mean Detected	2.4	SD Detected	0.845
Mean of Detected Logged Data	0.83	SD of Detected Logged Data	0.346

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.614	d2max (for USL)	2.372

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.946	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.223	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	1.761	KM SD	0.563
95% UTL95% Coverage	3.232	95% KM UPL (t)	2.792
90% KM Percentile (z)	2.482	95% KM Percentile (z)	2.687
99% KM Percentile (z)	3.07	95% KM USL	3.095

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	1.268	SD	0.847
95% UTL95% Coverage	3.482	95% UPL (t)	2.821
90% Percentile (z)	2.353	95% Percentile (z)	2.661
99% Percentile (z)	3.238	95% USL	3.277

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.252	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.657	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.242	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.395	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	11.17	k star (bias corrected MLE)	2.959
Theta hat (MLE)	0.215	Theta star (bias corrected MLE)	0.811
nu hat (MLE)	89.35	nu star (bias corrected)	23.67
MLE Mean (bias corrected)	2.4		
MLE Sd (bias corrected)	1.395	95% Percentile of Chisquare (2kstar)	12.47

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.806
Maximum	3.5	Median	0.106
SD	1.148	CV	1.423
k hat (MLE)	0.336	k star (bias corrected MLE)	0.312
Theta hat (MLE)	2.4	Theta star (bias corrected MLE)	2.588
nu hat (MLE)	9.409	nu star (bias corrected)	8.726
MLE Mean (bias corrected)	0.806	MLE Sd (bias corrected)	1.445
95% Percentile of Chisquare (2kstar)	2.816	90% Percentile	2.367
95% Percentile	3.644	99% Percentile	6.947

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	7.767	10.25	95% Approx. Gamma UPL	3.979	4.554
95% Gamma USL	6.41	8.108			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.761	SD (KM)	0.563
Variance (KM)	0.316	SE of Mean (KM)	0.174
k hat (KM)	9.802	k star (KM)	7.749
nu hat (KM)	274.5	nu star (KM)	217
theta hat (KM)	0.18	theta star (KM)	0.227
80% gamma percentile (KM)	2.26	90% gamma percentile (KM)	2.605
95% gamma percentile (KM)	2.914	99% gamma percentile (KM)	3.556

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	3.241	3.244	95% Approx. Gamma UPL	2.718	2.708
95% KM Gamma Percentile	2.601	2.59	95% Gamma USL	3.072	3.07

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.207	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	1.196	Mean in Log Scale	-0.0439
SD in Original Scale	0.912	SD in Log Scale	0.669

95% UTL95% Coverage	5.502	95% BCA UTL95% Coverage	3.5
95% Bootstrap (%) UTL95% Coverage	3.5	95% UPL (t)	3.263
90% Percentile (z)	2.256	95% Percentile (z)	2.877
99% Percentile (z)	4.539	95% USL	4.679

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	0.529	95% KM UTL (Lognormal)95% Coverage	3.255
KM SD of Logged Data	0.249	95% KM UPL (Lognormal)	2.68
95% KM Percentile Lognormal (z)	2.557	95% KM USL (Lognormal)	3.065

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	1.268	Mean in Log Scale	0.0905
SD in Original Scale	0.847	SD in Log Scale	0.514
95% UTL95% Coverage	4.199	95% UPL (t)	2.81
90% Percentile (z)	2.116	95% Percentile (z)	2.551
99% Percentile (z)	3.621	95% USL	3.707

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	14	95% UTL with95% Coverage	3.5
Approx, f used to compute achieved CC	0.737	Approximate Actual Confidence Coefficient achieved by UTL	0.512
Approximate Sample Size needed to achieve specified CC	59	95% UPL	3.5
95% USL	3.5	95% KM Chebyshev UPL	4.299

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:38:18 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

2,3,4,7,8-PeCDF

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	13	14	7	7	50.00%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	7	0.81	0.9	0.861	0.86	0.0324
Statistics (Non-Detects Only)	7	0.98	6.9	3.197	3.4	2.022
Statistics (All: NDs treated as DL value)	14	0.81	6.9	2.029	0.94	1.832
Statistics (All: NDs treated as DL/2 value)	14	0.405	6.9	1.814	0.715	1.987
Statistics (Normal ROS Imputed Data)	14	-3.763	6.9	0.298	-0.3	3.335
Statistics (Gamma ROS Imputed Data)	14	0.01	6.9	1.604	0.495	2.15
Statistics (Lognormal ROS Imputed Data)	14	0.271	6.9	1.801	0.767	1.998

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	2.889	1.746	1.107	0.979	0.673	0.688
Statistics (NDs = DL)	1.856	1.506	1.093	0.415	0.744	1.793
Statistics (NDs = DL/2)	1.085	0.9	1.673	0.0682	1.051	15.41
Statistics (Gamma ROS Estimates)	0.302	0.285	5.318	-1.813	2.934	-1.618
Statistics (Lognormal ROS Estimates)	--	--	--	0.0276	1.097	39.74

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.953	0.844	0.868	0.947

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.911	0.803	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.717	0.874	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.755	0.874	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.887	0.874	Data Appear Normal
Lilliefors (Detects Only)	0.199	0.304	Data Appear Normal
Lilliefors (NDs = DL)	0.288	0.226	Data Not Normal
Lilliefors (NDs = DL/2)	0.254	0.226	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.234	0.226	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.981	0.958	0.98	0.949

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.284	0.713	
Kolmogorov-Smirnov (Detects Only)	0.207	0.314	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.449	0.747	

Kolmogorov-Smirnov (NDs = DL)	0.306	0.232	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.158	0.758	
Kolmogorov-Smirnov (NDs = DL/2)	0.298	0.235	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	1.432	0.832	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.332	0.248	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.978	0.897	0.917	0.943

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.953	0.803	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.793	0.874	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.82	0.874	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.873	0.874	Data Not Lognormal
Lilliefors (Detects Only)	0.213	0.304	Data Appear Lognormal
Lilliefors (NDs = DL)	0.292	0.226	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.295	0.226	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.233	0.226	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:37:15 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

2,3,4,7,8-PeCDF

General Statistics

Total Number of Observations	14	Number of Missing Observations	13
Number of Distinct Observations	13		
Number of Detects	7	Number of Non-Detects	7
Number of Distinct Detects	7	Number of Distinct Non-Detects	6
Minimum Detect	0.98	Minimum Non-Detect	0.81
Maximum Detect	6.9	Maximum Non-Detect	0.9
Variance Detected	4.088	Percent Non-Detects	50%
Mean Detected	3.197	SD Detected	2.022
Mean of Detected Logged Data	0.979	SD of Detected Logged Data	0.673

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.614	d2max (for USL)	2.372

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.911	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.199	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	2.004	KM SD	1.782
95% UTL95% Coverage	6.663	95% KM UPL (t)	5.271
90% KM Percentile (z)	4.288	95% KM Percentile (z)	4.935
99% KM Percentile (z)	6.15	95% KM USL	6.231

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	1.814	SD	1.987
95% UTL95% Coverage	7.007	95% UPL (t)	5.456
90% Percentile (z)	4.36	95% Percentile (z)	5.082
99% Percentile (z)	6.436	95% USL	6.526

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.284	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.713	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.207	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.314	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.889	k star (bias corrected MLE)	1.746
Theta hat (MLE)	1.107	Theta star (bias corrected MLE)	1.831
nu hat (MLE)	40.44	nu star (bias corrected)	24.44
MLE Mean (bias corrected)	3.197		
MLE Sd (bias corrected)	2.42	95% Percentile of Chisquare (2kstar)	8.651

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.604
Maximum	6.9	Median	0.495
SD	2.15	CV	1.341
k hat (MLE)	0.302	k star (bias corrected MLE)	0.285
Theta hat (MLE)	5.318	Theta star (bias corrected MLE)	5.636
nu hat (MLE)	8.442	nu star (bias corrected)	7.967
MLE Mean (bias corrected)	1.604	MLE Sd (bias corrected)	3.006
95% Percentile of Chisquare (2kstar)	2.647	90% Percentile	4.758
95% Percentile	7.46	99% Percentile	14.53

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	16.31	22.71	95% Approx. Gamma UPL	8.266	9.843
95% Gamma USL	13.42	17.84			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.004	SD (KM)	1.782
Variance (KM)	3.177	SE of Mean (KM)	0.515
k hat (KM)	1.264	k star (KM)	1.041
nu hat (KM)	35.38	nu star (KM)	29.13
theta hat (KM)	1.585	theta star (KM)	1.926
80% gamma percentile (KM)	3.214	90% gamma percentile (KM)	4.568
95% gamma percentile (KM)	5.919	99% gamma percentile (KM)	9.045

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	8.024	8.39	95% Approx. Gamma UPL	5.402	5.455
95% KM Gamma Percentile	4.87	4.882	95% Gamma USL	7.136	7.377

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.213	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	1.801	Mean in Log Scale	0.0276
SD in Original Scale	1.998	SD in Log Scale	1.097

95% UTL95% Coverage	18.11	95% BCA UTL95% Coverage	6.9
95% Bootstrap (%) UTL95% Coverage	6.9	95% UPL (t)	7.686
90% Percentile (z)	4.196	95% Percentile (z)	6.252
99% Percentile (z)	13.21	95% USL	13.88

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	0.384	95% KM UTL (Lognormal)95% Coverage	10.18
KM SD of Logged Data	0.741	95% KM UPL (Lognormal)	5.707
95% KM Percentile Lognormal (z)	4.965	95% KM USL (Lognormal)	8.504

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	1.814	Mean in Log Scale	0.0682
SD in Original Scale	1.987	SD in Log Scale	1.051
95% UTL95% Coverage	16.69	95% UPL (t)	7.346
90% Percentile (z)	4.115	95% Percentile (z)	6.028
99% Percentile (z)	12.33	95% USL	12.94

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	14	95% UTL with95% Coverage	6.9
Approx, f used to compute achieved CC	0.737	Approximate Actual Confidence Coefficient achieved by UTL	0.512
Approximate Sample Size needed to achieve specified CC	59	95% UPL	6.9
95% USL	6.9	95% KM Chebyshev UPL	10.05

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:10:04 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

1,2,3,4,7,8-HxCDD

General Statistics

Total Number of Observations	14	Number of Missing Observations	13
Number of Distinct Observations	4		
Number of Detects	2	Number of Non-Detects	12
Number of Distinct Detects	2	Number of Distinct Non-Detects	3
Minimum Detect	1.5	Minimum Non-Detect	1.3
Maximum Detect	4.5	Maximum Non-Detect	1.5
Variance Detected	4.5	Percent Non-Detects	85.71%
Mean Detected	3	SD Detected	2.121
Mean of Detected Logged Data	0.955	SD of Detected Logged Data	0.777

Warning: Data set has only 2 Detected Values.

This is not enough to compute meaningful or reliable statistics and estimates.

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.614	d2max (for USL)	2.372

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	1.543	KM SD	0.822
95% UTL95% Coverage	3.691	95% KM UPL (t)	3.049
90% KM Percentile (z)	2.596	95% KM Percentile (z)	2.895
99% KM Percentile (z)	3.455	95% KM USL	3.492

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	1.036	SD	1.02
95% UTL95% Coverage	3.701	95% UPL (t)	2.905
90% Percentile (z)	2.342	95% Percentile (z)	2.713
99% Percentile (z)	3.407	95% USL	3.454

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	3.634	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.825	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	14.54	nu star (bias corrected)	N/A

MLE Mean (bias corrected)	N/A		
MLE Sd (bias corrected)	N/A	95% Percentile of Chisquare (2kstar)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.543	SD (KM)	0.822
Variance (KM)	0.675	SE of Mean (KM)	0.311
k hat (KM)	3.525	k star (KM)	2.817
nu hat (KM)	98.7	nu star (KM)	78.88
theta hat (KM)	0.438	theta star (KM)	0.548
80% gamma percentile (KM)	2.217	90% gamma percentile (KM)	2.775
95% gamma percentile (KM)	3.297	99% gamma percentile (KM)	4.433

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	3.449	3.414	95% Approx. Gamma UPL	2.736	2.696
95% KM Gamma Percentile	2.58	2.541	95% Gamma USL	3.216	3.177

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	0.468	Mean in Log Scale	-3.511
SD in Original Scale	1.225	SD in Log Scale	2.535
95% UTL95% Coverage	22.57	95% BCA UTL95% Coverage	4.5
95% Bootstrap (%) UTL95% Coverage	4.5	95% UPL (t)	3.117
90% Percentile (z)	0.77	95% Percentile (z)	1.934
99% Percentile (z)	10.88	95% USL	12.21

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	0.361	95% KM UTL (Lognormal)95% Coverage	3.305
KM SD of Logged Data	0.319	95% KM UPL (Lognormal)	2.576
95% KM Percentile Lognormal (z)	2.426	95% KM USL (Lognormal)	3.059

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	1.036	Mean in Log Scale	-0.16
SD in Original Scale	1.02	SD in Log Scale	0.52
95% UTL95% Coverage	3.322	95% UPL (t)	2.212
90% Percentile (z)	1.66	95% Percentile (z)	2.006
99% Percentile (z)	2.86	95% USL	2.928

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	14	95% UTL with95% Coverage	4.5
Approx, f used to compute achieved CC	0.737	Approximate Actual Confidence Coefficient achieved by UTL	0.512
Approximate Sample Size needed to achieve specified CC	59	95% UPL	4.5
95% USL	4.5	95% KM Chebyshev UPL	5.251

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.

Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers

and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:19:07 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

1,2,3,4,7,8-HxCDF

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	13	14	4	10	71.43%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	10	1.4	1.6	1.53	1.5	0.0675
Statistics (Non-Detects Only)	4	2.3	5.5	3.45	3	1.408
Statistics (All: NDs treated as DL value)	14	1.4	5.5	2.079	1.6	1.127
Statistics (All: NDs treated as DL/2 value)	14	0.7	5.5	1.532	0.8	1.429
Statistics (Normal ROS Imputed Data)	14	-5.053	5.5	-0.584	-1.132	3.109
Statistics (Gamma ROS Imputed Data)	14	0.01	5.5	1.042	0.01	1.724
Statistics (Lognormal ROS Imputed Data)	14	0.331	5.5	1.549	0.953	1.45

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	9.266	2.483	0.372	1.183	0.37	0.313
Statistics (NDs = DL)	5.691	4.519	0.365	0.641	0.4	0.623
Statistics (NDs = DL/2)	1.932	1.566	0.793	0.146	0.705	4.821
Statistics (Gamma ROS Estimates)	0.28	0.268	3.718	-2.446	2.694	-1.101
Statistics (Lognormal ROS Estimates)	--	--	--	0.0979	0.836	8.539

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.908	0.773	0.792	0.984

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.838	0.748	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.617	0.874	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.639	0.874	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.961	0.874	Data Appear Normal
Lilliefors (Detects Only)	0.348	0.375	Data Appear Normal
Lilliefors (NDs = DL)	0.379	0.226	Data Not Normal
Lilliefors (NDs = DL/2)	0.41	0.226	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.114	0.226	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.957	0.866	0.926	0.961

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.422	0.657	
Kolmogorov-Smirnov (Detects Only)	0.333	0.395	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.985	0.738	

Kolmogorov-Smirnov (NDs = DL)	0.39	0.229	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	2.296	0.747	
Kolmogorov-Smirnov (NDs = DL/2)	0.428	0.232	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	1.653	0.841	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.36	0.249	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.944	0.835	0.829	0.985

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.905	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.707	0.874	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.684	0.874	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.962	0.874	Data Appear Lognormal
Lilliefors (Detects Only)	0.306	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.38	0.226	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.414	0.226	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.114	0.226	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:17:27 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

1,2,3,4,7,8-HxCDF

General Statistics

Total Number of Observations	14	Number of Missing Observations	13
Number of Distinct Observations	7		
Number of Detects	4	Number of Non-Detects	10
Number of Distinct Detects	4	Number of Distinct Non-Detects	3
Minimum Detect	2.3	Minimum Non-Detect	1.4
Maximum Detect	5.5	Maximum Non-Detect	1.6
Variance Detected	1.983	Percent Non-Detects	71.43%
Mean Detected	3.45	SD Detected	1.408
Mean of Detected Logged Data	1.183	SD of Detected Logged Data	0.37

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.614	d2max (for USL)	2.372

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.838	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.348	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	1.986	KM SD	1.133
95% UTL95% Coverage	4.946	95% KM UPL (t)	4.062
90% KM Percentile (z)	3.437	95% KM Percentile (z)	3.849
99% KM Percentile (z)	4.62	95% KM USL	4.672

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	1.532	SD	1.429
95% UTL95% Coverage	5.268	95% UPL (t)	4.152
90% Percentile (z)	3.364	95% Percentile (z)	3.883
99% Percentile (z)	4.857	95% USL	4.922

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.422	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.657	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.333	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.395	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	9.266	k star (bias corrected MLE)	2.483
Theta hat (MLE)	0.372	Theta star (bias corrected MLE)	1.389
nu hat (MLE)	74.13	nu star (bias corrected)	19.86
MLE Mean (bias corrected)	3.45		
MLE Sd (bias corrected)	2.189	95% Percentile of Chisquare (2kstar)	11.02

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.042
Maximum	5.5	Median	0.01
SD	1.724	CV	1.654
k hat (MLE)	0.28	k star (bias corrected MLE)	0.268
Theta hat (MLE)	3.718	Theta star (bias corrected MLE)	3.891
nu hat (MLE)	7.848	nu star (bias corrected)	7.499
MLE Mean (bias corrected)	1.042	MLE Sd (bias corrected)	2.014
95% Percentile of Chisquare (2kstar)	2.539	90% Percentile	3.111
95% Percentile	4.94	99% Percentile	9.765

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	10.4	13.41	95% Approx. Gamma UPL	5.133	5.681
95% Gamma USL	8.5	10.47			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.986	SD (KM)	1.133
Variance (KM)	1.283	SE of Mean (KM)	0.35
k hat (KM)	3.074	k star (KM)	2.463
nu hat (KM)	86.08	nu star (KM)	68.96
theta hat (KM)	0.646	theta star (KM)	0.806
80% gamma percentile (KM)	2.9	90% gamma percentile (KM)	3.681
95% gamma percentile (KM)	4.416	99% gamma percentile (KM)	6.029

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	5.121	5.164	95% Approx. Gamma UPL	3.906	3.889
95% KM Gamma Percentile	3.645	3.621	95% Gamma USL	4.72	4.739

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.905	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.306	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	1.549	Mean in Log Scale	0.0979
SD in Original Scale	1.45	SD in Log Scale	0.836

95% UTL95% Coverage	9.806	95% BCA UTL95% Coverage	5.5
95% Bootstrap (%) UTL95% Coverage	5.5	95% UPL (t)	5.105
90% Percentile (z)	3.219	95% Percentile (z)	4.362
99% Percentile (z)	7.71	95% USL	8.008

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	0.578	95% KM UTL (Lognormal)95% Coverage	5.336
KM SD of Logged Data	0.419	95% KM UPL (Lognormal)	3.846
95% KM Percentile Lognormal (z)	3.554	95% KM USL (Lognormal)	4.82

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	1.532	Mean in Log Scale	0.146
SD in Original Scale	1.429	SD in Log Scale	0.705
95% UTL95% Coverage	7.302	95% UPL (t)	4.212
90% Percentile (z)	2.855	95% Percentile (z)	3.688
99% Percentile (z)	5.962	95% USL	6.155

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	14	95% UTL with95% Coverage	5.5
Approx, f used to compute achieved CC	0.737	Approximate Actual Confidence Coefficient achieved by UTL	0.512
Approximate Sample Size needed to achieve specified CC	59	95% UPL	5.5
95% USL	5.5	95% KM Chebyshev UPL	7.096

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:25:43 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

1,2,3,6,7,8-HxCDF

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	13	14	4	10	71.43%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	10	1.7	1.9	1.835	1.825	0.0669
Statistics (Non-Detects Only)	4	2.3	3.5	2.75	2.6	0.526
Statistics (All: NDs treated as DL value)	14	1.7	3.5	2.096	1.9	0.501
Statistics (All: NDs treated as DL/2 value)	14	0.85	3.5	1.441	0.95	0.896
Statistics (Normal ROS Imputed Data)	14	-0.355	3.5	1.209	0.906	1.163
Statistics (Gamma ROS Imputed Data)	14	0.01	3.5	1.336	1.02	1.052
Statistics (Lognormal ROS Imputed Data)	14	0.919	3.5	1.719	1.427	0.758

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	39.24	9.976	0.0701	0.999	0.182	0.182
Statistics (NDs = DL)	23.21	18.29	0.0903	0.719	0.206	0.287
Statistics (NDs = DL/2)	3.681	2.94	0.392	0.223	0.517	2.315
Statistics (Gamma ROS Estimates)	0.82	0.692	1.629	-0.432	1.861	-4.306
Statistics (Lognormal ROS Estimates)	--	--	--	0.461	0.406	0.879

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.938	0.834	0.819	0.974

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.887	0.748	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.71	0.874	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.669	0.874	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.941	0.874	Data Appear Normal
Lilliefors (Detects Only)	0.288	0.375	Data Appear Normal
Lilliefors (NDs = DL)	0.367	0.226	Data Not Normal
Lilliefors (NDs = DL/2)	0.422	0.226	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.175	0.226	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.962	0.878	0.903	0.954

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.356	0.656	
Kolmogorov-Smirnov (Detects Only)	0.274	0.394	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.582	0.734	

Kolmogorov-Smirnov (NDs = DL)	0.368	0.228	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	2.372	0.741	
Kolmogorov-Smirnov (NDs = DL/2)	0.429	0.23	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.843	0.768	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.237	0.237	Detected Data appear Approximate Gamma Distri

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.955	0.867	0.829	0.975

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.919	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.761	0.874	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.679	0.874	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.941	0.874	Data Appear Lognormal
Lilliefors (Detects Only)	0.262	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.36	0.226	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.417	0.226	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.175	0.226	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:23:48 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

1,2,3,6,7,8-HxCDF

General Statistics

Total Number of Observations	14	Number of Missing Observations	13
Number of Distinct Observations	8		
Number of Detects	4	Number of Non-Detects	10
Number of Distinct Detects	4	Number of Distinct Non-Detects	4
Minimum Detect	2.3	Minimum Non-Detect	1.7
Maximum Detect	3.5	Maximum Non-Detect	1.9
Variance Detected	0.277	Percent Non-Detects	71.43%
Mean Detected	2.75	SD Detected	0.526
Mean of Detected Logged Data	0.999	SD of Detected Logged Data	0.182

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.614	d2max (for USL)	2.372

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.887	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.288	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	2	KM SD	0.533
95% UTL95% Coverage	3.394	95% KM UPL (t)	2.977
90% KM Percentile (z)	2.683	95% KM Percentile (z)	2.877
99% KM Percentile (z)	3.24	95% KM USL	3.265

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	1.441	SD	0.896
95% UTL95% Coverage	3.783	95% UPL (t)	3.083
90% Percentile (z)	2.589	95% Percentile (z)	2.915
99% Percentile (z)	3.525	95% USL	3.566

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.356	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.656	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.274	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.394	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	39.24	k star (bias corrected MLE)	9.976
Theta hat (MLE)	0.0701	Theta star (bias corrected MLE)	0.276
nu hat (MLE)	313.9	nu star (bias corrected)	79.81
MLE Mean (bias corrected)	2.75		
MLE Sd (bias corrected)	0.871	95% Percentile of Chisquare (2kstar)	31.35

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.336
Maximum	3.5	Median	1.02
SD	1.052	CV	0.788
k hat (MLE)	0.82	k star (bias corrected MLE)	0.692
Theta hat (MLE)	1.629	Theta star (bias corrected MLE)	1.931
nu hat (MLE)	22.96	nu star (bias corrected)	19.37
MLE Mean (bias corrected)	1.336	MLE Sd (bias corrected)	1.606
95% Percentile of Chisquare (2kstar)	4.729	90% Percentile	3.362
95% Percentile	4.566	99% Percentile	7.442

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	8.117	10.62	95% Approx. Gamma UPL	4.946	5.862
95% Gamma USL	7.02	8.913			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2	SD (KM)	0.533
Variance (KM)	0.284	SE of Mean (KM)	0.165
k hat (KM)	14.07	k star (KM)	11.1
nu hat (KM)	394	nu star (KM)	310.9
theta hat (KM)	0.142	theta star (KM)	0.18
80% gamma percentile (KM)	2.48	90% gamma percentile (KM)	2.797
95% gamma percentile (KM)	3.079	99% gamma percentile (KM)	3.654

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	3.467	3.48	95% Approx. Gamma UPL	2.957	2.955
95% KM Gamma Percentile	2.842	2.838	95% Gamma USL	3.303	3.31

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.919	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.262	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	1.719	Mean in Log Scale	0.461
SD in Original Scale	0.758	SD in Log Scale	0.406

95% UTL95% Coverage	4.579	95% BCA UTL95% Coverage	3.5
95% Bootstrap (%) UTL95% Coverage	3.5	95% UPL (t)	3.336
90% Percentile (z)	2.667	95% Percentile (z)	3.091
99% Percentile (z)	4.075	95% USL	4.15

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	0.664	95% KM UTL (Lognormal)95% Coverage	3.523
KM SD of Logged Data	0.228	95% KM UPL (Lognormal)	2.949
95% KM Percentile Lognormal (z)	2.826	95% KM USL (Lognormal)	3.334

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	1.441	Mean in Log Scale	0.223
SD in Original Scale	0.896	SD in Log Scale	0.517
95% UTL95% Coverage	4.833	95% UPL (t)	3.227
90% Percentile (z)	2.426	95% Percentile (z)	2.928
99% Percentile (z)	4.165	95% USL	4.264

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	14	95% UTL with95% Coverage	3.5
Approx, f used to compute achieved CC	0.737	Approximate Actual Confidence Coefficient achieved by UTL	0.512
Approximate Sample Size needed to achieve specified CC	59	95% UPL	3.5
95% USL	3.5	95% KM Chebyshev UPL	4.406

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:34:33 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

2,3,4,6,7,8-HxCDF

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	13	14	6	8	57.14%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	8	0.87	0.96	0.926	0.933	0.0322
Statistics (Non-Detects Only)	6	1	3.9	2.517	2.45	1.175
Statistics (All: NDs treated as DL value)	14	0.87	3.9	1.608	0.958	1.095
Statistics (All: NDs treated as DL/2 value)	14	0.435	3.9	1.343	0.479	1.282
Statistics (Normal ROS Imputed Data)	14	-1.095	3.9	0.453	-1.095	1.993
Statistics (Gamma ROS Imputed Data)	14	0.01	3.9	1.084	0.01	1.479
Statistics (Lognormal ROS Imputed Data)	14	0.466	3.9	1.345	0.466	1.281

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	4.816	2.519	0.523	0.816	0.532	0.652
Statistics (NDs = DL)	3.107	2.489	0.517	0.305	0.565	1.851
Statistics (NDs = DL/2)	1.44	1.179	0.933	-0.0907	0.879	-9.697
Statistics (Gamma ROS Estimates)	0.293	0.278	3.701	-2.282	2.803	-1.228
Statistics (Lognormal ROS Estimates)	--	--	--	-0.0865	0.875	-10.11

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.969	0.837	0.862	0.88

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.919	0.788	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.692	0.874	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.73	0.874	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.753	0.874	Data Not Normal
Lilliefors (Detects Only)	0.196	0.325	Data Appear Normal
Lilliefors (NDs = DL)	0.353	0.226	Data Not Normal
Lilliefors (NDs = DL/2)	0.321	0.226	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.353	0.226	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.943	0.92	0.948	0.89

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.31	0.698	
Kolmogorov-Smirnov (Detects Only)	0.202	0.333	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.847	0.742	

Kolmogorov-Smirnov (NDs = DL)	0.362	0.23	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.556	0.752	
Kolmogorov-Smirnov (NDs = DL/2)	0.347	0.233	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	1.835	0.835	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.375	0.248	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.965	0.866	0.888	0.875

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.918	0.788	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.736	0.874	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.766	0.874	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.743	0.874	Data Not Lognormal
Lilliefors (Detects Only)	0.212	0.325	Data Appear Lognormal
Lilliefors (NDs = DL)	0.348	0.226	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.339	0.226	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.352	0.226	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:33:09 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

2,3,4,6,7,8-HxCDF

General Statistics

Total Number of Observations	14	Number of Missing Observations	13
Number of Distinct Observations	14		
Number of Detects	6	Number of Non-Detects	8
Number of Distinct Detects	6	Number of Distinct Non-Detects	8
Minimum Detect	1	Minimum Non-Detect	0.87
Maximum Detect	3.9	Maximum Non-Detect	0.96
Variance Detected	1.382	Percent Non-Detects	57.14%
Mean Detected	2.517	SD Detected	1.175
Mean of Detected Logged Data	0.816	SD of Detected Logged Data	0.532

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.614	d2max (for USL)	2.372

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.919	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.196	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	1.576	KM SD	1.076
95% UTL95% Coverage	4.388	95% KM UPL (t)	3.548
90% KM Percentile (z)	2.954	95% KM Percentile (z)	3.345
99% KM Percentile (z)	4.079	95% KM USL	4.127

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	1.343	SD	1.282
95% UTL95% Coverage	4.695	95% UPL (t)	3.693
90% Percentile (z)	2.986	95% Percentile (z)	3.452
99% Percentile (z)	4.326	95% USL	4.384

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.31	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.698	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.202	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.333	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.816	k star (bias corrected MLE)	2.519
Theta hat (MLE)	0.523	Theta star (bias corrected MLE)	0.999
nu hat (MLE)	57.79	nu star (bias corrected)	30.23
MLE Mean (bias corrected)	2.517		
MLE Sd (bias corrected)	1.586	95% Percentile of Chisquare (2kstar)	11.13

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.084
Maximum	3.9	Median	0.01
SD	1.479	CV	1.364
k hat (MLE)	0.293	k star (bias corrected MLE)	0.278
Theta hat (MLE)	3.701	Theta star (bias corrected MLE)	3.903
nu hat (MLE)	8.203	nu star (bias corrected)	7.778
MLE Mean (bias corrected)	1.084	MLE Sd (bias corrected)	2.057
95% Percentile of Chisquare (2kstar)	2.604	90% Percentile	3.225
95% Percentile	5.082	99% Percentile	9.956

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	11.13	15.07	95% Approx. Gamma UPL	5.568	6.452
95% Gamma USL	9.125	11.8			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.576	SD (KM)	1.076
Variance (KM)	1.157	SE of Mean (KM)	0.315
k hat (KM)	2.145	k star (KM)	1.733
nu hat (KM)	60.06	nu star (KM)	48.52
theta hat (KM)	0.735	theta star (KM)	0.909
80% gamma percentile (KM)	2.399	90% gamma percentile (KM)	3.171
95% gamma percentile (KM)	3.913	99% gamma percentile (KM)	5.575

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	5.047	5.192	95% Approx. Gamma UPL	3.624	3.643
95% KM Gamma Percentile	3.326	3.328	95% Gamma USL	4.571	4.667

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.918	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.212	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	1.345	Mean in Log Scale	-0.0865
SD in Original Scale	1.281	SD in Log Scale	0.875

95% UTL95% Coverage	9.037	95% BCA UTL95% Coverage	3.9
95% Bootstrap (%) UTL95% Coverage	3.9	95% UPL (t)	4.562
90% Percentile (z)	2.815	95% Percentile (z)	3.869
99% Percentile (z)	7.026	95% USL	7.31

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	0.27	95% KM UTL (Lognormal)95% Coverage	5.804
KM SD of Logged Data	0.569	95% KM UPL (Lognormal)	3.72
95% KM Percentile Lognormal (z)	3.342	95% KM USL (Lognormal)	5.056

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	1.343	Mean in Log Scale	-0.0907
SD in Original Scale	1.282	SD in Log Scale	0.879
95% UTL95% Coverage	9.09	95% UPL (t)	4.575
90% Percentile (z)	2.818	95% Percentile (z)	3.878
99% Percentile (z)	7.059	95% USL	7.346

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	14	95% UTL with95% Coverage	3.9
Approx, f used to compute achieved CC	0.737	Approximate Actual Confidence Coefficient achieved by UTL	0.512
Approximate Sample Size needed to achieve specified CC	59	95% UPL	3.9
95% USL	3.9	95% KM Chebyshev UPL	6.43

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:00:59 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

1,2,3,4,6,7,8-HpCDD

Raw Statistics

Number of Valid Observations	13
Number of Missing Observations	14
Number of Distinct Observations	13
Minimum	1.9
Maximum	43
Mean of Raw Data	15.64
Standard Deviation of Raw Data	14.41
Khat	1.154
Theta hat	13.55
Kstar	0.939
Theta star	16.65
Mean of Log Transformed Data	2.258
Standard Deviation of Log Transformed Data	1.101

Normal GOF Test Results

Correlation Coefficient R	0.932
Shapiro Wilk Test Statistic	0.851
Shapiro Wilk Critical (0.05) Value	0.866
Approximate Shapiro Wilk P Value	0.038
Lilliefors Test Statistic	0.245
Lilliefors Critical (0.05) Value	0.234

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.96
A-D Test Statistic	0.474
A-D Critical (0.05) Value	0.755
K-S Test Statistic	0.173
K-S Critical(0.05) Value	0.242

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.971
Shapiro Wilk Test Statistic	0.92
Shapiro Wilk Critical (0.05) Value	0.866
Approximate Shapiro Wilk P Value	0.353
Lilliefors Test Statistic	0.143
Lilliefors Critical (0.05) Value	0.234

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 3:59:51 PM
From File	C:\Users\K[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

1,2,3,4,6,7,8-HpCDD

General Statistics

Total Number of Observations	13	Number of Distinct Observations	13
		Number of Missing Observations	14
Minimum	1.9	First Quartile	3.3
Second Largest	35	Median	7.8
Maximum	43	Third Quartile	28
Mean	15.64	SD	14.41
Coefficient of Variation	0.921	Skewness	0.795
Mean of logged Data	2.258	SD of logged Data	1.101

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.671	d2max (for USL)	2.331

Normal GOF Test

Shapiro Wilk Test Statistic	0.851	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.866	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.245	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.234	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	54.13	90% Percentile (z)	34.1
	95% UPL (t)	42.29	95% Percentile (z)	39.34
	95% USL	49.22	99% Percentile (z)	49.16

Gamma GOF Test

A-D Test Statistic	0.474	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.173	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.242	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.154	k star (bias corrected MLE)	0.939
Theta hat (MLE)	13.55	Theta star (bias corrected MLE)	16.65
nu hat (MLE)	30.01	nu star (bias corrected)	24.42
MLE Mean (bias corrected)	15.64	MLE Sd (bias corrected)	16.14

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	52.51	90% Percentile	36.57
95% Hawkins Wixley (HW) Approx. Gamma UPL	55.63	95% Percentile	47.9

95% WH Approx. Gamma UTL with	95% Coverage	85.53	99% Percentile	74.34	
95% HW Approx. Gamma UTL with	95% Coverage	96.66			
	95% WH USL	70.54	95% HW USL	77.59	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.143	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.234	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	181	90% Percentile (z)	39.2	
	95% UPL (t)	73.27	95% Percentile (z)	58.48	
	95% USL	124.4	99% Percentile (z)	123.9	

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		13	95% UTL with	95% Coverage	43
Approx, f used to compute achieved CC		0.684	Approximate Actual Confidence Coefficient achieved by UTL		0.487
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	43	95% BCA Bootstrap UTL with	95% Coverage	43
	95% UPL	43		90% Percentile	34.6
	90% Chebyshev UPL	60.5		95% Percentile	38.2
	95% Chebyshev UPL	80.82		99% Percentile	42.04
	95% USL	43			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:06:39 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

1,2,3,4,6,7,8-HpCDF (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	3	4	1	3	75.00%

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!

It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable 1,2,3,4,6,7,8-HpCDF (sb) was not processed!

1,2,3,4,6,7,8-HpCDF (ss)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	20	10	10	9	1	10.00%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	1	2.3	2.3	2.3	2.3	N/A
Statistics (Non-Detects Only)	9	2.4	25	12.1	13	8.617
Statistics (All: NDs treated as DL value)	10	2.3	25	11.12	9.55	8.696
Statistics (All: NDs treated as DL/2 value)	10	1.15	25	11.01	9.55	8.832
Statistics (Normal ROS Imputed Data)	10	-8.931	25	9.997	9.55	10.5
Statistics (Gamma ROS Imputed Data)	10	0.01	25	10.89	9.55	8.979
Statistics (Lognormal ROS Imputed Data)	10	0.966	25	10.99	9.55	8.855

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.703	1.21	7.104	2.172	0.927	0.427
Statistics (NDs = DL)	1.493	1.112	7.448	2.038	0.971	0.477
Statistics (NDs = DL/2)	1.305	0.98	8.433	1.969	1.085	0.551
Statistics (Gamma ROS Estimates)	0.679	0.542	16.04	1.494	2.314	1.549
Statistics (Lognormal ROS Estimates)	--	--	--	1.951	1.118	0.573

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.96	0.945	0.954	0.978

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.897	0.829	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.869	0.842	Data Appear Normal
Shapiro-Wilk (NDs = DL/2)	0.889	0.842	Data Appear Normal
Shapiro-Wilk (Normal ROS Estimates)	0.954	0.842	Data Appear Normal
Lilliefors (Detects Only)	0.201	0.274	Data Appear Normal
Lilliefors (NDs = DL)	0.218	0.262	Data Appear Normal

Lilliefors (NDs = DL/2)	0.211	0.262	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.148	0.262	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.934	0.938	0.933	0.891

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.521	0.732	
Kolmogorov-Smirnov (Detects Only)	0.209	0.283	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.624	0.739	
Kolmogorov-Smirnov (NDs = DL)	0.207	0.271	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.467	0.743	
Kolmogorov-Smirnov (NDs = DL/2)	0.194	0.272	Data Appear Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.604	0.763	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.21	0.277	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.948	0.944	0.961	0.961

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.872	0.829	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.86	0.842	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.907	0.842	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.909	0.842	Data Appear Lognormal
Lilliefors (Detects Only)	0.22	0.274	Data Appear Lognormal
Lilliefors (NDs = DL)	0.206	0.262	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.209	0.262	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.208	0.262	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:05:37 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

1,2,3,4,6,7,8-HpCDF (sb)

General Statistics

Total Number of Observations	4	Number of Missing Observations	3
Number of Distinct Observations	3		
Number of Detects	1	Number of Non-Detects	3
Number of Distinct Detects	1	Number of Distinct Non-Detects	2
Minimum Detect	3.8	Minimum Non-Detect	2.1
Maximum Detect	3.8	Maximum Non-Detect	2.2
Variance Detected	N/A	Percent Non-Detects	75%
Mean Detected	3.8	SD Detected	N/A
Mean of Detected Logged Data	1.335	SD of Detected Logged Data	N/A

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!

It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable 1,2,3,4,6,7,8-HpCDF (sb) was not processed!

1,2,3,4,6,7,8-HpCDF (ss)

General Statistics

Total Number of Observations	10	Number of Missing Observations	10
Number of Distinct Observations	10		
Number of Detects	9	Number of Non-Detects	1
Number of Distinct Detects	9	Number of Distinct Non-Detects	1
Minimum Detect	2.4	Minimum Non-Detect	2.3
Maximum Detect	25	Maximum Non-Detect	2.3
Variance Detected	74.26	Percent Non-Detects	10%
Mean Detected	12.1	SD Detected	8.617
Mean of Detected Logged Data	2.172	SD of Detected Logged Data	0.927

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.911	d2max (for USL)	2.176

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.897	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.201	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	11.12	KM SD	8.249
95% UTL95% Coverage	35.13	95% KM UPL (t)	26.98
90% KM Percentile (z)	21.69	95% KM Percentile (z)	24.69
99% KM Percentile (z)	30.31	95% KM USL	29.07

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	11.01	SD	8.832
95% UTL95% Coverage	36.71	95% UPL (t)	27.98
90% Percentile (z)	22.32	95% Percentile (z)	25.53
99% Percentile (z)	31.55	95% USL	30.22

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.521	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.732	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.209	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.283	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.703	k star (bias corrected MLE)	1.21
Theta hat (MLE)	7.104	Theta star (bias corrected MLE)	10
nu hat (MLE)	30.66	nu star (bias corrected)	21.77
MLE Mean (bias corrected)	12.1		
MLE Sd (bias corrected)	11	95% Percentile of Chisquare (2kstar)	6.781

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	10.89
Maximum	25	Median	9.55
SD	8.979	CV	0.824
k hat (MLE)	0.679	k star (bias corrected MLE)	0.542
Theta hat (MLE)	16.04	Theta star (bias corrected MLE)	20.09
nu hat (MLE)	13.58	nu star (bias corrected)	10.84
MLE Mean (bias corrected)	10.89	MLE Sd (bias corrected)	14.79
95% Percentile of Chisquare (2kstar)	4.046	90% Percentile	28.97
95% Percentile	40.65	99% Percentile	69.16

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	86.46	122.2	95% Approx. Gamma UPL	46.05	56.78
95% Gamma USL	54.83	70.12			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	11.12	SD (KM)	8.249
Variance (KM)	68.05	SE of Mean (KM)	2.767
k hat (KM)	1.817	k star (KM)	1.339
nu hat (KM)	36.34	nu star (KM)	26.77
theta hat (KM)	6.12	theta star (KM)	8.307

80% gamma percentile (KM)	17.42	90% gamma percentile (KM)	23.83
95% gamma percentile (KM)	30.1	99% gamma percentile (KM)	44.38

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	56.65	63.71	95% Approx. Gamma UPL	33.94	35.8
95% KM Gamma Percentile	28.89	29.95	95% Gamma USL	39.04	41.84

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.872	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.22	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	10.99	Mean in Log Scale	1.951
SD in Original Scale	8.855	SD in Log Scale	1.118
95% UTL95% Coverage	182.5	95% BCA UTL95% Coverage	25
95% Bootstrap (%) UTL95% Coverage	25	95% UPL (t)	60.43
90% Percentile (z)	29.5	95% Percentile (z)	44.29
99% Percentile (z)	94.92	95% USL	80.23

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	2.038	95% KM UTL (Lognormal)95% Coverage	112.2
KM SD of Logged Data	0.921	95% KM UPL (Lognormal)	45.13
95% KM Percentile Lognormal (z)	34.94	95% KM USL (Lognormal)	57

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	11.01	Mean in Log Scale	1.969
SD in Original Scale	8.832	SD in Log Scale	1.085
95% UTL95% Coverage	168.5	95% UPL (t)	57.65
90% Percentile (z)	28.76	95% Percentile (z)	42.65
99% Percentile (z)	89.35	95% USL	75.9

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	10	95% UTL with95% Coverage	25
Approx, f used to compute achieved CC	0.526	Approximate Actual Confidence Coefficient achieved by UTL	0.401
Approximate Sample Size needed to achieve specified CC	59	95% UPL	25
95% USL	25	95% KM Chebyshev UPL	48.83

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 5:21:18 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

OCDD

Raw Statistics

Number of Valid Observations	13
Number of Missing Observations	13
Number of Distinct Observations	13
Minimum	63
Maximum	750
Mean of Raw Data	378.6
Standard Deviation of Raw Data	239.2
Khat	2.006
Theta hat	188.7
Kstar	1.594
Theta star	237.5
Mean of Log Transformed Data	5.667
Standard Deviation of Log Transformed Data	0.859

Normal GOF Test Results

Correlation Coefficient R	0.972
Shapiro Wilk Test Statistic	0.924
Shapiro Wilk Critical (0.05) Value	0.866
Approximate Shapiro Wilk P Value	0.386
Lilliefors Test Statistic	0.163
Lilliefors Critical (0.05) Value	0.234

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.946
A-D Test Statistic	0.509
A-D Critical (0.05) Value	0.743
K-S Test Statistic	0.162
K-S Critical(0.05) Value	0.239

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.94
Shapiro Wilk Test Statistic	0.867
Shapiro Wilk Critical (0.05) Value	0.866
Approximate Shapiro Wilk P Value	0.0623
Lilliefors Test Statistic	0.209
Lilliefors Critical (0.05) Value	0.234

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 4:56:53 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

OCDD

General Statistics

Total Number of Observations	13	Number of Distinct Observations	13
		Number of Missing Observations	13
Minimum	63	First Quartile	240
Second Largest	740	Median	330
Maximum	750	Third Quartile	530
Mean	378.6	SD	239.2
Coefficient of Variation	0.632	Skewness	0.231
Mean of logged Data	5.667	SD of logged Data	0.859

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.671	d2max (for USL)	2.331

Normal GOF Test

Shapiro Wilk Test Statistic	0.924	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.866	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.163	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.234	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	1017	90% Percentile (z)	685.1
	95% UPL (t)	821	95% Percentile (z)	772
	95% USL	936	99% Percentile (z)	935

Gamma GOF Test

A-D Test Statistic	0.509	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.162	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.239	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.006	k star (bias corrected MLE)	1.594
Theta hat (MLE)	188.7	Theta star (bias corrected MLE)	237.5
nu hat (MLE)	52.16	nu star (bias corrected)	41.45
MLE Mean (bias corrected)	378.6	MLE Sd (bias corrected)	299.8

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	1036	90% Percentile	777.3
95% Hawkins Wixley (HW) Approx. Gamma UPL	1097	95% Percentile	966.4

95% WH Approx. Gamma UTL with	95% Coverage	1549		99% Percentile	1392
95% HW Approx. Gamma UTL with	95% Coverage	1722			
	95% WH USL	1320		95% HW USL	1437

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.867	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.209	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.234	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	2871		90% Percentile (z)	869.9
	95% UPL (t)	1417		95% Percentile (z)	1189
	95% USL	2143		99% Percentile (z)	2135

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

	Order of Statistic, r	13	95% UTL with	95% Coverage	750
	Approx, f used to compute achieved CC	0.684	Approximate Actual Confidence Coefficient achieved by UTL		0.487
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	750	95% BCA Bootstrap UTL with	95% Coverage	750
	95% UPL	750		90% Percentile	718
	90% Chebyshev UPL	1123		95% Percentile	744
	95% Chebyshev UPL	1461		99% Percentile	748.8
	95% USL	750			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 5:24:57 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

OCDF

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	13	14	8	6	42.86%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	6	1.7	1.9	1.8	1.8	0.0632
Statistics (Non-Detects Only)	8	2.2	36	15.4	14.5	12.23
Statistics (All: NDs treated as DL value)	14	1.7	36	9.571	2.25	11.37
Statistics (All: NDs treated as DL/2 value)	14	0.85	36	9.186	2.25	11.66
Statistics (Normal ROS Imputed Data)	14	-31.01	36	0.881	2.25	20.11
Statistics (Gamma ROS Imputed Data)	14	0.01	36	8.804	2.25	11.96
Statistics (Lognormal ROS Imputed Data)	14	0.216	36	9.103	2.25	11.73

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.372	0.941	11.23	2.328	1.084	0.466
Statistics (NDs = DL)	0.867	0.729	11.03	1.582	1.197	0.756
Statistics (NDs = DL/2)	0.654	0.561	14.05	1.285	1.481	1.153
Statistics (Gamma ROS Estimates)	0.252	0.245	34.98	-0.644	3.648	-5.668
Statistics (Lognormal ROS Estimates)	--	--	--	1.12	1.695	1.513

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.971	0.865	0.875	0.988

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.927	0.818	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.744	0.874	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.761	0.874	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.966	0.874	Data Appear Normal
Lilliefors (Detects Only)	0.161	0.283	Data Appear Normal
Lilliefors (NDs = DL)	0.31	0.226	Data Not Normal
Lilliefors (NDs = DL/2)	0.294	0.226	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.134	0.226	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.971	0.976	0.976	0.933

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.33	0.73	
Kolmogorov-Smirnov (Detects Only)	0.196	0.3	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.416	0.766	

Kolmogorov-Smirnov (NDs = DL)	0.326	0.236	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.095	0.779	
Kolmogorov-Smirnov (NDs = DL/2)	0.252	0.239	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	1.095	0.855	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.287	0.25	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.955	0.899	0.922	0.973

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.89	0.818	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.785	0.874	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.824	0.874	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.928	0.874	Data Appear Lognormal
Lilliefors (Detects Only)	0.238	0.283	Data Appear Lognormal
Lilliefors (NDs = DL)	0.306	0.226	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.245	0.226	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.172	0.226	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 5:23:54 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

OCDF

General Statistics

Total Number of Observations	14	Number of Missing Observations	13
Number of Distinct Observations	11		
Number of Detects	8	Number of Non-Detects	6
Number of Distinct Detects	8	Number of Distinct Non-Detects	3
Minimum Detect	2.2	Minimum Non-Detect	1.7
Maximum Detect	36	Maximum Non-Detect	1.9
Variance Detected	149.5	Percent Non-Detects	42.86%
Mean Detected	15.4	SD Detected	12.23
Mean of Detected Logged Data	2.328	SD of Detected Logged Data	1.084

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.614	d2max (for USL)	2.372

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.927	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.161	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.283	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	9.529	KM SD	10.99
95% UTL95% Coverage	38.25	95% KM UPL (t)	29.67
90% KM Percentile (z)	23.61	95% KM Percentile (z)	27.6
99% KM Percentile (z)	35.09	95% KM USL	35.58

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	9.186	SD	11.66
95% UTL95% Coverage	39.66	95% UPL (t)	30.56
90% Percentile (z)	24.13	95% Percentile (z)	28.36
99% Percentile (z)	36.31	95% USL	36.84

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.33	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.73	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.196	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.3	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.372	k star (bias corrected MLE)	0.941
Theta hat (MLE)	11.23	Theta star (bias corrected MLE)	16.37
nu hat (MLE)	21.95	nu star (bias corrected)	15.05
MLE Mean (bias corrected)	15.4		
MLE Sd (bias corrected)	15.88	95% Percentile of Chisquare (2kstar)	5.76

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	8.804
Maximum	36	Median	2.25
SD	11.96	CV	1.358
k hat (MLE)	0.252	k star (bias corrected MLE)	0.245
Theta hat (MLE)	34.98	Theta star (bias corrected MLE)	35.88
nu hat (MLE)	7.048	nu star (bias corrected)	6.871
MLE Mean (bias corrected)	8.804	MLE Sd (bias corrected)	17.77
95% Percentile of Chisquare (2kstar)	2.389	90% Percentile	26.46
95% Percentile	42.85	99% Percentile	86.6

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	93.74	138.3	95% Approx. Gamma UPL	46.83	58.07
95% Gamma USL	76.85	107.8			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	9.529	SD (KM)	10.99
Variance (KM)	120.7	SE of Mean (KM)	3.139
k hat (KM)	0.752	k star (KM)	0.639
nu hat (KM)	21.06	nu star (KM)	17.88
theta hat (KM)	12.67	theta star (KM)	14.92
80% gamma percentile (KM)	15.7	90% gamma percentile (KM)	24.43
95% gamma percentile (KM)	33.52	99% gamma percentile (KM)	55.39

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	55.38	61.31	95% Approx. Gamma UPL	33.3	34.49
95% KM Gamma Percentile	29.04	29.63	95% Gamma USL	47.72	51.73

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.89	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.238	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.283	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	9.103	Mean in Log Scale	1.12
SD in Original Scale	11.73	SD in Log Scale	1.695

95% UTL95% Coverage	257.4	95% BCA UTL95% Coverage	36
95% Bootstrap (%) UTL95% Coverage	36	95% UPL (t)	68.53
90% Percentile (z)	26.91	95% Percentile (z)	49.81
99% Percentile (z)	158.1	95% USL	170.7

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.557	95% KM UTL (Lognormal)95% Coverage	102.1
KM SD of Logged Data	1.174	95% KM UPL (Lognormal)	40.83
95% KM Percentile Lognormal (z)	32.73	95% KM USL (Lognormal)	76.83

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	9.186	Mean in Log Scale	1.285
SD in Original Scale	11.66	SD in Log Scale	1.481
95% UTL95% Coverage	173.7	95% UPL (t)	54.61
90% Percentile (z)	24.12	95% Percentile (z)	41.32
99% Percentile (z)	113.4	95% USL	121.3

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	14	95% UTL with95% Coverage	36
Approx, f used to compute achieved CC	0.737	Approximate Actual Confidence Coefficient achieved by UTL	0.512
Approximate Sample Size needed to achieve specified CC	59	95% UPL	36
95% USL	36	95% KM Chebyshev UPL	59.1

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:30:29 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total DiCB

Raw Statistics

Number of Valid Observations	20
Number of Missing Observations	7
Number of Distinct Observations	20
Minimum	2.8
Maximum	335
Mean of Raw Data	73.94
Standard Deviation of Raw Data	106.7
Khat	0.556
Theta hat	133.1
Kstar	0.506
Theta star	146.3
Mean of Log Transformed Data	3.178
Standard Deviation of Log Transformed Data	1.606

Normal GOF Test Results

Correlation Coefficient R	0.838
Shapiro Wilk Test Statistic	0.698
Shapiro Wilk Critical (0.05) Value	0.905
Approximate Shapiro Wilk P Value	1.1600E-5
Lilliefors Test Statistic	0.302
Lilliefors Critical (0.05) Value	0.192

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.962
A-D Test Statistic	1.011
A-D Critical (0.05) Value	0.797
K-S Test Statistic	0.196
K-S Critical(0.05) Value	0.204

Data follow Appr. Gamma Distribution at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.969
Shapiro Wilk Test Statistic	0.92
Shapiro Wilk Critical (0.05) Value	0.905
Approximate Shapiro Wilk P Value	0.119
Lilliefors Test Statistic	0.14
Lilliefors Critical (0.05) Value	0.192

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:30:13 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Total DiCB

General Statistics

Total Number of Observations	20	Number of Distinct Observations	20
		Number of Missing Observations	7
Minimum	2.8	First Quartile	6.838
Second Largest	290	Median	16.25
Maximum	335	Third Quartile	80
Mean	73.94	SD	106.7
Coefficient of Variation	1.443	Skewness	1.564
Mean of logged Data	3.178	SD of logged Data	1.606

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.396	d2max (for USL)	2.557

Normal GOF Test

Shapiro Wilk Test Statistic	0.698	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.905	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.302	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.192	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	329.6	90% Percentile (z)	210.7
	95% UPL (t)	263	95% Percentile (z)	249.5
	95% USL	346.8	99% Percentile (z)	322.2

Gamma GOF Test

A-D Test Statistic	1.011	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.797	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.196	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.204	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.556	k star (bias corrected MLE)	0.506
Theta hat (MLE)	133.1	Theta star (bias corrected MLE)	146.3
nu hat (MLE)	22.22	nu star (bias corrected)	20.22
MLE Mean (bias corrected)	73.94	MLE Sd (bias corrected)	104

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	288.5	90% Percentile	199.6
95% Hawkins Wixley (HW) Approx. Gamma UPL	302.8	95% Percentile	282.9

95% WH Approx. Gamma UTL with	95% Coverage	468.5	99% Percentile	487.6	
95% HW Approx. Gamma UTL with	95% Coverage	529.7			
	95% WH USL	524.6	95% HW USL	604.5	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.905	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.14	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.192	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	1127	90% Percentile (z)	188.1	
	95% UPL (t)	413.3	95% Percentile (z)	337.1	
	95% USL	1458	99% Percentile (z)	1007	

Nonparametric Distribution Free Background Statistics

Data appear Approximate Gamma Distribution at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		20	95% UTL with	95% Coverage	335
Approx, f used to compute achieved CC		1.053	Approximate Actual Confidence Coefficient achieved by UTL		0.642
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	335	95% BCA Bootstrap UTL with	95% Coverage	335
	95% UPL	332.8		90% Percentile	263
	90% Chebyshev UPL	402		95% Percentile	292.3
	95% Chebyshev UPL	550.6		99% Percentile	326.5
	95% USL	335			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:36:04 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total HpCB

Raw Statistics

Number of Valid Observations	24
Number of Missing Observations	3
Number of Distinct Observations	22
Minimum	28
Maximum	3500
Mean of Raw Data	1022
Standard Deviation of Raw Data	1063
Khat	0.856
Theta hat	1194
Kstar	0.777
Theta star	1316
Mean of Log Transformed Data	6.243
Standard Deviation of Log Transformed Data	1.368

Normal GOF Test Results

Correlation Coefficient R	0.916
Shapiro Wilk Test Statistic	0.829
Shapiro Wilk Critical (0.05) Value	0.916
Approximate Shapiro Wilk P Value	6.3654E-4
Lilliefors Test Statistic	0.195
Lilliefors Critical (0.05) Value	0.177

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.97
A-D Test Statistic	0.318
A-D Critical (0.05) Value	0.778
K-S Test Statistic	0.135
K-S Critical(0.05) Value	0.184

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.981
Shapiro Wilk Test Statistic	0.952
Shapiro Wilk Critical (0.05) Value	0.916
Approximate Shapiro Wilk P Value	0.308
Lilliefors Test Statistic	0.114
Lilliefors Critical (0.05) Value	0.177

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:35:01 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Total HpCB

General Statistics

Total Number of Observations	24	Number of Distinct Observations	22
		Number of Missing Observations	3
Minimum	28	First Quartile	255
Second Largest	3200	Median	565
Maximum	3500	Third Quartile	1363
Mean	1022	SD	1063
Coefficient of Variation	1.039	Skewness	1.143
Mean of logged Data	6.243	SD of logged Data	1.368

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.309	d2max (for USL)	2.644

Normal GOF Test

Shapiro Wilk Test Statistic	0.829	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.916	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.195	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.177	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	3476	90% Percentile (z)	2384
	95% UPL (t)	2881	95% Percentile (z)	2770
	95% USL	3832	99% Percentile (z)	3494

Gamma GOF Test

A-D Test Statistic	0.318	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.778	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.135	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.184	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.856	k star (bias corrected MLE)	0.777
Theta hat (MLE)	1194	Theta star (bias corrected MLE)	1316
nu hat (MLE)	41.09	nu star (bias corrected)	37.29
MLE Mean (bias corrected)	1022	MLE Sd (bias corrected)	1160

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	3476	90% Percentile	2504
95% Hawkins Wixley (HW) Approx. Gamma UPL	3726	95% Percentile	3352

95% WH Approx. Gamma UTL with	95% Coverage	5074	99% Percentile	5360	
95% HW Approx. Gamma UTL with	95% Coverage	5746			
	95% WH USL	6232	95% HW USL	7293	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.952	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.916	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.114	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.177	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	12097	90% Percentile (z)	2968	
	95% UPL (t)	5626	95% Percentile (z)	4877	
	95% USL	19126	99% Percentile (z)	12388	

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		24	95% UTL with	95% Coverage	3500
Approx, f used to compute achieved CC		1.263	Approximate Actual Confidence Coefficient achieved by UTL		0.708
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	3500	95% BCA Bootstrap UTL with	95% Coverage	3455
	95% UPL	3425		90% Percentile	2600
	90% Chebyshev UPL	4276		95% Percentile	3110
	95% Chebyshev UPL	5749		99% Percentile	3431
	95% USL	3500			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 5:30:55 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total HpCDD

Raw Statistics

Number of Valid Observations	14
Number of Missing Observations	13
Number of Distinct Observations	13
Minimum	3.4
Maximum	170
Mean of Raw Data	43.12
Standard Deviation of Raw Data	47.8
Khat	0.913
Theta hat	47.21
Kstar	0.765
Theta star	56.34
Mean of Log Transformed Data	3.125
Standard Deviation of Log Transformed Data	1.245

Normal GOF Test Results

Correlation Coefficient R	0.893
Shapiro Wilk Test Statistic	0.802
Shapiro Wilk Critical (0.05) Value	0.874
Approximate Shapiro Wilk P Value	0.00458
Lilliefors Test Statistic	0.231
Lilliefors Critical (0.05) Value	0.226

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.986
A-D Test Statistic	0.437
A-D Critical (0.05) Value	0.764
K-S Test Statistic	0.171
K-S Critical(0.05) Value	0.236

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.979
Shapiro Wilk Test Statistic	0.944
Shapiro Wilk Critical (0.05) Value	0.874
Approximate Shapiro Wilk P Value	0.566
Lilliefors Test Statistic	0.15
Lilliefors Critical (0.05) Value	0.226

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 5:29:58 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Total HpCDD

General Statistics

Total Number of Observations	14	Number of Distinct Observations	13
		Number of Missing Observations	13
Minimum	3.4	First Quartile	8.388
Second Largest	89	Median	19.75
Maximum	170	Third Quartile	69.75
Mean	43.12	SD	47.8
Coefficient of Variation	1.109	Skewness	1.591
Mean of logged Data	3.125	SD of logged Data	1.245

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.614	d2max (for USL)	2.372

Normal GOF Test

Shapiro Wilk Test Statistic	0.802	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.231	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	168.1	90% Percentile (z)	104.4
	95% UPL (t)	130.7	95% Percentile (z)	121.7
	95% USL	156.5	99% Percentile (z)	154.3

Gamma GOF Test

A-D Test Statistic	0.437	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.764	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.171	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.236	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.913	k star (bias corrected MLE)	0.765
Theta hat (MLE)	47.21	Theta star (bias corrected MLE)	56.34
nu hat (MLE)	25.57	nu star (bias corrected)	21.43
MLE Mean (bias corrected)	43.12	MLE Sd (bias corrected)	49.29

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	154.7	90% Percentile	106
95% Hawkins Wixley (HW) Approx. Gamma UPL	164	95% Percentile	142.1

95% WH Approx. Gamma UTL with	95% Coverage	255.8	99% Percentile	227.8	
95% HW Approx. Gamma UTL with	95% Coverage	290.9			
	95% WH USL	220.8	95% HW USL	245.6	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.944	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.15	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.226	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	589.8	90% Percentile (z)	112.2	
	95% UPL (t)	223.1	95% Percentile (z)	176.5	
	95% USL	436.1	99% Percentile (z)	412.2	

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		14	95% UTL with	95% Coverage	170
Approx, f used to compute achieved CC		0.737	Approximate Actual Confidence Coefficient achieved by UTL		0.512
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	170	95% BCA Bootstrap UTL with	95% Coverage	170
	95% UPL	170		90% Percentile	87.2
	90% Chebyshev UPL	191.5		95% Percentile	117.4
	95% Chebyshev UPL	258.8		99% Percentile	159.5
	95% USL	170			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 5:37:11 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total HpCDF (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	3	4	1	3	75.00%

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Total HpCDF (sb) was not processed!

Total HpCDF (ss)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	20	10	10	9	1	10.00%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	1	2.25	2.25	2.25	2.25	N/A
Statistics (Non-Detects Only)	9	2.4	45	21.09	25	16.33
Statistics (All: NDs treated as DL value)	10	2.25	45	19.21	18	16.51
Statistics (All: NDs treated as DL/2 value)	10	1.125	45	19.09	18	16.64
Statistics (Normal ROS Imputed Data)	10	-18.27	45	17.15	18	19.8
Statistics (Gamma ROS Imputed Data)	10	0.0879	45	18.99	18	16.77
Statistics (Lognormal ROS Imputed Data)	10	0.818	45	19.06	18	16.68

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.183	0.862	17.83	2.57	1.2	0.467
Statistics (NDs = DL)	1.025	0.784	18.73	2.394	1.261	0.527
Statistics (NDs = DL/2)	0.932	0.719	20.49	2.324	1.371	0.59
Statistics (Gamma ROS Estimates)	0.692	0.551	27.43	2.07	1.945	0.94
Statistics (Lognormal ROS Estimates)	--	--	--	2.293	1.431	0.624

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.951	0.937	0.942	0.971

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.88	0.829	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.854	0.842	Data Appear Normal
Shapiro-Wilk (NDs = DL/2)	0.864	0.842	Data Appear Normal
Shapiro-Wilk (Normal ROS Estimates)	0.939	0.842	Data Appear Normal
Lilliefors (Detects Only)	0.192	0.274	Data Appear Normal
Lilliefors (NDs = DL)	0.228	0.262	Data Appear Normal

Lilliefors (NDs = DL/2)	0.224	0.262	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.173	0.262	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.892	0.901	0.895	0.872

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.69	0.74	
Kolmogorov-Smirnov (Detects Only)	0.246	0.286	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.782	0.748	
Kolmogorov-Smirnov (NDs = DL)	0.234	0.274	Detected Data appear Approximate Gamma Distri
Anderson-Darling (NDs = DL/2)	0.655	0.751	
Kolmogorov-Smirnov (NDs = DL/2)	0.231	0.274	Data Appear Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.556	0.762	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.238	0.277	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.923	0.924	0.941	0.943

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.826	0.829	Data Not Lognormal
Shapiro-Wilk (NDs = DL)	0.822	0.842	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.865	0.842	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.873	0.842	Data Appear Lognormal
Lilliefors (Detects Only)	0.261	0.274	Data Appear Lognormal
Lilliefors (NDs = DL)	0.244	0.262	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.243	0.262	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.241	0.262	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 5:34:49 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Total HpCDF (sb)

General Statistics

Total Number of Observations	4	Number of Missing Observations	3
Number of Distinct Observations	4		
Number of Detects	1	Number of Non-Detects	3
Number of Distinct Detects	1	Number of Distinct Non-Detects	3
Minimum Detect	3.8	Minimum Non-Detect	2
Maximum Detect	3.8	Maximum Non-Detect	2.15
Variance Detected	N/A	Percent Non-Detects	75%
Mean Detected	3.8	SD Detected	N/A
Mean of Detected Logged Data	1.335	SD of Detected Logged Data	N/A

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!

It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Total HpCDF (sb) was not processed!

Total HpCDF (ss)

General Statistics

Total Number of Observations	10	Number of Missing Observations	10
Number of Distinct Observations	10		
Number of Detects	9	Number of Non-Detects	1
Number of Distinct Detects	9	Number of Distinct Non-Detects	1
Minimum Detect	2.4	Minimum Non-Detect	2.25
Maximum Detect	45	Maximum Non-Detect	2.25
Variance Detected	266.6	Percent Non-Detects	10%
Mean Detected	21.09	SD Detected	16.33
Mean of Detected Logged Data	2.57	SD of Detected Logged Data	1.2

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.911	d2max (for USL)	2.176

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.88	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.192	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.274	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	19.21	KM SD	15.66
95% UTL95% Coverage	64.79	95% KM UPL (t)	49.31
90% KM Percentile (z)	39.27	95% KM Percentile (z)	44.96
99% KM Percentile (z)	55.64	95% KM USL	53.28

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	19.09	SD	16.64
95% UTL95% Coverage	67.53	95% UPL (t)	51.08
90% Percentile (z)	40.42	95% Percentile (z)	46.46
99% Percentile (z)	57.8	95% USL	55.3

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.69	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.74	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.246	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.286	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.183	k star (bias corrected MLE)	0.862
Theta hat (MLE)	17.83	Theta star (bias corrected MLE)	24.45
nu hat (MLE)	21.29	nu star (bias corrected)	15.52
MLE Mean (bias corrected)	21.09		
MLE Sd (bias corrected)	22.71	95% Percentile of Chisquare (2kstar)	5.447

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0879	Mean	18.99
Maximum	45	Median	18
SD	16.77	CV	0.883
k hat (MLE)	0.692	k star (bias corrected MLE)	0.551
Theta hat (MLE)	27.43	Theta star (bias corrected MLE)	34.45
nu hat (MLE)	13.85	nu star (bias corrected)	11.03
MLE Mean (bias corrected)	18.99	MLE Sd (bias corrected)	25.57
95% Percentile of Chisquare (2kstar)	4.09	90% Percentile	50.32
95% Percentile	70.44	99% Percentile	119.5

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	158.8	213.8	95% Approx. Gamma UPL	82.91	98.11
95% Gamma USL	99.33	121.6			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	19.21	SD (KM)	15.66
Variance (KM)	245.2	SE of Mean (KM)	5.252
k hat (KM)	1.504	k star (KM)	1.119
nu hat (KM)	30.08	nu star (KM)	22.39
theta hat (KM)	12.77	theta star (KM)	17.16

80% gamma percentile (KM)	30.61	90% gamma percentile (KM)	43.01
95% gamma percentile (KM)	55.3	99% gamma percentile (KM)	83.6

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	121.3	143.6	95% Approx. Gamma UPL	68.03	73.84
95% KM Gamma Percentile	56.56	59.93	95% Gamma USL	79.77	88.53

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.826	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.261	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Approximate Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	19.06	Mean in Log Scale	2.293
SD in Original Scale	16.68	SD in Log Scale	1.431
95% UTL95% Coverage	637.7	95% BCA UTL95% Coverage	45
95% Bootstrap (%) UTL95% Coverage	45	95% UPL (t)	155
90% Percentile (z)	61.95	95% Percentile (z)	104.2
99% Percentile (z)	276.2	95% USL	222.8

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	2.394	95% KM UTL (Lognormal)95% Coverage	356
KM SD of Logged Data	1.196	95% KM UPL (Lognormal)	109.2
95% KM Percentile Lognormal (z)	78.32	95% KM USL (Lognormal)	147.8

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	19.09	Mean in Log Scale	2.324
SD in Original Scale	16.64	SD in Log Scale	1.371
95% UTL95% Coverage	553.8	95% UPL (t)	142.8
90% Percentile (z)	59.27	95% Percentile (z)	97.55
99% Percentile (z)	248.4	95% USL	202.1

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	10	95% UTL with95% Coverage	45
Approx, f used to compute achieved CC	0.526	Approximate Actual Confidence Coefficient achieved by UTL	0.401
Approximate Sample Size needed to achieve specified CC	59	95% UPL	45
95% USL	45	95% KM Chebyshev UPL	90.8

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:41:39 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total HxCB

Raw Statistics

Number of Valid Observations	23
Number of Missing Observations	4
Number of Distinct Observations	23
Minimum	36
Maximum	6400
Mean of Raw Data	1439
Standard Deviation of Raw Data	1693
Khat	0.785
Theta hat	1834
Kstar	0.711
Theta star	2024
Mean of Log Transformed Data	6.513
Standard Deviation of Log Transformed Data	1.424

Normal GOF Test Results

Correlation Coefficient R	0.881
Shapiro Wilk Test Statistic	0.778
Shapiro Wilk Critical (0.05) Value	0.914
Approximate Shapiro Wilk P Value	8.8492E-5
Lilliefors Test Statistic	0.248
Lilliefors Critical (0.05) Value	0.18

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.989
A-D Test Statistic	0.225
A-D Critical (0.05) Value	0.78
K-S Test Statistic	0.0995
K-S Critical(0.05) Value	0.188

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.987
Shapiro Wilk Test Statistic	0.967
Shapiro Wilk Critical (0.05) Value	0.914
Approximate Shapiro Wilk P Value	0.604
Lilliefors Test Statistic	0.0799
Lilliefors Critical (0.05) Value	0.18

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:40:26 PM
From File	C:\Users[redacted]Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Total HxCB

General Statistics

Total Number of Observations	23	Number of Distinct Observations	23
		Number of Missing Observations	4
Minimum	36	First Quartile	305
Second Largest	4400	Median	800
Maximum	6400	Third Quartile	1775
Mean	1439	SD	1693
Coefficient of Variation	1.176	Skewness	1.675
Mean of logged Data	6.513	SD of logged Data	1.424

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.328	d2max (for USL)	2.624

Normal GOF Test

Shapiro Wilk Test Statistic	0.778	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.914	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.248	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.18	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	5380	90% Percentile (z)	3609
	95% UPL (t)	4409	95% Percentile (z)	4224
	95% USL	5881	99% Percentile (z)	5378

Gamma GOF Test

A-D Test Statistic	0.225	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.78	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0995	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.188	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.785	k star (bias corrected MLE)	0.711
Theta hat (MLE)	1834	Theta star (bias corrected MLE)	2024
nu hat (MLE)	36.09	nu star (bias corrected)	32.71
MLE Mean (bias corrected)	1439	MLE Sd (bias corrected)	1707

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	5017	90% Percentile	3599
95% Hawkins Wixley (HW) Approx. Gamma UPL	5358	95% Percentile	4871

95% WH Approx. Gamma UTL with	95% Coverage	7472	99% Percentile	7902	
95% HW Approx. Gamma UTL with	95% Coverage	8455			
	95% WH USL	9003	95% HW USL	10498	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.914	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0799	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.18	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	18565	90% Percentile (z)	4182
	95% UPL (t)	8198	95% Percentile (z)	7017
	95% USL	28297	99% Percentile (z)	18522

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		23	95% UTL with	95% Coverage	6400
Approx, f used to compute achieved CC		1.211	Approximate Actual Confidence Coefficient achieved by UTL		0.693
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	6400	95% BCA Bootstrap UTL with	95% Coverage	6400
	95% UPL	6000		90% Percentile	4100
	90% Chebyshev UPL	6627		95% Percentile	4380
	95% Chebyshev UPL	8978		99% Percentile	5960
	95% USL	6400			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 5:46:05 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total HxCDD (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	3	4	1	3	75.00%

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!

It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Total HxCDD (sb) was not processed!

Total HxCDD (ss)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	20	11	9	8	1	11.11%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	1	1.25	1.25	1.25	1.25	N/A
Statistics (Non-Detects Only)	8	2.9	45	16.89	15.5	14.21
Statistics (All: NDs treated as DL value)	9	1.25	45	15.15	13	14.28
Statistics (All: NDs treated as DL/2 value)	9	0.625	45	15.08	13	14.36
Statistics (Normal ROS Imputed Data)	9	-17.52	45	13.06	13	17.56
Statistics (Gamma ROS Imputed Data)	9	0.01	45	15.01	13	14.43
Statistics (Lognormal ROS Imputed Data)	9	1.011	45	15.12	13	14.31

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.482	1.01	11.39	2.453	0.999	0.407
Statistics (NDs = DL)	1.112	0.815	13.63	2.205	1.194	0.542
Statistics (NDs = DL/2)	0.987	0.732	15.27	2.128	1.35	0.635
Statistics (Gamma ROS Estimates)	0.595	0.471	25.24	1.669	2.532	1.517
Statistics (Lognormal ROS Estimates)	--	--	--	2.181	1.239	0.568

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.946	0.938	0.942	0.976

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.894	0.818	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.88	0.829	Data Appear Normal
Shapiro-Wilk (NDs = DL/2)	0.888	0.829	Data Appear Normal
Shapiro-Wilk (Normal ROS Estimates)	0.971	0.829	Data Appear Normal
Lilliefors (Detects Only)	0.219	0.283	Data Appear Normal
Lilliefors (NDs = DL)	0.199	0.274	Data Appear Normal

Lilliefors (NDs = DL/2)	0.197	0.274	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.17	0.274	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.992	0.991	0.989	0.975

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.252	0.729	
Kolmogorov-Smirnov (Detects Only)	0.16	0.299	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.238	0.741	
Kolmogorov-Smirnov (NDs = DL)	0.176	0.286	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.205	0.744	
Kolmogorov-Smirnov (NDs = DL/2)	0.15	0.287	Data Appear Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.435	0.763	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.186	0.292	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.971	0.978	0.967	0.976

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.926	0.818	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.947	0.829	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.936	0.829	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.947	0.829	Data Appear Lognormal
Lilliefors (Detects Only)	0.17	0.283	Data Appear Lognormal
Lilliefors (NDs = DL)	0.174	0.274	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.182	0.274	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.177	0.274	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 5:44:31 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Total HxCDD (sb)

General Statistics

Total Number of Observations	4	Number of Missing Observations	3
Number of Distinct Observations	2		
Number of Detects	1	Number of Non-Detects	3
Number of Distinct Detects	1	Number of Distinct Non-Detects	1
Minimum Detect	1.7	Minimum Non-Detect	1.2
Maximum Detect	1.7	Maximum Non-Detect	1.2
Variance Detected	N/A	Percent Non-Detects	75%
Mean Detected	1.7	SD Detected	N/A
Mean of Detected Logged Data	0.531	SD of Detected Logged Data	N/A

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!

It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Total HxCDD (sb) was not processed!

Total HxCDD (ss)

General Statistics

Total Number of Observations	9	Number of Missing Observations	11
Number of Distinct Observations	8		
Number of Detects	8	Number of Non-Detects	1
Number of Distinct Detects	7	Number of Distinct Non-Detects	1
Minimum Detect	2.9	Minimum Non-Detect	1.25
Maximum Detect	45	Maximum Non-Detect	1.25
Variance Detected	202	Percent Non-Detects	11.11%
Mean Detected	16.89	SD Detected	14.21
Mean of Detected Logged Data	2.453	SD of Detected Logged Data	0.999

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.031	d2max (for USL)	2.11

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.894	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.219	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.283	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	15.15	KM SD	13.46
95% UTL95% Coverage	55.95	95% KM UPL (t)	41.54
90% KM Percentile (z)	32.4	95% KM Percentile (z)	37.29
99% KM Percentile (z)	46.47	95% KM USL	43.55

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	15.08	SD	14.36
95% UTL95% Coverage	58.59	95% UPL (t)	43.22
90% Percentile (z)	33.48	95% Percentile (z)	38.69
99% Percentile (z)	48.48	95% USL	45.37

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.252	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.729	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.16	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.299	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.482	k star (bias corrected MLE)	1.01
Theta hat (MLE)	11.39	Theta star (bias corrected MLE)	16.73
nu hat (MLE)	23.71	nu star (bias corrected)	16.15
MLE Mean (bias corrected)	16.89		
MLE Sd (bias corrected)	16.81	95% Percentile of Chisquare (2kstar)	6.029

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	15.01
Maximum	45	Median	13
SD	14.43	CV	0.962
k hat (MLE)	0.595	k star (bias corrected MLE)	0.471
Theta hat (MLE)	25.24	Theta star (bias corrected MLE)	31.9
nu hat (MLE)	10.7	nu star (bias corrected)	8.47
MLE Mean (bias corrected)	15.01	MLE Sd (bias corrected)	21.88
95% Percentile of Chisquare (2kstar)	3.694	90% Percentile	41.12
95% Percentile	58.93	99% Percentile	103

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	138.7	202.7	95% Approx. Gamma UPL	68.98	86.3
95% Gamma USL	76.83	98.35			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	15.15	SD (KM)	13.46
Variance (KM)	181.2	SE of Mean (KM)	4.797
k hat (KM)	1.266	k star (KM)	0.918
nu hat (KM)	22.8	nu star (KM)	16.53
theta hat (KM)	11.96	theta star (KM)	16.5

80% gamma percentile (KM)	24.54	90% gamma percentile (KM)	35.62
95% gamma percentile (KM)	46.78	99% gamma percentile (KM)	72.84

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	96.11	112.7	95% Approx. Gamma UPL	52.73	56.71
95% KM Gamma Percentile	43.07	45.19	95% Gamma USL	57.77	62.88

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.926	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.17	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.283	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	15.12	Mean in Log Scale	2.181
SD in Original Scale	14.31	SD in Log Scale	1.239
95% UTL95% Coverage	379.3	95% BCA UTL95% Coverage	45
95% Bootstrap (%) UTL95% Coverage	45	95% UPL (t)	100.6
90% Percentile (z)	43.38	95% Percentile (z)	68.05
99% Percentile (z)	158.4	95% USL	121

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	2.205	95% KM UTL (Lognormal)95% Coverage	275.3
KM SD of Logged Data	1.126	95% KM UPL (Lognormal)	82.44
95% KM Percentile Lognormal (z)	57.81	95% KM USL (Lognormal)	97.55

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	15.08	Mean in Log Scale	2.128
SD in Original Scale	14.36	SD in Log Scale	1.35
95% UTL95% Coverage	503	95% UPL (t)	118.5
90% Percentile (z)	47.39	95% Percentile (z)	77.39
99% Percentile (z)	194.2	95% USL	144.9

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	9	95% UTL with95% Coverage	45
Approx, f used to compute achieved CC	0.474	Approximate Actual Confidence Coefficient achieved by UTL	0.37
Approximate Sample Size needed to achieve specified CC	59	95% UPL	45
95% USL	45	95% KM Chebyshev UPL	77.01

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 5:52:24 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total HxCDF (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	3	4	1	3	75.00%

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!

It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Total HxCDF (sb) was not processed!

Total HxCDF (ss)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	20	10	10	9	1	10.00%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	1	0.955	0.955	0.955	0.955	N/A
Statistics (Non-Detects Only)	9	1	54	20.34	12	18.73
Statistics (All: NDs treated as DL value)	10	0.955	54	18.41	11	18.69
Statistics (All: NDs treated as DL/2 value)	10	0.478	54	18.36	11	18.74
Statistics (Normal ROS Imputed Data)	10	-25.33	54	15.78	11	22.81
Statistics (Gamma ROS Imputed Data)	10	0.01	54	18.31	11	18.79
Statistics (Lognormal ROS Imputed Data)	10	0.433	54	18.35	11	18.75

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.97	0.721	20.97	2.416	1.35	0.559
Statistics (NDs = DL)	0.799	0.626	23.04	2.17	1.492	0.688
Statistics (NDs = DL/2)	0.74	0.585	24.79	2.1	1.617	0.77
Statistics (Gamma ROS Estimates)	0.528	0.436	34.7	1.714	2.559	1.493
Statistics (Lognormal ROS Estimates)	--	--	--	2.09	1.636	0.783

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.955	0.94	0.942	0.98

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.899	0.829	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.869	0.842	Data Appear Normal
Shapiro-Wilk (NDs = DL/2)	0.873	0.842	Data Appear Normal
Shapiro-Wilk (Normal ROS Estimates)	0.969	0.842	Data Appear Normal
Lilliefors (Detects Only)	0.228	0.274	Data Appear Normal
Lilliefors (NDs = DL)	0.234	0.262	Data Appear Normal

Lilliefors (NDs = DL/2)	0.233	0.262	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.166	0.262	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.964	0.964	0.961	0.944

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.263	0.744	
Kolmogorov-Smirnov (Detects Only)	0.192	0.287	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.324	0.755	
Kolmogorov-Smirnov (NDs = DL)	0.179	0.276	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.264	0.758	
Kolmogorov-Smirnov (NDs = DL/2)	0.18	0.276	Data Appear Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.302	0.775	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.183	0.28	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.971	0.967	0.97	0.97

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.933	0.829	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.911	0.842	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.927	0.842	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.927	0.842	Data Appear Lognormal
Lilliefors (Detects Only)	0.196	0.274	Data Appear Lognormal
Lilliefors (NDs = DL)	0.182	0.262	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.177	0.262	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.176	0.262	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 5:51:09 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Total HxCDF (sb)

General Statistics

Total Number of Observations	4	Number of Missing Observations	3
Number of Distinct Observations	4		
Number of Detects	1	Number of Non-Detects	3
Number of Distinct Detects	1	Number of Distinct Non-Detects	3
Minimum Detect	3.2	Minimum Non-Detect	0.87
Maximum Detect	3.2	Maximum Non-Detect	0.925
Variance Detected	N/A	Percent Non-Detects	75%
Mean Detected	3.2	SD Detected	N/A
Mean of Detected Logged Data	1.163	SD of Detected Logged Data	N/A

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!

It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Total HxCDF (sb) was not processed!

Total HxCDF (ss)

General Statistics

Total Number of Observations	10	Number of Missing Observations	10
Number of Distinct Observations	10		
Number of Detects	9	Number of Non-Detects	1
Number of Distinct Detects	9	Number of Distinct Non-Detects	1
Minimum Detect	1	Minimum Non-Detect	0.955
Maximum Detect	54	Maximum Non-Detect	0.955
Variance Detected	350.8	Percent Non-Detects	10%
Mean Detected	20.34	SD Detected	18.73
Mean of Detected Logged Data	2.416	SD of Detected Logged Data	1.35

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.911	d2max (for USL)	2.176

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.899	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.228	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	18.41	KM SD	17.73
95% UTL95% Coverage	70.03	95% KM UPL (t)	52.5
90% KM Percentile (z)	41.13	95% KM Percentile (z)	47.58
99% KM Percentile (z)	59.66	95% KM USL	57

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	18.36	SD	18.74
95% UTL95% Coverage	72.92	95% UPL (t)	54.39
90% Percentile (z)	42.38	95% Percentile (z)	49.19
99% Percentile (z)	61.96	95% USL	59.15

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.263	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.192	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.287	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.97	k star (bias corrected MLE)	0.721
Theta hat (MLE)	20.97	Theta star (bias corrected MLE)	28.22
nu hat (MLE)	17.46	nu star (bias corrected)	12.97
MLE Mean (bias corrected)	20.34		
MLE Sd (bias corrected)	23.96	95% Percentile of Chisquare (2kstar)	4.855

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	18.31
Maximum	54	Median	11
SD	18.79	CV	1.026
k hat (MLE)	0.528	k star (bias corrected MLE)	0.436
Theta hat (MLE)	34.7	Theta star (bias corrected MLE)	42
nu hat (MLE)	10.55	nu star (bias corrected)	8.72
MLE Mean (bias corrected)	18.31	MLE Sd (bias corrected)	27.73
95% Percentile of Chisquare (2kstar)	3.516	90% Percentile	50.91
95% Percentile	73.83	99% Percentile	131

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	171.3	243.7	95% Approx. Gamma UPL	86.23	105.7
95% Gamma USL	104.4	133.2			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	18.41	SD (KM)	17.73
Variance (KM)	314.5	SE of Mean (KM)	5.948
k hat (KM)	1.077	k star (KM)	0.821
nu hat (KM)	21.54	nu star (KM)	16.41
theta hat (KM)	17.09	theta star (KM)	22.43

80% gamma percentile (KM)	30.04	90% gamma percentile (KM)	44.48
95% gamma percentile (KM)	59.16	99% gamma percentile (KM)	93.77

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	132.7	161.7	95% Approx. Gamma UPL	71.2	78.34
95% KM Gamma Percentile	58.24	62.26	95% Gamma USL	84.6	95.57

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.933	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.196	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	18.35	Mean in Log Scale	2.09
SD in Original Scale	18.75	SD in Log Scale	1.636
95% UTL95% Coverage	947.1	95% BCA UTL95% Coverage	54
95% Bootstrap (%) UTL95% Coverage	54	95% UPL (t)	187.9
90% Percentile (z)	65.84	95% Percentile (z)	119.3
99% Percentile (z)	363.9	95% USL	284.5

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	2.17	95% KM UTL (Lognormal)95% Coverage	538.5
KM SD of Logged Data	1.415	95% KM UPL (Lognormal)	133
95% KM Percentile Lognormal (z)	89.76	95% KM USL (Lognormal)	190.3

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	18.36	Mean in Log Scale	2.1
SD in Original Scale	18.74	SD in Log Scale	1.617
95% UTL95% Coverage	904.1	95% UPL (t)	182.9
90% Percentile (z)	64.86	95% Percentile (z)	116.7
99% Percentile (z)	351.3	95% USL	275.5

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	10	95% UTL with95% Coverage	54
Approx, f used to compute achieved CC	0.526	Approximate Actual Confidence Coefficient achieved by UTL	0.401
Approximate Sample Size needed to achieve specified CC	59	95% UPL	54
95% USL	54	95% KM Chebyshev UPL	99.48

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:48:04 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total MoCB (sb)

Raw Statistics

Number of Valid Observations	5
Number of Missing Observations	2
Number of Distinct Observations	5
Minimum	0.49
Maximum	11
Mean of Raw Data	5.976
Standard Deviation of Raw Data	4.951
Khat	0.941
Theta hat	6.35
Kstar	0.51
Theta star	11.72
Mean of Log Transformed Data	1.17
Standard Deviation of Log Transformed Data	1.489

Normal GOF Test Results

Correlation Coefficient R	0.928
Shapiro Wilk Test Statistic	0.833
Shapiro Wilk Critical (0.05) Value	0.762
Approximate Shapiro Wilk P Value	N/A
Lilliefors Test Statistic	0.273
Lilliefors Critical (0.05) Value	0.343

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.801
A-D Test Statistic	0.646
A-D Critical (0.05) Value	0.693
K-S Test Statistic	0.347
K-S Critical(0.05) Value	0.365

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.903
Shapiro Wilk Test Statistic	0.791
Shapiro Wilk Critical (0.05) Value	0.762
Approximate Shapiro Wilk P Value	N/A
Lilliefors Test Statistic	0.335
Lilliefors Critical (0.05) Value	0.343

Data appear Lognormal at (0.05) Significance Level

Total MoCB (ss)

Raw Statistics

Number of Valid Observations	19
Number of Missing Observations	1
Number of Distinct Observations	19
Minimum	1.4
Maximum	210
Mean of Raw Data	52.29
Standard Deviation of Raw Data	68.17
Khat	0.639
Theta hat	81.8
Kstar	0.573
Theta star	91.2
Mean of Log Transformed Data	2.999
Standard Deviation of Log Transformed Data	1.583

Normal GOF Test Results

Correlation Coefficient R	0.86
Shapiro Wilk Test Statistic	0.734
Shapiro Wilk Critical (0.05) Value	0.901
Approximate Shapiro Wilk P Value	6.3860E-5
Lilliefors Test Statistic	0.25
Lilliefors Critical (0.05) Value	0.197

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.963
A-D Test Statistic	0.384
A-D Critical (0.05) Value	0.789
K-S Test Statistic	0.126
K-S Critical(0.05) Value	0.208

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.987
Shapiro Wilk Test Statistic	0.957
Shapiro Wilk Critical (0.05) Value	0.901
Approximate Shapiro Wilk P Value	0.575
Lilliefors Test Statistic	0.097
Lilliefors Critical (0.05) Value	0.197

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:46:31 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Total MoCB (sb)

General Statistics

Total Number of Observations	5	Number of Distinct Observations	5
		Number of Missing Observations	2
Minimum	0.49	First Quartile	0.84
Second Largest	9.35	Median	8.2
Maximum	11	Third Quartile	9.35
Mean	5.976	SD	4.951
Coefficient of Variation	0.828	Skewness	-0.427
Mean of logged Data	1.17	SD of logged Data	1.489

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	4.203	d2max (for USL)	1.671

Normal GOF Test

Shapiro Wilk Test Statistic	0.833	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.273	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	26.78	90% Percentile (z)	12.32
	95% UPL (t)	17.54	95% Percentile (z)	14.12
	95% USL	14.25	99% Percentile (z)	17.49

Gamma GOF Test

A-D Test Statistic	0.646	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.693	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.347	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.365	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.941	k star (bias corrected MLE)	0.51
Theta hat (MLE)	6.35	Theta star (bias corrected MLE)	11.72
nu hat (MLE)	9.411	nu star (bias corrected)	5.098
MLE Mean (bias corrected)	5.976	MLE Sd (bias corrected)	8.37

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	33.66	90% Percentile	16.1
95% Hawkins Wixley (HW) Approx. Gamma UPL	40.14	95% Percentile	22.8

95% WH Approx. Gamma UTL with	95% Coverage	92.26	99% Percentile	39.23	
95% HW Approx. Gamma UTL with	95% Coverage	133.9			
	95% WH USL	21.26	95% HW USL	23.54	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.791	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.762	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.335	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.343	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	1683	90% Percentile (z)	21.72	
	95% UPL (t)	104.3	95% Percentile (z)	37.31	
	95% USL	38.81	99% Percentile (z)	102.9	

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		5	95% UTL with	95% Coverage	11
Approx, f used to compute achieved CC		0.263	Approximate Actual Confidence Coefficient achieved by UTL		0.226
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	11	95% BCA Bootstrap UTL with	95% Coverage	11
	95% UPL	11		90% Percentile	10.34
	90% Chebyshev UPL	22.25		95% Percentile	10.67
	95% Chebyshev UPL	29.62		99% Percentile	10.93
	95% USL	11			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Total MoCB (ss)

General Statistics

Total Number of Observations	19	Number of Distinct Observations	19
		Number of Missing Observations	1
Minimum	1.4	First Quartile	7.25
Second Largest	205	Median	19
Maximum	210	Third Quartile	58
Mean	52.29	SD	68.17
Coefficient of Variation	1.304	Skewness	1.572
Mean of logged Data	2.999	SD of logged Data	1.583

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.423	d2max (for USL)	2.531

Normal GOF Test

Shapiro Wilk Test Statistic	0.734	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.901	Data Not Normal at 5% Significance Level	

Lilliefors Test Statistic	0.25	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.197	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	217.5	90% Percentile (z)	139.6
	95% UPL (t)	173.6	95% Percentile (z)	164.4
	95% USL	224.8	99% Percentile (z)	210.9

Gamma GOF Test

A-D Test Statistic	0.384	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.789	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.126	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.208	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.639	k star (bias corrected MLE)	0.573
Theta hat (MLE)	81.8	Theta star (bias corrected MLE)	91.2
nu hat (MLE)	24.29	nu star (bias corrected)	21.79
MLE Mean (bias corrected)	52.29	MLE Sd (bias corrected)	69.05

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	199.3	90% Percentile	137.4
95% Hawkins Wixley (HW) Approx. Gamma UPL	213.5	95% Percentile	191.2
95% WH Approx. Gamma UTL with 95% Coverage	320	99% Percentile	322.1
95% HW Approx. Gamma UTL with 95% Coverage	369		
95% WH USL	344.1	95% HW USL	401.7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.901	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.097	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.197	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	929.6	90% Percentile (z)	152.6
	95% UPL (t)	335.4	95% Percentile (z)	271.2
	95% USL	1103	99% Percentile (z)	797.7

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r	19	95% UTL with	95% Coverage	210
Approx, f used to compute achieved CC	1	Approximate Actual Confidence Coefficient achieved by UTL		0.623
		Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	210	95% BCA Bootstrap UTL with	95% Coverage	210
	95% UPL	210		90% Percentile	169
	90% Chebyshev UPL	262.1		95% Percentile	205.5
	95% Chebyshev UPL	357.2		99% Percentile	209.1
	95% USL	210			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:57:00 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total NoCB (sb)

Raw Statistics

Number of Valid Observations	7
Number of Distinct Observations	7
Minimum	2.2
Maximum	420
Mean of Raw Data	126
Standard Deviation of Raw Data	194.3
Khat	0.424
Theta hat	297.3
Kstar	0.337
Theta star	373.4
Mean of Log Transformed Data	3.297
Standard Deviation of Log Transformed Data	2.015

Normal GOF Test Results

Correlation Coefficient R	0.811
Shapiro Wilk Test Statistic	0.643
Shapiro Wilk Critical (0.05) Value	0.803
Approximate Shapiro Wilk P Value	0.00124
Lilliefors Test Statistic	0.414
Lilliefors Critical (0.05) Value	0.304

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.882
A-D Test Statistic	0.752
A-D Critical (0.05) Value	0.764
K-S Test Statistic	0.335
K-S Critical(0.05) Value	0.33

Data follow Appr. Gamma Distribution at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.95
Shapiro Wilk Test Statistic	0.887
Shapiro Wilk Critical (0.05) Value	0.803
Approximate Shapiro Wilk P Value	0.35
Lilliefors Test Statistic	0.238
Lilliefors Critical (0.05) Value	0.304

Data appear Lognormal at (0.05) Significance Level

Raw Statistics

Number of Valid Observations	19
Number of Missing Observations	1
Number of Distinct Observations	18
Minimum	30
Maximum	4200
Mean of Raw Data	732.7
Standard Deviation of Raw Data	1067
Khat	0.63
Theta hat	1164
Kstar	0.565
Theta star	1296
Mean of Log Transformed Data	5.622
Standard Deviation of Log Transformed Data	1.559

Normal GOF Test Results

Correlation Coefficient R	0.807
Shapiro Wilk Test Statistic	0.665
Shapiro Wilk Critical (0.05) Value	0.901
Approximate Shapiro Wilk P Value	5.2819E-6
Lilliefors Test Statistic	0.296
Lilliefors Critical (0.05) Value	0.197

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.971
A-D Test Statistic	0.571
A-D Critical (0.05) Value	0.79
K-S Test Statistic	0.146
K-S Critical(0.05) Value	0.208

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.971
Shapiro Wilk Test Statistic	0.928
Shapiro Wilk Critical (0.05) Value	0.901
Approximate Shapiro Wilk P Value	0.19
Lilliefors Test Statistic	0.135
Lilliefors Critical (0.05) Value	0.197

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 8:56:08 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Total NoCB (sb)

General Statistics

Total Number of Observations	7	Number of Distinct Observations	7
Minimum	2.2	First Quartile	7.75
Second Largest	400	Median	20
Maximum	420	Third Quartile	212
Mean	126	SD	194.3
Coefficient of Variation	1.542	Skewness	1.227
Mean of logged Data	3.297	SD of logged Data	2.015

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test

Shapiro Wilk Test Statistic	0.643	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.414	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	786.3	90% Percentile (z)	374.9
	95% UPL (t)	529.5	95% Percentile (z)	445.5
	95% USL	502.5	99% Percentile (z)	577.9

Gamma GOF Test

A-D Test Statistic	0.752	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.764	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.335	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.33	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.424	k star (bias corrected MLE)	0.337
Theta hat (MLE)	297.3	Theta star (bias corrected MLE)	373.4
nu hat (MLE)	5.93	nu star (bias corrected)	4.722
MLE Mean (bias corrected)	126	MLE Sd (bias corrected)	216.9

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	756.8	90% Percentile	365.7
95% Hawkins Wixley (HW) Approx. Gamma UPL	849	95% Percentile	554.5
95% WH Approx. Gamma UTL with 95% Coverage	1988	99% Percentile	1038

95% HW Approx. Gamma UTL with	95% Coverage	2698			
	95% WH USL	669.6		95% HW USL	735.3

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.887	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.238	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.304	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	25475		90% Percentile (z)	357.4
	95% UPL (t)	1777		95% Percentile (z)	743.2
	95% USL	1342		99% Percentile (z)	2934

Nonparametric Distribution Free Background Statistics

Data appear Approximate Gamma Distribution at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		7	95% UTL with	95% Coverage	420
Approx, f used to compute achieved CC		0.368	Approximate Actual Confidence Coefficient achieved by UTL		0.302
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	420	95% BCA Bootstrap UTL with	95% Coverage	420
	95% UPL	420		90% Percentile	408
	90% Chebyshev UPL	749		95% Percentile	414
	95% Chebyshev UPL	1031		99% Percentile	418.8
	95% USL	420			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Total NoCB (ss)

General Statistics

Total Number of Observations	19	Number of Distinct Observations	18
		Number of Missing Observations	1
Minimum	30	First Quartile	61
Second Largest	2800	Median	380
Maximum	4200	Third Quartile	945
Mean	732.7	SD	1067
Coefficient of Variation	1.456	Skewness	2.454
Mean of logged Data	5.622	SD of logged Data	1.559

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.423	d2max (for USL)	2.531

Normal GOF Test

Shapiro Wilk Test Statistic	0.665	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.901	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.296	**Lilliefors GOF Test**	

5% Lilliefors Critical Value	0.197	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	3318	90% Percentile (z)	2100
	95% UPL (t)	2631	95% Percentile (z)	2488
	95% USL	3433	99% Percentile (z)	3215

Gamma GOF Test

A-D Test Statistic	0.571	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.79	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.146	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.208	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.63	k star (bias corrected MLE)	0.565
Theta hat (MLE)	1164	Theta star (bias corrected MLE)	1296
nu hat (MLE)	23.92	nu star (bias corrected)	21.48
MLE Mean (bias corrected)	732.7	MLE Sd (bias corrected)	974.6

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		2781	90% Percentile	1931
95% Hawkins Wixley (HW) Approx. Gamma UPL		2955	95% Percentile	2694
95% WH Approx. Gamma UTL with	95% Coverage	4477	99% Percentile	4548
95% HW Approx. Gamma UTL with	95% Coverage	5116		
	95% WH USL	4816	95% HW USL	5571

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.928	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.901	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.135	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.197	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	12087	90% Percentile (z)	2039
	95% UPL (t)	4429	95% Percentile (z)	3593
	95% USL	14308	99% Percentile (z)	10397

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		19	95% UTL with	95% Coverage	4200
Approx, f used to compute achieved CC		1	Approximate Actual Confidence Coefficient achieved by UTL		0.623
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	4200	95% BCA Bootstrap UTL with	95% Coverage	4200
	95% UPL	4200		90% Percentile	1360
	90% Chebyshev UPL	4017		95% Percentile	2940
	95% Chebyshev UPL	5504		99% Percentile	3948
	95% USL	4200			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:02:58 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total OcCB

Raw Statistics

Number of Valid Observations	23
Number of Missing Observations	4
Number of Distinct Observations	22
Minimum	7.6
Maximum	1000
Mean of Raw Data	326.2
Standard Deviation of Raw Data	331.7
Khat	0.935
Theta hat	348.7
Kstar	0.842
Theta star	387.3
Mean of Log Transformed Data	5.166
Standard Deviation of Log Transformed Data	1.308

Normal GOF Test Results

Correlation Coefficient R	0.898
Shapiro Wilk Test Statistic	0.795
Shapiro Wilk Critical (0.05) Value	0.914
Approximate Shapiro Wilk P Value	1.7841E-4
Lilliefors Test Statistic	0.255
Lilliefors Critical (0.05) Value	0.18

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.942
A-D Test Statistic	0.42
A-D Critical (0.05) Value	0.773
K-S Test Statistic	0.123
K-S Critical(0.05) Value	0.187

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.972
Shapiro Wilk Test Statistic	0.94
Shapiro Wilk Critical (0.05) Value	0.914
Approximate Shapiro Wilk P Value	0.184
Lilliefors Test Statistic	0.117
Lilliefors Critical (0.05) Value	0.18

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:01:52 PM
From File	C:\Users\[redacted]Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Total OcCB

General Statistics

Total Number of Observations	23	Number of Distinct Observations	22
		Number of Missing Observations	4
Minimum	7.6	First Quartile	85
Second Largest	930	Median	200
Maximum	1000	Third Quartile	460
Mean	326.2	SD	331.7
Coefficient of Variation	1.017	Skewness	1.122
Mean of logged Data	5.166	SD of logged Data	1.308

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.328	d2max (for USL)	2.624

Normal GOF Test

Shapiro Wilk Test Statistic	0.795	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.914	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.255	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.18	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	1098	90% Percentile (z)	751.3
	95% UPL (t)	908	95% Percentile (z)	871.8
	95% USL	1196	99% Percentile (z)	1098

Gamma GOF Test

A-D Test Statistic	0.42	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.773	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.123	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.187	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.935	k star (bias corrected MLE)	0.842
Theta hat (MLE)	348.7	Theta star (bias corrected MLE)	387.3
nu hat (MLE)	43.03	nu star (bias corrected)	38.75
MLE Mean (bias corrected)	326.2	MLE Sd (bias corrected)	355.4

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	1077	90% Percentile	783.4
95% Hawkins Wixley (HW) Approx. Gamma UPL	1151	95% Percentile	1039

95% WH Approx. Gamma UTL with	95% Coverage	1567	99% Percentile	1640	
95% HW Approx. Gamma UTL with	95% Coverage	1765			
	95% WH USL	1869	95% HW USL	2165	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.94	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.914	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.117	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.18	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	3679	90% Percentile (z)	936.1	
	95% UPL (t)	1737	95% Percentile (z)	1505	
	95% USL	5417	99% Percentile (z)	3671	

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		23	95% UTL with	95% Coverage	1000
Approx, f used to compute achieved CC		1.211	Approximate Actual Confidence Coefficient achieved by UTL		0.693
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	1000	95% BCA Bootstrap UTL with	95% Coverage	993
	95% UPL	986		90% Percentile	918
	90% Chebyshev UPL	1343		95% Percentile	929
	95% Chebyshev UPL	1803		99% Percentile	984.6
	95% USL	1000			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:10:34 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

TOTAL PCBs

Raw Statistics

Number of Valid Observations	25
Number of Missing Observations	2
Number of Distinct Observations	25
Minimum	100
Maximum	32000
Mean of Raw Data	6921
Standard Deviation of Raw Data	9442
Khat	0.671
Theta hat	10321
Kstar	0.617
Theta star	11222
Mean of Log Transformed Data	7.936
Standard Deviation of Log Transformed Data	1.517

Normal GOF Test Results

Correlation Coefficient R	0.834
Shapiro Wilk Test Statistic	0.693
Shapiro Wilk Critical (0.05) Value	0.918
Approximate Shapiro Wilk P Value	1.5981E-6
Lilliefors Test Statistic	0.301
Lilliefors Critical (0.05) Value	0.173

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.966
A-D Test Statistic	0.618
A-D Critical (0.05) Value	0.791
K-S Test Statistic	0.208
K-S Critical(0.05) Value	0.182

Data follow Appr. Gamma Distribution at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.986
Shapiro Wilk Test Statistic	0.964
Shapiro Wilk Critical (0.05) Value	0.918
Approximate Shapiro Wilk P Value	0.524
Lilliefors Test Statistic	0.121
Lilliefors Critical (0.05) Value	0.173

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:09:09 PM
From File	C:\Users[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

TOTAL PCBs

General Statistics

Total Number of Observations	25	Number of Distinct Observations	25
		Number of Missing Observations	2
Minimum	100	First Quartile	1200
Second Largest	30000	Median	2700
Maximum	32000	Third Quartile	7600
Mean	6921	SD	9442
Coefficient of Variation	1.364	Skewness	1.848
Mean of logged Data	7.936	SD of logged Data	1.517

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.292	d2max (for USL)	2.663

Normal GOF Test

Shapiro Wilk Test Statistic	0.693	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.918	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.301	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.173	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	28561	90% Percentile (z)	19021
	95% UPL (t)	23395	95% Percentile (z)	22451
	95% USL	32063	99% Percentile (z)	28886

Gamma GOF Test

A-D Test Statistic	0.618	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.791	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.208	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.182	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.671	k star (bias corrected MLE)	0.617
Theta hat (MLE)	10321	Theta star (bias corrected MLE)	11222
nu hat (MLE)	33.53	nu star (bias corrected)	30.84
MLE Mean (bias corrected)	6921	MLE Sd (bias corrected)	8813

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	24776	90% Percentile	17888
95% Hawkins Wixley (HW) Approx. Gamma UPL	26131	95% Percentile	24658

95% WH Approx. Gamma UTL with	95% Coverage	37042	99% Percentile	40991	
95% HW Approx. Gamma UTL with	95% Coverage	41412			
	95% WH USL	47318	95% HW USL	55036	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.918	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.121	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.173	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	90369	90% Percentile (z)	19520	
	95% UPL (t)	39407	95% Percentile (z)	33866	
	95% USL	158599	99% Percentile (z)	95201	

Nonparametric Distribution Free Background Statistics

Data appear Approximate Gamma Distribution at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		25	95% UTL with	95% Coverage	32000
Approx, f used to compute achieved CC		1.316	Approximate Actual Confidence Coefficient achieved by UTL		0.723
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	32000	95% BCA Bootstrap UTL with	95% Coverage	32000
	95% UPL	31400		90% Percentile	22200
	90% Chebyshev UPL	35807		95% Percentile	29400
	95% Chebyshev UPL	48892		99% Percentile	31520
	95% USL	32000			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:15:54 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total PeCB

Raw Statistics

Number of Valid Observations	23
Number of Missing Observations	4
Number of Distinct Observations	22
Minimum	13
Maximum	2800
Mean of Raw Data	599.2
Standard Deviation of Raw Data	808.1
Khat	0.687
Theta hat	872.5
Kstar	0.626
Theta star	956.9
Mean of Log Transformed Data	5.513
Standard Deviation of Log Transformed Data	1.497

Normal GOF Test Results

Correlation Coefficient R	0.835
Shapiro Wilk Test Statistic	0.698
Shapiro Wilk Critical (0.05) Value	0.914
Approximate Shapiro Wilk P Value	4.1003E-6
Lilliefors Test Statistic	0.259
Lilliefors Critical (0.05) Value	0.18

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.967
A-D Test Statistic	0.405
A-D Critical (0.05) Value	0.788
K-S Test Statistic	0.109
K-S Critical(0.05) Value	0.189

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.99
Shapiro Wilk Test Statistic	0.97
Shapiro Wilk Critical (0.05) Value	0.914
Approximate Shapiro Wilk P Value	0.69
Lilliefors Test Statistic	0.0965
Lilliefors Critical (0.05) Value	0.18

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:14:10 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Total PeCB

General Statistics

Total Number of Observations	23	Number of Distinct Observations	22
		Number of Missing Observations	4
Minimum	13	First Quartile	120
Second Largest	2400	Median	270
Maximum	2800	Third Quartile	670
Mean	599.2	SD	808.1
Coefficient of Variation	1.349	Skewness	1.893
Mean of logged Data	5.513	SD of logged Data	1.497

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.328	d2max (for USL)	2.624

Normal GOF Test

Shapiro Wilk Test Statistic	0.698	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.914	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.259	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.18	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	2481	90% Percentile (z)	1635
	95% UPL (t)	2017	95% Percentile (z)	1928
	95% USL	2720	99% Percentile (z)	2479

Gamma GOF Test

A-D Test Statistic	0.405	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.788	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.109	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.189	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.687	k star (bias corrected MLE)	0.626
Theta hat (MLE)	872.5	Theta star (bias corrected MLE)	956.9
nu hat (MLE)	31.59	nu star (bias corrected)	28.81
MLE Mean (bias corrected)	599.2	MLE Sd (bias corrected)	757.2

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	2156	90% Percentile	1543
95% Hawkins Wixley (HW) Approx. Gamma UPL	2280	95% Percentile	2123

95% WH Approx. Gamma UTL with	95% Coverage	3270	99% Percentile	3520	
95% HW Approx. Gamma UTL with	95% Coverage	3675			
	95% WH USL	3971	95% HW USL	4605	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.914	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0965	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.18	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	8088	90% Percentile (z)	1689	
	95% UPL (t)	3426	95% Percentile (z)	2909	
	95% USL	12596	99% Percentile (z)	8068	

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		23	95% UTL with	95% Coverage	2800
Approx, f used to compute achieved CC		1.211	Approximate Actual Confidence Coefficient achieved by UTL		0.693
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	2800	95% BCA Bootstrap UTL with	95% Coverage	2800
	95% UPL	2720		90% Percentile	2060
	90% Chebyshev UPL	3076		95% Percentile	2390
	95% Chebyshev UPL	4197		99% Percentile	2712
	95% USL	2800			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 6:15:32 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total PeCDD

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	15	12	6	6	50.00%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	6	1.7	1.9	1.842	1.875	0.0801
Statistics (Non-Detects Only)	6	2.3	12	6.85	7.2	4.128
Statistics (All: NDs treated as DL value)	12	1.7	12	4.346	2.1	3.82
Statistics (All: NDs treated as DL/2 value)	12	0.85	12	3.885	1.625	4.163
Statistics (Normal ROS Imputed Data)	12	-8.994	12	0.839	0.139	7.029
Statistics (Gamma ROS Imputed Data)	12	0.01	12	3.43	1.155	4.528
Statistics (Lognormal ROS Imputed Data)	12	0.38	12	3.81	1.772	4.226

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	2.694	1.458	2.543	1.727	0.732	0.424
Statistics (NDs = DL)	1.812	1.415	2.398	1.169	0.765	0.654
Statistics (NDs = DL/2)	1.07	0.858	3.631	0.822	1.067	1.298
Statistics (Gamma ROS Estimates)	0.264	0.253	13.01	-1.439	3.344	-2.324
Statistics (Lognormal ROS Estimates)	--	--	--	0.705	1.203	1.707

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.959	0.848	0.871	0.963

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.893	0.788	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.71	0.859	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.745	0.859	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.911	0.859	Data Appear Normal
Lilliefors (Detects Only)	0.215	0.325	Data Appear Normal
Lilliefors (NDs = DL)	0.361	0.243	Data Not Normal
Lilliefors (NDs = DL/2)	0.306	0.243	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.214	0.243	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.929	0.937	0.951	0.887

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.462	0.702	
Kolmogorov-Smirnov (Detects Only)	0.261	0.335	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	1.538	0.743	

Kolmogorov-Smirnov (NDs = DL)	0.347	0.249	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.151	0.755	
Kolmogorov-Smirnov (NDs = DL/2)	0.298	0.252	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	1.295	0.841	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.333	0.268	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.94	0.879	0.91	0.955

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.854	0.788	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.755	0.859	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.803	0.859	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.894	0.859	Data Appear Lognormal
Lilliefors (Detects Only)	0.249	0.325	Data Appear Lognormal
Lilliefors (NDs = DL)	0.316	0.243	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.293	0.243	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.212	0.243	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 6:14:34 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Total PeCDD

General Statistics

Total Number of Observations	12	Number of Missing Observations	15
Number of Distinct Observations	10		
Number of Detects	6	Number of Non-Detects	6
Number of Distinct Detects	6	Number of Distinct Non-Detects	4
Minimum Detect	2.3	Minimum Non-Detect	1.7
Maximum Detect	12	Maximum Non-Detect	1.9
Variance Detected	17.04	Percent Non-Detects	50%
Mean Detected	6.85	SD Detected	4.128
Mean of Detected Logged Data	1.727	SD of Detected Logged Data	0.732

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.736	d2max (for USL)	2.285

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.893	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.215	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	4.275	KM SD	3.705
95% UTL95% Coverage	14.41	95% KM UPL (t)	11.2
90% KM Percentile (z)	9.024	95% KM Percentile (z)	10.37
99% KM Percentile (z)	12.9	95% KM USL	12.74

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	3.885	SD	4.163
95% UTL95% Coverage	15.28	95% UPL (t)	11.67
90% Percentile (z)	9.221	95% Percentile (z)	10.73
99% Percentile (z)	13.57	95% USL	13.4

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.462	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.702	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.261	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.335	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.694	k star (bias corrected MLE)	1.458
Theta hat (MLE)	2.543	Theta star (bias corrected MLE)	4.698
nu hat (MLE)	32.32	nu star (bias corrected)	17.5
MLE Mean (bias corrected)	6.85		
MLE Sd (bias corrected)	5.673	95% Percentile of Chisquare (2kstar)	7.668

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	3.43
Maximum	12	Median	1.155
SD	4.528	CV	1.32
k hat (MLE)	0.264	k star (bias corrected MLE)	0.253
Theta hat (MLE)	13.01	Theta star (bias corrected MLE)	13.54
nu hat (MLE)	6.327	nu star (bias corrected)	6.078
MLE Mean (bias corrected)	3.43	MLE Sd (bias corrected)	6.816
95% Percentile of Chisquare (2kstar)	2.442	90% Percentile	10.29
95% Percentile	16.54	99% Percentile	33.15

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	40.82	60.51	95% Approx. Gamma UPL	19.14	23.55
95% Gamma USL	28.19	38.07			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.275	SD (KM)	3.705
Variance (KM)	13.73	SE of Mean (KM)	1.172
k hat (KM)	1.331	k star (KM)	1.054
nu hat (KM)	31.95	nu star (KM)	25.29
theta hat (KM)	3.212	theta star (KM)	4.057
80% gamma percentile (KM)	6.85	90% gamma percentile (KM)	9.717
95% gamma percentile (KM)	12.57	99% gamma percentile (KM)	19.18

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	18.55	19.61	95% Approx. Gamma UPL	11.95	12.12
95% KM Gamma Percentile	10.54	10.6	95% Gamma USL	14.87	15.38

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.854	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.249	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	3.81	Mean in Log Scale	0.705
SD in Original Scale	4.226	SD in Log Scale	1.203

95% UTL95% Coverage	54.47	95% BCA UTL95% Coverage	12
95% Bootstrap (%) UTL95% Coverage	12	95% UPL (t)	19.19
90% Percentile (z)	9.462	95% Percentile (z)	14.65
99% Percentile (z)	33.27	95% USL	31.65

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	1.129	95% KM UTL (Lognormal)95% Coverage	24.9
KM SD of Logged Data	0.762	95% KM UPL (Lognormal)	12.86
95% KM Percentile Lognormal (z)	10.84	95% KM USL (Lognormal)	17.65

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	3.885	Mean in Log Scale	0.822
SD in Original Scale	4.163	SD in Log Scale	1.067
95% UTL95% Coverage	42.15	95% UPL (t)	16.72
90% Percentile (z)	8.93	95% Percentile (z)	13.16
99% Percentile (z)	27.23	95% USL	26.05

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	12	95% UTL with95% Coverage	12
Approx, f used to compute achieved CC	0.632	Approximate Actual Confidence Coefficient achieved by UTL	0.46
Approximate Sample Size needed to achieve specified CC	59	95% UPL	12
95% USL	12	95% KM Chebyshev UPL	21.09

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 6:19:54 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total PeCDF (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	3	4	1	3	75.00%

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!

It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Total PeCDF (sb) was not processed!

Total PeCDF (ss)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	20	10	10	9	1	10.00%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	1	0.9	0.9	0.9	0.9	N/A
Statistics (Non-Detects Only)	9	1.1	89	30.91	18	28.29
Statistics (All: NDs treated as DL value)	10	0.9	89	27.91	17.5	28.31
Statistics (All: NDs treated as DL/2 value)	10	0.45	89	27.87	17.5	28.36
Statistics (Normal ROS Imputed Data)	10	-37.22	89	24.1	17.5	34.29
Statistics (Gamma ROS Imputed Data)	10	0.01	89	27.82	17.5	28.41
Statistics (Lognormal ROS Imputed Data)	10	0.714	89	27.89	17.5	28.33

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.017	0.752	30.39	2.865	1.36	0.475
Statistics (NDs = DL)	0.782	0.614	35.69	2.568	1.59	0.619
Statistics (NDs = DL/2)	0.726	0.575	38.41	2.499	1.728	0.692
Statistics (Gamma ROS Estimates)	0.522	0.432	53.27	2.118	2.688	1.269
Statistics (Lognormal ROS Estimates)	--	--	--	2.545	1.634	0.642

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.947	0.935	0.936	0.975

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.896	0.829	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.873	0.842	Data Appear Normal
Shapiro-Wilk (NDs = DL/2)	0.876	0.842	Data Appear Normal
Shapiro-Wilk (Normal ROS Estimates)	0.968	0.842	Data Appear Normal
Lilliefors (Detects Only)	0.231	0.274	Data Appear Normal
Lilliefors (NDs = DL)	0.237	0.262	Data Appear Normal

Lilliefors (NDs = DL/2)	0.236	0.262	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.171	0.262	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.982	0.98	0.978	0.966

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.201	0.743	
Kolmogorov-Smirnov (Detects Only)	0.179	0.287	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.258	0.756	
Kolmogorov-Smirnov (NDs = DL)	0.169	0.276	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.237	0.759	
Kolmogorov-Smirnov (NDs = DL/2)	0.169	0.276	Data Appear Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.365	0.775	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.174	0.28	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.959	0.957	0.954	0.957

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.924	0.829	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.903	0.842	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.904	0.842	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.905	0.842	Data Appear Lognormal
Lilliefors (Detects Only)	0.178	0.274	Data Appear Lognormal
Lilliefors (NDs = DL)	0.166	0.262	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.177	0.262	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.17	0.262	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 6:18:38 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Total PeCDF (sb)

General Statistics

Total Number of Observations	4	Number of Missing Observations	3
Number of Distinct Observations	3		
Number of Detects	1	Number of Non-Detects	3
Number of Distinct Detects	1	Number of Distinct Non-Detects	2
Minimum Detect	6	Minimum Non-Detect	0.81
Maximum Detect	6	Maximum Non-Detect	0.86
Variance Detected	N/A	Percent Non-Detects	75%
Mean Detected	6	SD Detected	N/A
Mean of Detected Logged Data	1.792	SD of Detected Logged Data	N/A

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!

It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable Total PeCDF (sb) was not processed!

Total PeCDF (ss)

General Statistics

Total Number of Observations	10	Number of Missing Observations	10
Number of Distinct Observations	10		
Number of Detects	9	Number of Non-Detects	1
Number of Distinct Detects	9	Number of Distinct Non-Detects	1
Minimum Detect	1.1	Minimum Non-Detect	0.9
Maximum Detect	89	Maximum Non-Detect	0.9
Variance Detected	800.5	Percent Non-Detects	10%
Mean Detected	30.91	SD Detected	28.29
Mean of Detected Logged Data	2.865	SD of Detected Logged Data	1.36

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.911	d2max (for USL)	2.176

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.896	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.231	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	27.91	KM SD	26.86
95% UTL95% Coverage	106.1	95% KM UPL (t)	79.55
90% KM Percentile (z)	62.33	95% KM Percentile (z)	72.09
99% KM Percentile (z)	90.39	95% KM USL	86.36

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	27.87	SD	28.36
95% UTL95% Coverage	110.4	95% UPL (t)	82.39
90% Percentile (z)	64.21	95% Percentile (z)	74.51
99% Percentile (z)	93.84	95% USL	89.58

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.201	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.179	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.287	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.017	k star (bias corrected MLE)	0.752
Theta hat (MLE)	30.39	Theta star (bias corrected MLE)	41.09
nu hat (MLE)	18.31	nu star (bias corrected)	13.54
MLE Mean (bias corrected)	30.91		
MLE Sd (bias corrected)	35.64	95% Percentile of Chisquare (2kstar)	4.99

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	27.82
Maximum	89	Median	17.5
SD	28.41	CV	1.021
k hat (MLE)	0.522	k star (bias corrected MLE)	0.432
Theta hat (MLE)	53.27	Theta star (bias corrected MLE)	64.36
nu hat (MLE)	10.45	nu star (bias corrected)	8.646
MLE Mean (bias corrected)	27.82	MLE Sd (bias corrected)	42.31
95% Percentile of Chisquare (2kstar)	3.496	90% Percentile	77.48
95% Percentile	112.5	99% Percentile	199.9

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	257.5	373	95% Approx. Gamma UPL	130.3	162.2
95% Gamma USL	157.6	204.3			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	27.91	SD (KM)	26.86
Variance (KM)	721.4	SE of Mean (KM)	9.009
k hat (KM)	1.08	k star (KM)	0.822
nu hat (KM)	21.59	nu star (KM)	16.45
theta hat (KM)	25.85	theta star (KM)	33.93

80% gamma percentile (KM)	45.54	90% gamma percentile (KM)	67.41
95% gamma percentile (KM)	89.64	99% gamma percentile (KM)	142

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	202.3	251.6	95% Approx. Gamma UPL	108.5	121.3
95% KM Gamma Percentile	88.79	96.27	95% Gamma USL	129	148.2

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.924	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.178	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	27.89	Mean in Log Scale	2.545
SD in Original Scale	28.33	SD in Log Scale	1.634
95% UTL95% Coverage	1482	95% BCA UTL95% Coverage	89
95% Bootstrap (%) UTL95% Coverage	89	95% UPL (t)	294.7
90% Percentile (z)	103.4	95% Percentile (z)	187.2
99% Percentile (z)	570	95% USL	445.9

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	2.568	95% KM UTL (Lognormal)95% Coverage	1051
KM SD of Logged Data	1.508	95% KM UPL (Lognormal)	236.7
95% KM Percentile Lognormal (z)	155.7	95% KM USL (Lognormal)	347

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	27.87	Mean in Log Scale	2.499
SD in Original Scale	28.36	SD in Log Scale	1.728
95% UTL95% Coverage	1861	95% UPL (t)	337.3
90% Percentile (z)	111.4	95% Percentile (z)	208.7
99% Percentile (z)	677.7	95% USL	522.7

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	10	95% UTL with95% Coverage	89
Approx, f used to compute achieved CC	0.526	Approximate Actual Confidence Coefficient achieved by UTL	0.401
Approximate Sample Size needed to achieve specified CC	59	95% UPL	89
95% USL	89	95% KM Chebyshev UPL	150.7

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 6:26:28 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total TCDD (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	3	4	2	2	50.00%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	2	0.18	0.19	0.185	0.185	0.00707
Statistics (Non-Detects Only)	2	0.515	1.6	1.058	1.058	0.767
Statistics (All: NDs treated as DL value)	4	0.18	1.6	0.621	0.353	0.671
Statistics (All: NDs treated as DL/2 value)	4	0.09	1.6	0.575	0.305	0.712
Statistics (Normal ROS Imputed Data)	4	-1.719	1.6	-0.331	-0.602	1.663
Statistics (Gamma ROS Imputed Data)	4	N/A	N/A	N/A	N/A	N/A
Statistics (Lognormal ROS Imputed Data)	4	0.0499	1.6	0.554	0.282	0.731

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	N/A	N/A	N/A	N/A	N/A	N/A
Statistics (NDs = DL)	1.343	0.503	0.462	-0.892	1.029	-1.153
Statistics (NDs = DL/2)	0.858	0.381	0.67	-1.239	1.398	-1.128
Statistics (Gamma ROS Estimates)	N/A	N/A	N/A	N/A	N/A	N/A
Statistics (Lognormal ROS Estimates)	--	--	--	-1.547	1.738	-1.123

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	1	0.885	0.899	0.934

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (NDs = DL)	0.786	0.748	Data Appear Normal
Shapiro-Wilk (NDs = DL/2)	0.808	0.748	Data Appear Normal
Shapiro-Wilk (Normal ROS Estimates)	0.85	0.748	Data Appear Normal
Lilliefors (Detects Only)	N/A	N/A	
Lilliefors (NDs = DL)	0.313	0.375	Data Appear Normal
Lilliefors (NDs = DL/2)	0.284	0.375	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.298	0.375	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	N/A	0.995	0.998	0.99

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	N/A	N/A	
Kolmogorov-Smirnov (Detects Only)	N/A	N/A	
Anderson-Darling (NDs = DL)	0.439	0.664	
Kolmogorov-Smirnov (NDs = DL)	0.299	0.4	Data Appear Gamma Distributed

Anderson-Darling (NDs = DL/2)	0.411	0.669	
Kolmogorov-Smirnov (NDs = DL/2)	0.315	0.404	Data Appear Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	N/A	0.657	
Kolmogorov-Smirnov (Gamma ROS Est.)	N/A	0.394	

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	1	0.942	0.944	N/A

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (NDs = DL)	0.877	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.872	0.748	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.85	0.748	Data Appear Lognormal
Lilliefors (Detects Only)	N/A	N/A	
Lilliefors (NDs = DL)	0.272	0.375	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.287	0.375	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.298	0.375	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Total TCDD (ss)

Raw Statistics

Number of Valid Observations	8
Number of Missing Observations	12
Number of Distinct Observations	8
Minimum	0.9
Maximum	17
Mean of Raw Data	7.335
Standard Deviation of Raw Data	6.369
Khat	1.195
Theta hat	6.136
Kstar	0.83
Theta star	8.832
Mean of Log Transformed Data	1.519
Standard Deviation of Log Transformed Data	1.155

Normal GOF Test Results

Correlation Coefficient R	0.945
Shapiro Wilk Test Statistic	0.869
Shapiro Wilk Critical (0.05) Value	0.818
Approximate Shapiro Wilk P Value	0.237
Lilliefors Test Statistic	0.22
Lilliefors Critical (0.05) Value	0.283

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.936
A-D Test Statistic	0.362
A-D Critical (0.05) Value	0.733

K-S Test Statistic	0.213
K-S Critical(0.05) Value	0.3

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.961
Shapiro Wilk Test Statistic	0.899
Shapiro Wilk Critical (0.05) Value	0.818
Approximate Shapiro Wilk P Value	0.447
Lilliefors Test Statistic	0.192
Lilliefors Critical (0.05) Value	0.283

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 6:24:41 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Total TCDD (sb)

General Statistics

Total Number of Observations	4	Number of Missing Observations	3
Number of Distinct Observations	4		
Number of Detects	2	Number of Non-Detects	2
Number of Distinct Detects	2	Number of Distinct Non-Detects	2
Minimum Detect	0.515	Minimum Non-Detect	0.18
Maximum Detect	1.6	Maximum Non-Detect	0.19
Variance Detected	0.589	Percent Non-Detects	50%
Mean Detected	1.058	SD Detected	0.767
Mean of Detected Logged Data	-0.0968	SD of Detected Logged Data	0.802

Warning: Data set has only 2 Detected Values.

This is not enough to compute meaningful or reliable statistics and estimates.

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	5.144	d2max (for USL)	1.462

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	0.619	KM SD	0.583
95% UTL95% Coverage	3.617	95% KM UPL (t)	2.152
90% KM Percentile (z)	1.366	95% KM Percentile (z)	1.577
99% KM Percentile (z)	1.975	95% KM USL	1.471

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	0.575	SD	0.712
95% UTL95% Coverage	4.236	95% UPL (t)	2.448
90% Percentile (z)	1.487	95% Percentile (z)	1.746
99% Percentile (z)	2.231	95% USL	1.616

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	3.432	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.308	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	13.73	nu star (bias corrected)	N/A

MLE Mean (bias corrected)	N/A		
MLE Sd (bias corrected)	N/A	95% Percentile of Chisquare (2kstar)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.619	SD (KM)	0.583
Variance (KM)	0.34	SE of Mean (KM)	0.412
k hat (KM)	1.127	k star (KM)	0.448
nu hat (KM)	9.017	nu star (KM)	3.588
theta hat (KM)	0.549	theta star (KM)	1.38
80% gamma percentile (KM)	1.01	90% gamma percentile (KM)	1.711
95% gamma percentile (KM)	2.47	99% gamma percentile (KM)	4.357

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	8.59	10.88	95% Approx. Gamma UPL	2.901	3.119
95% KM Gamma Percentile	1.652	1.675	95% Gamma USL	1.47	1.476

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	0.554	Mean in Log Scale	-1.547
SD in Original Scale	0.731	SD in Log Scale	1.738
95% UTL95% Coverage	1622	95% BCA UTL95% Coverage	N/A
95% Bootstrap (%) UTL95% Coverage	N/A	95% UPL (t)	20.59
90% Percentile (z)	1.973	95% Percentile (z)	3.71
99% Percentile (z)	12.12	95% USL	2.702

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	-0.906	95% KM UTL (Lognormal)95% Coverage	42.03
KM SD of Logged Data	0.903	95% KM UPL (Lognormal)	4.348
95% KM Percentile Lognormal (z)	1.785	95% KM USL (Lognormal)	1.514

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	0.575	Mean in Log Scale	-1.239
SD in Original Scale	0.712	SD in Log Scale	1.398
95% UTL95% Coverage	384.2	95% UPL (t)	11.46
90% Percentile (z)	1.737	95% Percentile (z)	2.887
99% Percentile (z)	7.484	95% USL	2.238

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	4	95% UTL with95% Coverage	1.6
Approx, f used to compute achieved CC	0.211	Approximate Actual Confidence Coefficient achieved by UTL	0.185
Approximate Sample Size needed to achieve specified CC	59	95% UPL	1.6
95% USL	1.6	95% KM Chebyshev UPL	3.459

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers

and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Total TCDD (ss)

General Statistics

Total Number of Observations	8	Number of Distinct Observations	8
		Number of Missing Observations	12
Minimum	0.9	First Quartile	2.495
Second Largest	14	Median	4.9
Maximum	17	Third Quartile	13.25
Mean	7.335	SD	6.369
Coefficient of Variation	0.868	Skewness	0.542
Mean of logged Data	1.519	SD of logged Data	1.155

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.187	d2max (for USL)	2.032

Normal GOF Test

Shapiro Wilk Test Statistic	0.869	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.818	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.22	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.283	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	27.63	90% Percentile (z)	15.5
	95% UPL (t)	20.13	95% Percentile (z)	17.81
	95% USL	20.28	99% Percentile (z)	22.15

Gamma GOF Test

A-D Test Statistic	0.362	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.733	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.213	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.3	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.195	k star (bias corrected MLE)	0.83
Theta hat (MLE)	6.136	Theta star (bias corrected MLE)	8.832
nu hat (MLE)	19.13	nu star (bias corrected)	13.29
MLE Mean (bias corrected)	7.335	MLE Sd (bias corrected)	8.049

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	27.86	90% Percentile	17.68
95% Hawkins Wixley (HW) Approx. Gamma UPL	30.37	95% Percentile	23.48
95% WH Approx. Gamma UTL with 95% Coverage	53.74	99% Percentile	37.14
95% HW Approx. Gamma UTL with 95% Coverage	64.65		
95% WH USL	28.25	95% HW USL	30.84

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.899	**Shapiro Wilk Lognormal GOF Test**

5% Shapiro Wilk Critical Value	0.818	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.192	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.283	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	181.2	90% Percentile (z)		20.07
	95% UPL (t)	46.52	95% Percentile (z)		30.53
	95% USL	47.72	99% Percentile (z)		67.07

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		8	95% UTL with	95% Coverage	17
Approx, f used to compute achieved CC		0.421	Approximate Actual Confidence Coefficient achieved by UTL		0.337
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	17	95% BCA Bootstrap UTL with	95% Coverage	17
	95% UPL	17		90% Percentile	14.9
	90% Chebyshev UPL	27.6		95% Percentile	15.95
	95% Chebyshev UPL	36.78		99% Percentile	16.79
	95% USL	17			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 6:31:58 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total TCDF (sb)

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	7	3	4	2	2	50.00%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	2	0.22	0.24	0.23	0.23	0.0141
Statistics (Non-Detects Only)	2	2.4	13	7.7	7.7	7.495
Statistics (All: NDs treated as DL value)	4	0.22	13	3.965	1.32	6.11
Statistics (All: NDs treated as DL/2 value)	4	0.11	13	3.908	1.26	6.157
Statistics (Normal ROS Imputed Data)	4	-19.43	13	-5.864	-8.514	16.25
Statistics (Gamma ROS Imputed Data)	4	N/A	N/A	N/A	N/A	N/A
Statistics (Lognormal ROS Imputed Data)	4	0.074	13	3.887	1.237	6.173

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	N/A	N/A	N/A	N/A	N/A	N/A
Statistics (NDs = DL)	0.506	0.293	7.835	0.125	1.967	15.77
Statistics (NDs = DL/2)	0.413	0.27	9.459	-0.222	2.346	-10.58
Statistics (Gamma ROS Estimates)	N/A	N/A	N/A	N/A	N/A	N/A
Statistics (Lognormal ROS Estimates)	--	--	--	-0.442	2.59	-5.863

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	1	0.861	0.863	0.934

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (NDs = DL)	0.747	0.748	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.751	0.748	Data Appear Normal
Shapiro-Wilk (Normal ROS Estimates)	0.85	0.748	Data Appear Normal
Lilliefors (Detects Only)	N/A	N/A	
Lilliefors (NDs = DL)	0.351	0.375	Data Appear Normal
Lilliefors (NDs = DL/2)	0.347	0.375	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.298	0.375	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	N/A	0.999	1	1

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	N/A	N/A	
Kolmogorov-Smirnov (Detects Only)	N/A	N/A	
Anderson-Darling (NDs = DL)	0.416	0.681	
Kolmogorov-Smirnov (NDs = DL)	0.309	0.41	Data Appear Gamma Distributed

Anderson-Darling (NDs = DL/2)	0.406	0.691	
Kolmogorov-Smirnov (NDs = DL/2)	0.315	0.414	Data Appear Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	N/A	0.657	
Kolmogorov-Smirnov (Gamma ROS Est.)	N/A	0.394	

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	1	0.945	0.941	N/A

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (NDs = DL)	0.876	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.866	0.748	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.85	0.748	Data Appear Lognormal
Lilliefors (Detects Only)	N/A	N/A	
Lilliefors (NDs = DL)	0.285	0.375	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.291	0.375	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.298	0.375	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Total TCDF (ss)

Raw Statistics

Number of Valid Observations	10
Number of Missing Observations	10
Number of Distinct Observations	9
Minimum	2
Maximum	70
Mean of Raw Data	32.87
Standard Deviation of Raw Data	28.35
Khat	1.002
Theta hat	32.8
Kstar	0.768
Theta star	42.79
Mean of Log Transformed Data	2.917
Standard Deviation of Log Transformed Data	1.317

Normal GOF Test Results

Correlation Coefficient R	0.932
Shapiro Wilk Test Statistic	0.838
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.0755
Lilliefors Test Statistic	0.207
Lilliefors Critical (0.05) Value	0.262

Data appear Approximate Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.874
A-D Test Statistic	0.517
A-D Critical (0.05) Value	0.748

K-S Test Statistic	0.212
K-S Critical(0.05) Value	0.274

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.95
Shapiro Wilk Test Statistic	0.881
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.195
Lilliefors Test Statistic	0.196
Lilliefors Critical (0.05) Value	0.262

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 6:31:06 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Total TCDF (sb)

General Statistics

Total Number of Observations	4	Number of Missing Observations	3
Number of Distinct Observations	4		
Number of Detects	2	Number of Non-Detects	2
Number of Distinct Detects	2	Number of Distinct Non-Detects	2
Minimum Detect	2.4	Minimum Non-Detect	0.22
Maximum Detect	13	Maximum Non-Detect	0.24
Variance Detected	56.18	Percent Non-Detects	50%
Mean Detected	7.7	SD Detected	7.495
Mean of Detected Logged Data	1.72	SD of Detected Logged Data	1.195

Warning: Data set has only 2 Detected Values.

This is not enough to compute meaningful or reliable statistics and estimates.

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	5.144	d2max (for USL)	1.462

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	3.96	KM SD	5.295
95% UTL95% Coverage	31.2	95% KM UPL (t)	17.89
90% KM Percentile (z)	10.75	95% KM Percentile (z)	12.67
99% KM Percentile (z)	16.28	95% KM USL	11.7

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	3.908	SD	6.157
95% UTL95% Coverage	35.58	95% UPL (t)	20.11
90% Percentile (z)	11.8	95% Percentile (z)	14.03
99% Percentile (z)	18.23	95% USL	12.91

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	1.705	k star (bias corrected MLE)	N/A
Theta hat (MLE)	4.516	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	6.821	nu star (bias corrected)	N/A

MLE Mean (bias corrected)	N/A		
MLE Sd (bias corrected)	N/A	95% Percentile of Chisquare (2kstar)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.96	SD (KM)	5.295
Variance (KM)	28.03	SE of Mean (KM)	3.744
k hat (KM)	0.559	k star (KM)	0.307
nu hat (KM)	4.475	nu star (KM)	2.452
theta hat (KM)	7.079	theta star (KM)	12.92
80% gamma percentile (KM)	6.104	90% gamma percentile (KM)	11.65
95% gamma percentile (KM)	17.99	99% gamma percentile (KM)	34.43

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	118.4	187.6	95% Approx. Gamma UPL	30.07	35.69
95% KM Gamma Percentile	13.88	14.49	95% Gamma USL	11.73	11.96

Lognormal GOF Test on Detected Observations Only

Not Enough Data to Perform GOF Test

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	3.887	Mean in Log Scale	-0.442
SD in Original Scale	6.173	SD in Log Scale	2.59
95% UTL95% Coverage	392728	95% BCA UTL95% Coverage	N/A
95% Bootstrap (%) UTL95% Coverage	N/A	95% UPL (t)	585.7
90% Percentile (z)	17.77	95% Percentile (z)	45.53
99% Percentile (z)	266	95% USL	28.39

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	0.103	95% KM UTL (Lognormal)95% Coverage	7872
KM SD of Logged Data	1.724	95% KM UPL (Lognormal)	103.4
95% KM Percentile Lognormal (z)	18.89	95% KM USL (Lognormal)	13.8

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	3.908	Mean in Log Scale	-0.222
SD in Original Scale	6.157	SD in Log Scale	2.346
95% UTL95% Coverage	139791	95% UPL (t)	384.5
90% Percentile (z)	16.2	95% Percentile (z)	38
99% Percentile (z)	188	95% USL	24.77

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	4	95% UTL with95% Coverage	13
Approx, f used to compute achieved CC	0.211	Approximate Actual Confidence Coefficient achieved by UTL	0.185
Approximate Sample Size needed to achieve specified CC	59	95% UPL	13
95% USL	13	95% KM Chebyshev UPL	29.76

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.

Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers

and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Total TCDF (ss)

General Statistics

Total Number of Observations	10	Number of Distinct Observations	9
		Number of Missing Observations	10
Minimum	2	First Quartile	8.15
Second Largest	66	Median	25
Maximum	70	Third Quartile	63.25
Mean	32.87	SD	28.35
Coefficient of Variation	0.863	Skewness	0.295
Mean of logged Data	2.917	SD of logged Data	1.317

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.911	d2max (for USL)	2.176

Normal GOF Test

Shapiro Wilk Test Statistic	0.838	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.207	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	115.4	90% Percentile (z)	69.2
	95% UPL (t)	87.38	95% Percentile (z)	79.5
	95% USL	94.56	99% Percentile (z)	98.82

Gamma GOF Test

A-D Test Statistic	0.517	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.212	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.274	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.002	k star (bias corrected MLE)	0.768
Theta hat (MLE)	32.8	Theta star (bias corrected MLE)	42.79
nu hat (MLE)	20.04	nu star (bias corrected)	15.36
MLE Mean (bias corrected)	32.87	MLE Sd (bias corrected)	37.51

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	125.2	90% Percentile	80.71
95% Hawkins Wixley (HW) Approx. Gamma UPL	138.4	95% Percentile	108.2
95% WH Approx. Gamma UTL with 95% Coverage	227.3	99% Percentile	173.3
95% HW Approx. Gamma UTL with 95% Coverage	276.2		
95% WH USL	147.6	95% HW USL	167.1

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.881	**Shapiro Wilk Lognormal GOF Test**

5% Shapiro Wilk Critical Value	0.842	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.196	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.262	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	855.7	90% Percentile (z)		99.99
	95% UPL (t)	232.7	95% Percentile (z)		161.4
	95% USL	324.9	99% Percentile (z)		396.1

Nonparametric Distribution Free Background Statistics

Data appear Approximate Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		10	95% UTL with	95% Coverage	70
Approx, f used to compute achieved CC		0.526	Approximate Actual Confidence Coefficient achieved by UTL		0.401
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	70	95% BCA Bootstrap UTL with	95% Coverage	70
	95% UPL	70		90% Percentile	66.4
	90% Chebyshev UPL	122.1		95% Percentile	68.2
	95% Chebyshev UPL	162.5		99% Percentile	69.64
	95% USL	70			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:19:31 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total TeCB

Raw Statistics

Number of Valid Observations	21
Number of Missing Observations	6
Number of Distinct Observations	20
Minimum	3.1
Maximum	430
Mean of Raw Data	87.45
Standard Deviation of Raw Data	110.9
Khat	0.774
Theta hat	113
Kstar	0.695
Theta star	125.8
Mean of Log Transformed Data	3.701
Standard Deviation of Log Transformed Data	1.362

Normal GOF Test Results

Correlation Coefficient R	0.857
Shapiro Wilk Test Statistic	0.74
Shapiro Wilk Critical (0.05) Value	0.908
Approximate Shapiro Wilk P Value	4.0326E-5
Lilliefors Test Statistic	0.242
Lilliefors Critical (0.05) Value	0.188

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.991
A-D Test Statistic	0.405
A-D Critical (0.05) Value	0.782
K-S Test Statistic	0.139
K-S Critical(0.05) Value	0.197

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.99
Shapiro Wilk Test Statistic	0.973
Shapiro Wilk Critical (0.05) Value	0.908
Approximate Shapiro Wilk P Value	0.776
Lilliefors Test Statistic	0.12
Lilliefors Critical (0.05) Value	0.188

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:18:27 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Total TeCB

General Statistics

Total Number of Observations	21	Number of Distinct Observations	20
		Number of Missing Observations	6
Minimum	3.1	First Quartile	16
Second Largest	290	Median	52
Maximum	430	Third Quartile	93
Mean	87.45	SD	110.9
Coefficient of Variation	1.268	Skewness	1.987
Mean of logged Data	3.701	SD of logged Data	1.362

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.371	d2max (for USL)	2.58

Normal GOF Test

Shapiro Wilk Test Statistic	0.74	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.908	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.242	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.188	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	350.3	90% Percentile (z)	229.5
	95% UPL (t)	283.2	95% Percentile (z)	269.8
	95% USL	373.5	99% Percentile (z)	345.3

Gamma GOF Test

A-D Test Statistic	0.405	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.782	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.139	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.197	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.774	k star (bias corrected MLE)	0.695
Theta hat (MLE)	113	Theta star (bias corrected MLE)	125.8
nu hat (MLE)	32.52	nu star (bias corrected)	29.2
MLE Mean (bias corrected)	87.45	MLE Sd (bias corrected)	104.9

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	308.2	90% Percentile	219.9
95% Hawkins Wixley (HW) Approx. Gamma UPL	324.6	95% Percentile	298.4

95% WH Approx. Gamma UTL with	95% Coverage	470	99% Percentile	485.9	
95% HW Approx. Gamma UTL with	95% Coverage	525.1			
	95% WH USL	537	95% HW USL	612.3	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.973	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.908	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.12	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.188	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	1022	90% Percentile (z)	231.9	
	95% UPL (t)	448	95% Percentile (z)	380.2	
	95% USL	1359	99% Percentile (z)	961.7	

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		21	95% UTL with	95% Coverage	430
Approx, f used to compute achieved CC		1.105	Approximate Actual Confidence Coefficient achieved by UTL		0.659
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	430	95% BCA Bootstrap UTL with	95% Coverage	430
	95% UPL	416		90% Percentile	250
	90% Chebyshev UPL	427.9		95% Percentile	290
	95% Chebyshev UPL	582		99% Percentile	402
	95% USL	430			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:26:48 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Total TrCB (sb)

Raw Statistics

Number of Valid Observations	7
Number of Distinct Observations	7
Minimum	0.33
Maximum	75
Mean of Raw Data	21.06
Standard Deviation of Raw Data	29.84
Khat	0.532
Theta hat	39.58
Kstar	0.399
Theta star	52.75
Mean of Log Transformed Data	1.865
Standard Deviation of Log Transformed Data	1.881

Normal GOF Test Results

Correlation Coefficient R	0.852
Shapiro Wilk Test Statistic	0.722
Shapiro Wilk Critical (0.05) Value	0.803
Approximate Shapiro Wilk P Value	0.00672
Lilliefors Test Statistic	0.391
Lilliefors Critical (0.05) Value	0.304

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.959
A-D Test Statistic	0.419
A-D Critical (0.05) Value	0.75
K-S Test Statistic	0.281
K-S Critical(0.05) Value	0.327

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.975
Shapiro Wilk Test Statistic	0.948
Shapiro Wilk Critical (0.05) Value	0.803
Approximate Shapiro Wilk P Value	0.751
Lilliefors Test Statistic	0.185
Lilliefors Critical (0.05) Value	0.304

Data appear Lognormal at (0.05) Significance Level

Raw Statistics

Number of Valid Observations	17
Number of Missing Observations	3
Number of Distinct Observations	17
Minimum	1.9
Maximum	350
Mean of Raw Data	105.5
Standard Deviation of Raw Data	122.9
Khat	0.723
Theta hat	145.9
Kstar	0.635
Theta star	166.2
Mean of Log Transformed Data	3.827
Standard Deviation of Log Transformed Data	1.473

Normal GOF Test Results

Correlation Coefficient R	0.884
Shapiro Wilk Test Statistic	0.768
Shapiro Wilk Critical (0.05) Value	0.892
Approximate Shapiro Wilk P Value	6.0598E-4
Lilliefors Test Statistic	0.302
Lilliefors Critical (0.05) Value	0.207

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.939
A-D Test Statistic	0.721
A-D Critical (0.05) Value	0.779
K-S Test Statistic	0.228
K-S Critical(0.05) Value	0.218

Data follow Appr. Gamma Distribution at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.97
Shapiro Wilk Test Statistic	0.936
Shapiro Wilk Critical (0.05) Value	0.892
Approximate Shapiro Wilk P Value	0.302
Lilliefors Test Statistic	0.154
Lilliefors Critical (0.05) Value	0.207

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:25:00 PM
From File	C:\Users\[redacted]Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Total TrCB (sb)

General Statistics

Total Number of Observations	7	Number of Distinct Observations	7
Minimum	0.33	First Quartile	3.4
Second Largest	52	Median	5.9
Maximum	75	Third Quartile	29.7
Mean	21.06	SD	29.84
Coefficient of Variation	1.417	Skewness	1.407
Mean of logged Data	1.865	SD of logged Data	1.881

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test

Shapiro Wilk Test Statistic	0.722	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.391	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	122.5	90% Percentile (z)	59.31
	95% UPL (t)	83.05	95% Percentile (z)	70.15
	95% USL	78.9	99% Percentile (z)	90.48

Gamma GOF Test

A-D Test Statistic	0.419	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.281	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.327	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.532	k star (bias corrected MLE)	0.399
Theta hat (MLE)	39.58	Theta star (bias corrected MLE)	52.75
nu hat (MLE)	7.449	nu star (bias corrected)	5.59
MLE Mean (bias corrected)	21.06	MLE Sd (bias corrected)	33.33

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	117.1	90% Percentile	59.51
95% Hawkins Wixley (HW) Approx. Gamma UPL	132.9	95% Percentile	87.56
95% WH Approx. Gamma UTL with 95% Coverage	289.5	99% Percentile	158.1

95% HW Approx. Gamma UTL with	95% Coverage	390			
	95% WH USL	104.6		95% HW USL	116.4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.948	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.185	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.304	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	3861		90% Percentile (z)	71.93
	95% UPL (t)	321.4		95% Percentile (z)	142.5
	95% USL	247.3		99% Percentile (z)	513.3

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

	Order of Statistic, r	7	95% UTL with	95% Coverage	75
	Approx, f used to compute achieved CC	0.368	Approximate Actual Confidence Coefficient achieved by UTL		0.302
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	75	95% BCA Bootstrap UTL with	95% Coverage	75
	95% UPL	75		90% Percentile	61.2
	90% Chebyshev UPL	116.8		95% Percentile	68.1
	95% Chebyshev UPL	160.1		99% Percentile	73.62
	95% USL	75			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Total TrCB (ss)

General Statistics

Total Number of Observations	17	Number of Distinct Observations	17
		Number of Missing Observations	3
Minimum	1.9	First Quartile	18
Second Largest	310	Median	34
Maximum	350	Third Quartile	190
Mean	105.5	SD	122.9
Coefficient of Variation	1.164	Skewness	1.058
Mean of logged Data	3.827	SD of logged Data	1.473

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.486	d2max (for USL)	2.475

Normal GOF Test

Shapiro Wilk Test Statistic	0.768	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.302	**Lilliefors GOF Test**	

5% Lilliefors Critical Value	0.207	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	411	90% Percentile (z)	263
	95% UPL (t)	326.2	95% Percentile (z)	307.6
	95% USL	409.6	99% Percentile (z)	391.3

Gamma GOF Test

A-D Test Statistic	0.721	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.779	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.228	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.218	Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.723	k star (bias corrected MLE)	0.635
Theta hat (MLE)	145.9	Theta star (bias corrected MLE)	166.2
nu hat (MLE)	24.59	nu star (bias corrected)	21.58
MLE Mean (bias corrected)	105.5	MLE Sd (bias corrected)	132.5

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		396.1	90% Percentile	271
95% Hawkins Wixley (HW) Approx. Gamma UPL		424	95% Percentile	372.1
95% WH Approx. Gamma UTL with	95% Coverage	643	99% Percentile	615.5
95% HW Approx. Gamma UTL with	95% Coverage	740.5		
	95% WH USL	638.3	95% HW USL	734.3

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.936	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.892	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.154	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.207	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	1788	90% Percentile (z)	303.3
	95% UPL (t)	647.5	95% Percentile (z)	517.9
	95% USL	1759	99% Percentile (z)	1413

Nonparametric Distribution Free Background Statistics

Data appear Approximate Gamma Distribution at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		17	95% UTL with 95% Coverage	350
Approx, f used to compute achieved CC		0.895	Approximate Actual Confidence Coefficient achieved by UTL	0.582
			Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with	95% Coverage	350	95% BCA Bootstrap UTL with 95% Coverage	350
	95% UPL	350	90% Percentile	304
	90% Chebyshev UPL	484.8	95% Percentile	318
	95% Chebyshev UPL	656.6	99% Percentile	343.6
	95% USL	350		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:56:00 AM
From File	S-A Soil All-nCong Bkg_outliers removed_a.xls
Full Precision	OFF
Confidence Coefficient	0.95

Aluminum

Raw Statistics

Number of Valid Observations	27
Number of Distinct Observations	26
Minimum	1770
Maximum	13700
Mean of Raw Data	8048
Standard Deviation of Raw Data	2893
Khat	6.676
Theta hat	1206
Kstar	5.959
Theta star	1351
Mean of Log Transformed Data	8.916
Standard Deviation of Log Transformed Data	0.433

Normal GOF Test Results

Correlation Coefficient R	0.989
Shapiro Wilk Test Statistic	0.977
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.785
Lilliefors Test Statistic	0.102
Lilliefors Critical (0.05) Value	0.167

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.978
A-D Test Statistic	0.385
A-D Critical (0.05) Value	0.746
K-S Test Statistic	0.143
K-S Critical(0.05) Value	0.168

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.944
Shapiro Wilk Test Statistic	0.903
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.0161
Lilliefors Test Statistic	0.162
Lilliefors Critical (0.05) Value	0.167

Data appear Approximate_Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:00:25 AM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Aluminum

General Statistics

Total Number of Observations	27	Number of Distinct Observations	26
Minimum	1770	First Quartile	5885
Second Largest	13000	Median	8360
Maximum	13700	Third Quartile	9690
Mean	8048	SD	2893
Coefficient of Variation	0.36	Skewness	0.0847
Mean of logged Data	8.916	SD of logged Data	0.433

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test

Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.102	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	14587	90% Percentile (z)	11756
	95% UPL (t)	13074	95% Percentile (z)	12807
	95% USL	15855	99% Percentile (z)	14779

Gamma GOF Test

A-D Test Statistic	0.385	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.143	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.168	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.676	k star (bias corrected MLE)	5.959
Theta hat (MLE)	1206	Theta star (bias corrected MLE)	1351
nu hat (MLE)	360.5	nu star (bias corrected)	321.8
MLE Mean (bias corrected)	8048	MLE Sd (bias corrected)	3297

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	14314	90% Percentile	12456
95% Hawkins Wixley (HW) Approx. Gamma UPL	14597	95% Percentile	14124
95% WH Approx. Gamma UTL with 95% Coverage	16883	99% Percentile	17622

95% HW Approx. Gamma UTL with	95% Coverage	17421			
	95% WH USL	19257		95% HW USL	20086

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.903	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.162	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	19824		90% Percentile (z)	12980
	95% UPL (t)	15808		95% Percentile (z)	15190
	95% USL	23963		99% Percentile (z)	20402

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		27	95% UTL with	95% Coverage	13700
Approx, f used to compute achieved CC		1.421	Approximate Actual Confidence Coefficient achieved by UTL		0.75
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	13700	95% BCA Bootstrap UTL with	95% Coverage	13490
	95% UPL	13420		90% Percentile	11860
	90% Chebyshev UPL	16888		95% Percentile	13000
	95% Chebyshev UPL	20892		99% Percentile	13518
	95% USL	13700			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:35:17 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Antimony

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	4	23	85.19%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	23	1	1.4	1.165	1.1	0.102
Statistics (Non-Detects Only)	4	1.3	2.4	1.75	1.65	0.465
Statistics (All: NDs treated as DL value)	27	1	2.4	1.252	1.15	0.28
Statistics (All: NDs treated as DL/2 value)	27	0.5	2.4	0.756	0.575	0.454
Statistics (Normal ROS Imputed Data)	27	-2.232	2.4	-0.218	-0.28	1.108
Statistics (Gamma ROS Imputed Data)	27	0.01	2.4	0.368	0.01	0.64
Statistics (Lognormal ROS Imputed Data)	27	0.187	2.4	0.697	0.553	0.512

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	20.17	5.208	0.0868	0.535	0.255	0.476
Statistics (NDs = DL)	27.76	24.7	0.0451	0.207	0.181	0.878
Statistics (NDs = DL/2)	4.985	4.455	0.152	-0.384	0.407	-1.061
Statistics (Gamma ROS Estimates)	0.369	0.353	0.995	-2.805	2.07	-0.738
Statistics (Lognormal ROS Estimates)	--	--	--	-0.559	0.616	-1.101

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.952	0.786	0.721	0.984

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.919	0.748	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.643	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.535	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.968	0.923	Data Appear Normal
Lilliefors (Detects Only)	0.293	0.375	Data Appear Normal
Lilliefors (NDs = DL)	0.277	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.401	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.108	0.167	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.975	0.831	0.828	0.979

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.303	0.657	
Kolmogorov-Smirnov (Detects Only)	0.272	0.394	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	2.642	0.744	

Kolmogorov-Smirnov (NDs = DL)	0.266	0.168	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	5.07	0.747	
Kolmogorov-Smirnov (NDs = DL/2)	0.359	0.169	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	2.494	0.837	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.314	0.181	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.972	0.848	0.778	0.984

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.957	0.748	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.739	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.614	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.967	0.923	Data Appear Lognormal
Lilliefors (Detects Only)	0.256	0.375	Data Appear Lognormal
Lilliefors (NDs = DL)	0.257	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.326	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.108	0.167	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:33:46 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Antimony

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	9		
Number of Detects	4	Number of Non-Detects	23
Number of Distinct Detects	4	Number of Distinct Non-Detects	6
Minimum Detect	1.3	Minimum Non-Detect	1
Maximum Detect	2.4	Maximum Non-Detect	1.4
Variance Detected	0.217	Percent Non-Detects	85.19%
Mean Detected	1.75	SD Detected	0.465
Mean of Detected Logged Data	0.535	SD of Detected Logged Data	0.255

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.919	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.293	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	1.112	KM SD	0.308
95% UTL95% Coverage	1.809	95% KM UPL (t)	1.648
90% KM Percentile (z)	1.507	95% KM Percentile (z)	1.619
99% KM Percentile (z)	1.83	95% KM USL	1.944

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	0.756	SD	0.454
95% UTL95% Coverage	1.781	95% UPL (t)	1.543
90% Percentile (z)	1.337	95% Percentile (z)	1.502
99% Percentile (z)	1.811	95% USL	1.979

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.303	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.657	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.272	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.394	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	20.17	k star (bias corrected MLE)	5.208
Theta hat (MLE)	0.0868	Theta star (bias corrected MLE)	0.336
nu hat (MLE)	161.3	nu star (bias corrected)	41.66
MLE Mean (bias corrected)	1.75		
MLE Sd (bias corrected)	0.767	95% Percentile of Chisquare (2kstar)	18.88

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.368
Maximum	2.4	Median	0.01
SD	0.64	CV	1.741
k hat (MLE)	0.369	k star (bias corrected MLE)	0.353
Theta hat (MLE)	0.995	Theta star (bias corrected MLE)	1.041
nu hat (MLE)	19.95	nu star (bias corrected)	19.07
MLE Mean (bias corrected)	0.368	MLE Sd (bias corrected)	0.619
95% Percentile of Chisquare (2kstar)	3.062	90% Percentile	1.06
95% Percentile	1.594	99% Percentile	2.954

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	2.368	2.686	95% Approx. Gamma UPL	1.482	1.548
95% Gamma USL	3.338	4.046			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.112	SD (KM)	0.308
Variance (KM)	0.0951	SE of Mean (KM)	0.0687
k hat (KM)	13	k star (KM)	11.58
nu hat (KM)	702	nu star (KM)	625.3
theta hat (KM)	0.0855	theta star (KM)	0.096
80% gamma percentile (KM)	1.374	90% gamma percentile (KM)	1.546
95% gamma percentile (KM)	1.699	99% gamma percentile (KM)	2.01

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	1.759	1.753	95% Approx. Gamma UPL	1.585	1.578
95% KM Gamma Percentile	1.556	1.548	95% Gamma USL	1.913	1.91

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.256	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	0.697	Mean in Log Scale	-0.559
SD in Original Scale	0.512	SD in Log Scale	0.616

95% UTL95% Coverage	2.298	95% BCA UTL95% Coverage	2.4
95% Bootstrap (%) UTL95% Coverage	2.4	95% UPL (t)	1.665
90% Percentile (z)	1.258	95% Percentile (z)	1.574
99% Percentile (z)	2.394	95% USL	3.009

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	0.0801	95% KM UTL (Lognormal)95% Coverage	1.734
KM SD of Logged Data	0.208	95% KM UPL (Lognormal)	1.555
95% KM Percentile Lognormal (z)	1.526	95% KM USL (Lognormal)	1.9

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	0.756	Mean in Log Scale	-0.384
SD in Original Scale	0.454	SD in Log Scale	0.407
95% UTL95% Coverage	1.71	95% UPL (t)	1.382
90% Percentile (z)	1.148	95% Percentile (z)	1.331
99% Percentile (z)	1.757	95% USL	2.044

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	2.4
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	2.12
95% USL	2.4	95% KM Chebyshev UPL	2.481

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:42:39 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Arsenic (sb)

Raw Statistics

Number of Valid Observations	7
Number of Distinct Observations	6
Minimum	3.9
Maximum	8.6
Mean of Raw Data	6.014
Standard Deviation of Raw Data	1.592
Khat	16.14
Theta hat	0.373
Kstar	9.316
Theta star	0.646
Mean of Log Transformed Data	1.763
Standard Deviation of Log Transformed Data	0.274

Normal GOF Test Results

Correlation Coefficient R	0.969
Shapiro Wilk Test Statistic	0.941
Shapiro Wilk Critical (0.05) Value	0.803
Approximate Shapiro Wilk P Value	0.645
Lilliefors Test Statistic	0.191
Lilliefors Critical (0.05) Value	0.304

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.969
A-D Test Statistic	0.34
A-D Critical (0.05) Value	0.707
K-S Test Statistic	0.226
K-S Critical(0.05) Value	0.312

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.967
Shapiro Wilk Test Statistic	0.934
Shapiro Wilk Critical (0.05) Value	0.803
Approximate Shapiro Wilk P Value	0.61
Lilliefors Test Statistic	0.226
Lilliefors Critical (0.05) Value	0.304

Data appear Lognormal at (0.05) Significance Level

Raw Statistics

Number of Valid Observations	20
Number of Distinct Observations	18
Minimum	3.3
Maximum	21
Mean of Raw Data	10.27
Standard Deviation of Raw Data	4.707
Khat	4.835
Theta hat	2.124
Kstar	4.143
Theta star	2.479
Mean of Log Transformed Data	2.222
Standard Deviation of Log Transformed Data	0.49

Normal GOF Test Results

Correlation Coefficient R	0.978
Shapiro Wilk Test Statistic	0.953
Shapiro Wilk Critical (0.05) Value	0.905
Approximate Shapiro Wilk P Value	0.436
Lilliefors Test Statistic	0.147
Lilliefors Critical (0.05) Value	0.192

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.988
A-D Test Statistic	0.213
A-D Critical (0.05) Value	0.745
K-S Test Statistic	0.107
K-S Critical(0.05) Value	0.194

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.988
Shapiro Wilk Test Statistic	0.972
Shapiro Wilk Critical (0.05) Value	0.905
Approximate Shapiro Wilk P Value	0.797
Lilliefors Test Statistic	0.102
Lilliefors Critical (0.05) Value	0.192

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:41:17 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Arsenic (sb)

General Statistics

Total Number of Observations	7	Number of Distinct Observations	6
Minimum	3.9	First Quartile	4.95
Second Largest	6.7	Median	6.5
Maximum	8.6	Third Quartile	6.6
Mean	6.014	SD	1.592
Coefficient of Variation	0.265	Skewness	0.19
Mean of logged Data	1.763	SD of logged Data	0.274

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test

Shapiro Wilk Test Statistic	0.941	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.191	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	11.43	90% Percentile (z)	8.055
	95% UPL (t)	9.322	95% Percentile (z)	8.633
	95% USL	9.1	99% Percentile (z)	9.718

Gamma GOF Test

A-D Test Statistic	0.34	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.707	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.226	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.312	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	16.14	k star (bias corrected MLE)	9.316
Theta hat (MLE)	0.373	Theta star (bias corrected MLE)	0.646
nu hat (MLE)	225.9	nu star (bias corrected)	130.4
MLE Mean (bias corrected)	6.014	MLE Sd (bias corrected)	1.97

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	9.867	90% Percentile	8.637
95% Hawkins Wixley (HW) Approx. Gamma UPL	9.961	95% Percentile	9.579
95% WH Approx. Gamma UTL with 95% Coverage	13.15	99% Percentile	11.52

95% HW Approx. Gamma UTL with	95% Coverage	13.48			
	95% WH USL	9.557		95% HW USL	9.635

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.226	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.304	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	14.79		90% Percentile (z)	8.28
	95% UPL (t)	10.3		95% Percentile (z)	9.146
	95% USL	9.911		99% Percentile (z)	11.02

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		7	95% UTL with	95% Coverage	8.6
Approx, f used to compute achieved CC		0.368	Approximate Actual Confidence Coefficient achieved by UTL		0.302
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	8.6	95% BCA Bootstrap UTL with	95% Coverage	8.6
	95% UPL	8.6		90% Percentile	7.46
	90% Chebyshev UPL	11.12		95% Percentile	8.03
	95% Chebyshev UPL	13.43		99% Percentile	8.486
	95% USL	8.6			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Arsenic (ss)

General Statistics

Total Number of Observations	20	Number of Distinct Observations	18
Minimum	3.3	First Quartile	7.025
Second Largest	16.1	Median	8.85
Maximum	21	Third Quartile	14.2
Mean	10.27	SD	4.707
Coefficient of Variation	0.458	Skewness	0.578
Mean of logged Data	2.222	SD of logged Data	0.49

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.396	d2max (for USL)	2.557

Normal GOF Test

Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.905	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.147	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.192	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	21.55	90% Percentile (z)		16.3
	95% UPL (t)	18.61	95% Percentile (z)		18.01
	95% USL	22.3	99% Percentile (z)		21.22

Gamma GOF Test

A-D Test Statistic	0.213	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.107	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.194	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.835	k star (bias corrected MLE)	4.143
Theta hat (MLE)	2.124	Theta star (bias corrected MLE)	2.479
nu hat (MLE)	193.4	nu star (bias corrected)	165.7
MLE Mean (bias corrected)	10.27	MLE Sd (bias corrected)	5.046

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		20.19	90% Percentile		17.03
95% Hawkins Wixley (HW) Approx. Gamma UPL		20.54	95% Percentile		19.72
95% WH Approx. Gamma UTL with	95% Coverage	25.26	99% Percentile		25.46
95% HW Approx. Gamma UTL with	95% Coverage	26.11			
	95% WH USL	26.69	95% HW USL		27.71

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.905	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.102	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.192	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	29.86	90% Percentile (z)		17.29
	95% UPL (t)	21.99	95% Percentile (z)		20.66
	95% USL	32.3	99% Percentile (z)		28.86

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		20	95% UTL with	95% Coverage	21
Approx, f used to compute achieved CC		1.053	Approximate Actual Confidence Coefficient achieved by UTL		0.642
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	21	95% BCA Bootstrap UTL with	95% Coverage	21
	95% UPL	20.76	90% Percentile		16.1
	90% Chebyshev UPL	24.74	95% Percentile		16.35
	95% Chebyshev UPL	31.29	99% Percentile		20.07
	95% USL	21			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.

Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:52:18 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Barium

Raw Statistics

Number of Valid Observations	27
Number of Distinct Observations	27
Minimum	27.2
Maximum	183
Mean of Raw Data	80.28
Standard Deviation of Raw Data	42.28
Khat	4.037
Theta hat	19.89
Kstar	3.613
Theta star	22.22
Mean of Log Transformed Data	4.257
Standard Deviation of Log Transformed Data	0.518

Normal GOF Test Results

Correlation Coefficient R	0.956
Shapiro Wilk Test Statistic	0.906
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.0188
Lilliefors Test Statistic	0.17
Lilliefors Critical (0.05) Value	0.167

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.988
A-D Test Statistic	0.39
A-D Critical (0.05) Value	0.749
K-S Test Statistic	0.127
K-S Critical(0.05) Value	0.169

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.991
Shapiro Wilk Test Statistic	0.971
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.655
Lilliefors Test Statistic	0.0957
Lilliefors Critical (0.05) Value	0.167

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:51:13 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Barium

General Statistics

Total Number of Observations	27	Number of Distinct Observations	27
Minimum	27.2	First Quartile	47
Second Largest	153	Median	63.8
Maximum	183	Third Quartile	98.2
Mean	80.28	SD	42.28
Coefficient of Variation	0.527	Skewness	0.9
Mean of logged Data	4.257	SD of logged Data	0.518

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test

Shapiro Wilk Test Statistic	0.906	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.17	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	175.8	90% Percentile (z)	134.5
	95% UPL (t)	153.7	95% Percentile (z)	149.8
	95% USL	194.4	99% Percentile (z)	178.6

Gamma GOF Test

A-D Test Statistic	0.39	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.127	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.169	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.037	k star (bias corrected MLE)	3.613
Theta hat (MLE)	19.89	Theta star (bias corrected MLE)	22.22
nu hat (MLE)	218	nu star (bias corrected)	195.1
MLE Mean (bias corrected)	80.28	MLE Sd (bias corrected)	42.24

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	162.8	90% Percentile	136.9
95% Hawkins Wixley (HW) Approx. Gamma UPL	164.9	95% Percentile	159.9
95% WH Approx. Gamma UTL with 95% Coverage	199.4	99% Percentile	209.4

95% HW Approx. Gamma UTL with	95% Coverage	204.8			
	95% WH USL	234		95% HW USL	243.4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0957	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	227.6	90% Percentile (z)	137.1
	95% UPL (t)	173.6	95% Percentile (z)	165.5
	95% USL	285.5	99% Percentile (z)	235.5

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r	27	95% UTL with	95% Coverage	183
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL		0.75
		Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	183	95% BCA Bootstrap UTL with 95% Coverage	183
	95% UPL	171	90% Percentile	146.8
	90% Chebyshev UPL	209.5	95% Percentile	152.4
	95% Chebyshev UPL	268	99% Percentile	175.2
	95% USL	183		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:57:32 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Beryllium

Raw Statistics

Number of Valid Observations	27
Number of Distinct Observations	25
Minimum	0.25
Maximum	1.3
Mean of Raw Data	0.656
Standard Deviation of Raw Data	0.301
Khat	4.973
Theta hat	0.132
Kstar	4.445
Theta star	0.148
Mean of Log Transformed Data	-0.525
Standard Deviation of Log Transformed Data	0.471

Normal GOF Test Results

Correlation Coefficient R	0.973
Shapiro Wilk Test Statistic	0.934
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.0955
Lilliefors Test Statistic	0.144
Lilliefors Critical (0.05) Value	0.167

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.988
A-D Test Statistic	0.286
A-D Critical (0.05) Value	0.747
K-S Test Statistic	0.102
K-S Critical(0.05) Value	0.169

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.991
Shapiro Wilk Test Statistic	0.968
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.56
Lilliefors Test Statistic	0.086
Lilliefors Critical (0.05) Value	0.167

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 9:56:05 PM
From File	C:\Users\K[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Beryllium

General Statistics

Total Number of Observations	27	Number of Distinct Observations	25
Minimum	0.25	First Quartile	0.43
Second Largest	1.2	Median	0.58
Maximum	1.3	Third Quartile	0.87
Mean	0.656	SD	0.301
Coefficient of Variation	0.459	Skewness	0.605
Mean of logged Data	-0.525	SD of logged Data	0.471

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test

Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.144	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	1.337	90% Percentile (z)	1.042
	95% UPL (t)	1.179	95% Percentile (z)	1.151
	95% USL	1.469	99% Percentile (z)	1.357

Gamma GOF Test

A-D Test Statistic	0.286	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.102	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.169	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.973	k star (bias corrected MLE)	4.445
Theta hat (MLE)	0.132	Theta star (bias corrected MLE)	0.148
nu hat (MLE)	268.5	nu star (bias corrected)	240
MLE Mean (bias corrected)	0.656	MLE Sd (bias corrected)	0.311

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	1.258	90% Percentile	1.073
95% Hawkins Wixley (HW) Approx. Gamma UPL	1.275	95% Percentile	1.237
95% WH Approx. Gamma UTL with 95% Coverage	1.516	99% Percentile	1.586

95% HW Approx. Gamma UTL with	95% Coverage	1.555			
	95% WH USL	1.758		95% HW USL	1.823

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.968	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.086	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	1.715		90% Percentile (z)	1.082
	95% UPL (t)	1.34		95% Percentile (z)	1.283
	95% USL	2.108		99% Percentile (z)	1.769

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

	Order of Statistic, r	27	95% UTL with	95% Coverage	1.3
	Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL		0.75
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	1.3	95% BCA Bootstrap UTL with	95% Coverage	1.27
	95% UPL	1.26		90% Percentile	1.1
	90% Chebyshev UPL	1.576		95% Percentile	1.17
	95% Chebyshev UPL	1.993		99% Percentile	1.274
	95% USL	1.3			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:02:42 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Cadmium

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	19	8	29.63%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	8	0.52	0.56	0.545	0.545	0.0131
Statistics (Non-Detects Only)	19	0.08	1.1	0.361	0.215	0.312
Statistics (All: NDs treated as DL value)	27	0.08	1.1	0.416	0.43	0.273
Statistics (All: NDs treated as DL/2 value)	27	0.08	1.1	0.335	0.27	0.263
Statistics (Normal ROS Imputed Data)	27	0.08	1.1	0.333	0.24	0.271
Statistics (Gamma ROS Imputed Data)	27	0.08	1.1	0.318	0.209	0.273
Statistics (Lognormal ROS Imputed Data)	27	0.08	1.1	0.316	0.201	0.272

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.672	1.443	0.216	-1.346	0.828	-0.615
Statistics (NDs = DL)	2.157	1.942	0.193	-1.127	0.77	-0.683
Statistics (NDs = DL/2)	2.247	2.022	0.149	-1.332	0.689	-0.517
Statistics (Gamma ROS Estimates)	1.891	1.705	0.168	-1.431	0.75	-0.524
Statistics (Lognormal ROS Estimates)	--	--	--	-1.427	0.724	-0.507

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.906	0.956	0.875	0.899

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.814	0.901	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.907	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.767	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.807	0.923	Data Not Normal
Lilliefors (Detects Only)	0.247	0.197	Data Not Normal
Lilliefors (NDs = DL)	0.151	0.167	Data Appear Normal
Lilliefors (NDs = DL/2)	0.324	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.221	0.167	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.978	0.974	0.959	0.974

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.608	0.755	
Kolmogorov-Smirnov (Detects Only)	0.169	0.202	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.713	0.756	

Kolmogorov-Smirnov (NDs = DL)	0.175	0.17	Detected Data appear Approximate Gamma Distri
Anderson-Darling (NDs = DL/2)	1.045	0.755	
Kolmogorov-Smirnov (NDs = DL/2)	0.254	0.17	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.767	0.758	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.156	0.171	Detected Data appear Approximate Gamma Distri

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.979	0.968	0.973	0.979

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.943	0.901	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.922	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.941	0.923	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.947	0.923	Data Appear Lognormal
Lilliefors (Detects Only)	0.118	0.197	Data Appear Lognormal
Lilliefors (NDs = DL)	0.195	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.206	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.137	0.167	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:01:41 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Cadmium

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	22		
Number of Detects	19	Number of Non-Detects	8
Number of Distinct Detects	18	Number of Distinct Non-Detects	4
Minimum Detect	0.08	Minimum Non-Detect	0.52
Maximum Detect	1.1	Maximum Non-Detect	0.56
Variance Detected	0.0974	Percent Non-Detects	29.63%
Mean Detected	0.361	SD Detected	0.312
Mean of Detected Logged Data	-1.346	SD of Detected Logged Data	0.828

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.814	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.901	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.247	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.197	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	0.319	KM SD	0.271
95% UTL95% Coverage	0.933	95% KM UPL (t)	0.791
90% KM Percentile (z)	0.667	95% KM Percentile (z)	0.766
99% KM Percentile (z)	0.951	95% KM USL	1.052

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	0.335	SD	0.263
95% UTL95% Coverage	0.929	95% UPL (t)	0.792
90% Percentile (z)	0.672	95% Percentile (z)	0.768
99% Percentile (z)	0.947	95% USL	1.045

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.608	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.169	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.202	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.672	k star (bias corrected MLE)	1.443
Theta hat (MLE)	0.216	Theta star (bias corrected MLE)	0.25
nu hat (MLE)	63.55	nu star (bias corrected)	54.85
MLE Mean (bias corrected)	0.361		
MLE Sd (bias corrected)	0.301	95% Percentile of Chisquare (2kstar)	7.617

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.08	Mean	0.318
Maximum	1.1	Median	0.209
SD	0.273	CV	0.858
k hat (MLE)	1.891	k star (bias corrected MLE)	1.705
Theta hat (MLE)	0.168	Theta star (bias corrected MLE)	0.187
nu hat (MLE)	102.1	nu star (bias corrected)	92.1
MLE Mean (bias corrected)	0.318	MLE Sd (bias corrected)	0.244
95% Percentile of Chisquare (2kstar)	8.516	90% Percentile	0.643
95% Percentile	0.795	99% Percentile	1.135

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	1.063	1.101	95% Approx. Gamma UPL	0.811	0.821
95% Gamma USL	1.31	1.387			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.319	SD (KM)	0.271
Variance (KM)	0.0737	SE of Mean (KM)	0.0561
k hat (KM)	1.384	k star (KM)	1.255
nu hat (KM)	74.75	nu star (KM)	67.78
theta hat (KM)	0.231	theta star (KM)	0.254
80% gamma percentile (KM)	0.503	90% gamma percentile (KM)	0.695
95% gamma percentile (KM)	0.884	99% gamma percentile (KM)	1.315

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	1.063	1.103	95% Approx. Gamma UPL	0.81	0.821
95% KM Gamma Percentile	0.77	0.778	95% Gamma USL	1.312	1.39

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.901	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.118	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.197	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	0.316	Mean in Log Scale	-1.427
SD in Original Scale	0.272	SD in Log Scale	0.724

95% UTL95% Coverage	1.232	95% BCA UTL95% Coverage	1.1
95% Bootstrap (%) UTL95% Coverage	1.1	95% UPL (t)	0.844
90% Percentile (z)	0.607	95% Percentile (z)	0.79
99% Percentile (z)	1.293	95% USL	1.692

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	-1.442	95% KM UTL (Lognormal)95% Coverage	1.306
KM SD of Logged Data	0.756	95% KM UPL (Lognormal)	0.88
95% KM Percentile Lognormal (z)	0.82	95% KM USL (Lognormal)	1.819

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	0.335	Mean in Log Scale	-1.332
SD in Original Scale	0.263	SD in Log Scale	0.689
95% UTL95% Coverage	1.253	95% UPL (t)	0.874
90% Percentile (z)	0.638	95% Percentile (z)	0.82
99% Percentile (z)	1.312	95% USL	1.695

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	1.1
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	1.032
95% USL	1.1	95% KM Chebyshev UPL	1.524

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:15:17 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Calcium (sb)

Raw Statistics

Number of Valid Observations	6
Number of Missing Observations	1
Number of Distinct Observations	6
Minimum	161
Maximum	718
Mean of Raw Data	337.7
Standard Deviation of Raw Data	211.6
Khat	3.628
Theta hat	93.07
Kstar	1.925
Theta star	175.4
Mean of Log Transformed Data	5.678
Standard Deviation of Log Transformed Data	0.572

Normal GOF Test Results

Correlation Coefficient R	0.918
Shapiro Wilk Test Statistic	0.844
Shapiro Wilk Critical (0.05) Value	0.788
Approximate Shapiro Wilk P Value	N/A
Lilliefors Test Statistic	0.285
Lilliefors Critical (0.05) Value	0.325

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.98
A-D Test Statistic	0.357
A-D Critical (0.05) Value	0.7
K-S Test Statistic	0.248
K-S Critical(0.05) Value	0.334

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.968
Shapiro Wilk Test Statistic	0.927
Shapiro Wilk Critical (0.05) Value	0.788
Approximate Shapiro Wilk P Value	N/A
Lilliefors Test Statistic	0.212
Lilliefors Critical (0.05) Value	0.325

Data appear Lognormal at (0.05) Significance Level

Calcium (ss)

Raw Statistics

Number of Valid Observations	17
Number of Missing Observations	3
Number of Distinct Observations	17
Minimum	231
Maximum	1900
Mean of Raw Data	853.1
Standard Deviation of Raw Data	565.9
Khat	2.404
Theta hat	354.8
Kstar	2.019
Theta star	422.5
Mean of Log Transformed Data	6.527
Standard Deviation of Log Transformed Data	0.7

Normal GOF Test Results

Correlation Coefficient R	0.94
Shapiro Wilk Test Statistic	0.866
Shapiro Wilk Critical (0.05) Value	0.892
Approximate Shapiro Wilk P Value	0.0225
Lilliefors Test Statistic	0.197
Lilliefors Critical (0.05) Value	0.207

Data appear Approximate Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.956
A-D Test Statistic	0.665
A-D Critical (0.05) Value	0.748
K-S Test Statistic	0.172
K-S Critical(0.05) Value	0.211

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.97
Shapiro Wilk Test Statistic	0.921
Shapiro Wilk Critical (0.05) Value	0.892
Approximate Shapiro Wilk P Value	0.201
Lilliefors Test Statistic	0.174
Lilliefors Critical (0.05) Value	0.207

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:10:59 PM
From File	C:\Users\[redacted]Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Calcium (sb)

General Statistics

Total Number of Observations	6	Number of Distinct Observations	6
		Number of Missing Observations	1
Minimum	161	First Quartile	193.8
Second Largest	440	Median	268
Maximum	718	Third Quartile	398.5
Mean	337.7	SD	211.6
Coefficient of Variation	0.627	Skewness	1.433
Mean of logged Data	5.678	SD of logged Data	0.572

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.708	d2max (for USL)	1.822

Normal GOF Test

Shapiro Wilk Test Statistic	0.844	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.285	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	1122	90% Percentile (z)	608.9
	95% UPL (t)	798.2	95% Percentile (z)	685.7
	95% USL	723.2	99% Percentile (z)	829.9

Gamma GOF Test

A-D Test Statistic	0.357	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.7	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.248	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.334	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.628	k star (bias corrected MLE)	1.925
Theta hat (MLE)	93.07	Theta star (bias corrected MLE)	175.4
nu hat (MLE)	43.54	nu star (bias corrected)	23.1
MLE Mean (bias corrected)	337.7	MLE Sd (bias corrected)	243.4

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	898.7	90% Percentile	662.6
95% Hawkins Wixley (HW) Approx. Gamma UPL	921	95% Percentile	810.7

95% WH Approx. Gamma UTL with	95% Coverage	1601	99% Percentile	1140	
95% HW Approx. Gamma UTL with	95% Coverage	1731			
	95% WH USL	772.8	95% HW USL	783.7	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.927	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.788	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.212	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.325	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	2435	90% Percentile (z)	608.3	
	95% UPL (t)	1015	95% Percentile (z)	748.7	
	95% USL	828.5	99% Percentile (z)	1105	

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r	6		95% UTL with	95% Coverage	718
Approx, f used to compute achieved CC	0.316		Approximate Actual Confidence Coefficient achieved by UTL		0.265
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	718	95% BCA Bootstrap UTL with	95% Coverage	718
	95% UPL	718		90% Percentile	579
	90% Chebyshev UPL	1023		95% Percentile	648.5
	95% Chebyshev UPL	1334		99% Percentile	704.1
	95% USL	718			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Calcium (ss)

General Statistics

Total Number of Observations	17	Number of Distinct Observations	17
		Number of Missing Observations	3
Minimum	231	First Quartile	367
Second Largest	1650	Median	677
Maximum	1900	Third Quartile	1400
Mean	853.1	SD	565.9
Coefficient of Variation	0.663	Skewness	0.612
Mean of logged Data	6.527	SD of logged Data	0.7

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.486	d2max (for USL)	2.475

Normal GOF Test

Shapiro Wilk Test Statistic	0.866	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Data Not Normal at 5% Significance Level	

Lilliefors Test Statistic	0.197	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	2260	90% Percentile (z)		1578
	95% UPL (t)	1870	95% Percentile (z)		1784
	95% USL	2254	99% Percentile (z)		2170

Gamma GOF Test

A-D Test Statistic	0.665	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.172	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.211	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.404	k star (bias corrected MLE)	2.019
Theta hat (MLE)	354.8	Theta star (bias corrected MLE)	422.5
nu hat (MLE)	81.74	nu star (bias corrected)	68.65
MLE Mean (bias corrected)	853.1	MLE Sd (bias corrected)	600.3

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		2107	90% Percentile		1655
95% Hawkins Wixley (HW) Approx. Gamma UPL		2162	95% Percentile		2017
95% WH Approx. Gamma UTL with	95% Coverage	2908	99% Percentile		2820
95% HW Approx. Gamma UTL with	95% Coverage	3073			
	95% WH USL	2893	95% HW USL		3056

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.921	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.174	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.207	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	3891	90% Percentile (z)		1675
	95% UPL (t)	2402	95% Percentile (z)		2160
	95% USL	3861	99% Percentile (z)		3480

Nonparametric Distribution Free Background Statistics

Data appear Approximate Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		17	95% UTL with	95% Coverage	1900
Approx, f used to compute achieved CC		0.895	Approximate Actual Confidence Coefficient achieved by UTL		0.582
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	1900	95% BCA Bootstrap UTL with	95% Coverage	1900
	95% UPL	1900		90% Percentile	1620
	90% Chebyshev UPL	2600		95% Percentile	1700
	95% Chebyshev UPL	3391		99% Percentile	1860
	95% USL	1900			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:21:20 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Chromium

Raw Statistics

Number of Valid Observations	26
Number of Missing Observations	1
Number of Distinct Observations	24
Minimum	4.8
Maximum	23.9
Mean of Raw Data	13.32
Standard Deviation of Raw Data	4.855
Khat	7.832
Theta hat	1.701
Kstar	6.954
Theta star	1.915
Mean of Log Transformed Data	2.524
Standard Deviation of Log Transformed Data	0.376

Normal GOF Test Results

Correlation Coefficient R	0.975
Shapiro Wilk Test Statistic	0.946
Shapiro Wilk Critical (0.05) Value	0.92
Approximate Shapiro Wilk P Value	0.202
Lilliefors Test Statistic	0.169
Lilliefors Critical (0.05) Value	0.17

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.986
A-D Test Statistic	0.265
A-D Critical (0.05) Value	0.745
K-S Test Statistic	0.122
K-S Critical(0.05) Value	0.171

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.986
Shapiro Wilk Test Statistic	0.973
Shapiro Wilk Critical (0.05) Value	0.92
Approximate Shapiro Wilk P Value	0.723
Lilliefors Test Statistic	0.102
Lilliefors Critical (0.05) Value	0.17

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:20:21 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Chromium

General Statistics

Total Number of Observations	26	Number of Distinct Observations	24
		Number of Missing Observations	1
Minimum	4.8	First Quartile	10.1
Second Largest	22.8	Median	12.75
Maximum	23.9	Third Quartile	15.85
Mean	13.32	SD	4.855
Coefficient of Variation	0.365	Skewness	0.656
Mean of logged Data	2.524	SD of logged Data	0.376

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.275	d2max (for USL)	2.681

Normal GOF Test

Shapiro Wilk Test Statistic	0.946	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.92	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.169	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.17	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	24.36	90% Percentile (z)	19.54
	95% UPL (t)	21.77	95% Percentile (z)	21.31
	95% USL	26.34	99% Percentile (z)	24.61

Gamma GOF Test

A-D Test Statistic	0.265	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.122	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.171	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.832	k star (bias corrected MLE)	6.954
Theta hat (MLE)	1.701	Theta star (bias corrected MLE)	1.915
nu hat (MLE)	407.3	nu star (bias corrected)	361.6
MLE Mean (bias corrected)	13.32	MLE Sd (bias corrected)	5.051

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	22.85	90% Percentile	20.06
95% Hawkins Wixley (HW) Approx. Gamma UPL	23.08	95% Percentile	22.57

95% WH Approx. Gamma UTL with	95% Coverage	26.77	99% Percentile	27.78	
95% HW Approx. Gamma UTL with	95% Coverage	27.28			
	95% WH USL	30.04	95% HW USL	30.83	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.973	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.92	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.102	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.17	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	29.33	90% Percentile (z)	20.19	
	95% UPL (t)	23.99	95% Percentile (z)	23.15	
	95% USL	34.15	99% Percentile (z)	29.9	

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		26	95% UTL with	95% Coverage	23.9
Approx, f used to compute achieved CC		1.368	Approximate Actual Confidence Coefficient achieved by UTL		0.736
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	23.9	95% BCA Bootstrap UTL with	95% Coverage	23.9
	95% UPL	23.52		90% Percentile	21.08
	90% Chebyshev UPL	28.16		95% Percentile	22.39
	95% Chebyshev UPL	34.88		99% Percentile	23.63
	95% USL	23.9			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:25:42 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Cobalt

Raw Statistics

Number of Valid Observations	27
Number of Distinct Observations	27
Minimum	3.1
Maximum	20.8
Mean of Raw Data	9.38
Standard Deviation of Raw Data	5.16
Khat	3.666
Theta hat	2.558
Kstar	3.284
Theta star	2.856
Mean of Log Transformed Data	2.096
Standard Deviation of Log Transformed Data	0.547

Normal GOF Test Results

Correlation Coefficient R	0.954
Shapiro Wilk Test Statistic	0.897
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.0113
Lilliefors Test Statistic	0.191
Lilliefors Critical (0.05) Value	0.167

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.984
A-D Test Statistic	0.415
A-D Critical (0.05) Value	0.75
K-S Test Statistic	0.131
K-S Critical(0.05) Value	0.169

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.989
Shapiro Wilk Test Statistic	0.963
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.459
Lilliefors Test Statistic	0.0963
Lilliefors Critical (0.05) Value	0.167

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:24:49 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Cobalt

General Statistics

Total Number of Observations	27	Number of Distinct Observations	27
Minimum	3.1	First Quartile	5.8
Second Largest	20.7	Median	7.6
Maximum	20.8	Third Quartile	12.3
Mean	9.38	SD	5.16
Coefficient of Variation	0.55	Skewness	0.901
Mean of logged Data	2.096	SD of logged Data	0.547

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test

Shapiro Wilk Test Statistic	0.897	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.191	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	21.04	90% Percentile (z)	15.99
	95% UPL (t)	18.34	95% Percentile (z)	17.87
	95% USL	23.3	99% Percentile (z)	21.38

Gamma GOF Test

A-D Test Statistic	0.415	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.131	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.169	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.666	k star (bias corrected MLE)	3.284
Theta hat (MLE)	2.558	Theta star (bias corrected MLE)	2.856
nu hat (MLE)	198	nu star (bias corrected)	177.3
MLE Mean (bias corrected)	9.38	MLE Sd (bias corrected)	5.176

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	19.55	90% Percentile	16.32
95% Hawkins Wixley (HW) Approx. Gamma UPL	19.84	95% Percentile	19.19
95% WH Approx. Gamma UTL with 95% Coverage	24.14	99% Percentile	25.37

95% HW Approx. Gamma UTL with	95% Coverage	24.86			
	95% WH USL	28.49		95% HW USL	29.75

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0963	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	28.02		90% Percentile (z)	16.4
	95% UPL (t)	21.05		95% Percentile (z)	20.01
	95% USL	35.62		99% Percentile (z)	29.06

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

	Order of Statistic, r	27	95% UTL with	95% Coverage	20.8
Approx, f used to compute achieved CC		1.421	Approximate Actual Confidence Coefficient achieved by UTL		0.75
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	20.8	95% BCA Bootstrap UTL with	95% Coverage	20.8
	95% UPL	20.76		90% Percentile	16.72
	90% Chebyshev UPL	25.14		95% Percentile	20.01
	95% Chebyshev UPL	32.28		99% Percentile	20.77
	95% USL	20.8			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:30:27 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Copper

Raw Statistics

Number of Valid Observations	26
Number of Missing Observations	1
Number of Distinct Observations	25
Minimum	3.5
Maximum	93.4
Mean of Raw Data	29.39
Standard Deviation of Raw Data	23.86
Khat	1.701
Theta hat	17.28
Kstar	1.53
Theta star	19.2
Mean of Log Transformed Data	3.059
Standard Deviation of Log Transformed Data	0.857

Normal GOF Test Results

Correlation Coefficient R	0.926
Shapiro Wilk Test Statistic	0.854
Shapiro Wilk Critical (0.05) Value	0.92
Approximate Shapiro Wilk P Value	0.00139
Lilliefors Test Statistic	0.241
Lilliefors Critical (0.05) Value	0.17

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.988
A-D Test Statistic	0.304
A-D Critical (0.05) Value	0.76
K-S Test Statistic	0.139
K-S Critical(0.05) Value	0.174

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.99
Shapiro Wilk Test Statistic	0.973
Shapiro Wilk Critical (0.05) Value	0.92
Approximate Shapiro Wilk P Value	0.727
Lilliefors Test Statistic	0.0933
Lilliefors Critical (0.05) Value	0.17

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:29:39 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Copper

General Statistics

Total Number of Observations	26	Number of Distinct Observations	25
		Number of Missing Observations	1
Minimum	3.5	First Quartile	13.35
Second Largest	78.2	Median	22.5
Maximum	93.4	Third Quartile	39.98
Mean	29.39	SD	23.86
Coefficient of Variation	0.812	Skewness	1.302
Mean of logged Data	3.059	SD of logged Data	0.857

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.275	d2max (for USL)	2.681

Normal GOF Test

Shapiro Wilk Test Statistic	0.854	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.92	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.241	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.17	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	83.67	90% Percentile (z)	59.97
	95% UPL (t)	70.92	95% Percentile (z)	68.63
	95% USL	93.35	99% Percentile (z)	84.89

Gamma GOF Test

A-D Test Statistic	0.304	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.76	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.139	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.174	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.701	k star (bias corrected MLE)	1.53
Theta hat (MLE)	17.28	Theta star (bias corrected MLE)	19.2
nu hat (MLE)	88.46	nu star (bias corrected)	79.58
MLE Mean (bias corrected)	29.39	MLE Sd (bias corrected)	23.76

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	78.13	90% Percentile	60.94
95% Hawkins Wixley (HW) Approx. Gamma UPL	80.69	95% Percentile	76.05

95% WH Approx. Gamma UTL with	95% Coverage	104	99% Percentile	110.1	
95% HW Approx. Gamma UTL with	95% Coverage	110.6			
	95% WH USL	127.1	95% HW USL	138.4	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.973	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.92	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0933	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.17	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	149.8	90% Percentile (z)	63.91	
	95% UPL (t)	94.74	95% Percentile (z)	87.27	
	95% USL	212.1	99% Percentile (z)	156.5	

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		26	95% UTL with	95% Coverage	93.4
Approx, f used to compute achieved CC		1.368	Approximate Actual Confidence Coefficient achieved by UTL		0.736
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	93.4	95% BCA Bootstrap UTL with	95% Coverage	93.4
	95% UPL	88.08		90% Percentile	65.9
	90% Chebyshev UPL	102.3		95% Percentile	75.3
	95% Chebyshev UPL	135.4		99% Percentile	89.6
	95% USL	93.4			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:35:55 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Iron

Raw Statistics

Number of Valid Observations	26
Number of Missing Observations	1
Number of Distinct Observations	23
Minimum	6500
Maximum	38900
Mean of Raw Data	18135
Standard Deviation of Raw Data	7610
Khat	5.869
Theta hat	3090
Kstar	5.217
Theta star	3476
Mean of Log Transformed Data	9.718
Standard Deviation of Log Transformed Data	0.438

Normal GOF Test Results

Correlation Coefficient R	0.969
Shapiro Wilk Test Statistic	0.942
Shapiro Wilk Critical (0.05) Value	0.92
Approximate Shapiro Wilk P Value	0.159
Lilliefors Test Statistic	0.171
Lilliefors Critical (0.05) Value	0.17

Data appear Approximate Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.985
A-D Test Statistic	0.359
A-D Critical (0.05) Value	0.746
K-S Test Statistic	0.117
K-S Critical(0.05) Value	0.171

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.982
Shapiro Wilk Test Statistic	0.963
Shapiro Wilk Critical (0.05) Value	0.92
Approximate Shapiro Wilk P Value	0.475
Lilliefors Test Statistic	0.133
Lilliefors Critical (0.05) Value	0.17

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:34:52 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Iron

General Statistics

Total Number of Observations	26	Number of Distinct Observations	23
		Number of Missing Observations	1
Minimum	6500	First Quartile	13400
Second Largest	28100	Median	16050
Maximum	38900	Third Quartile	24200
Mean	18135	SD	7610
Coefficient of Variation	0.42	Skewness	0.76
Mean of logged Data	9.718	SD of logged Data	0.438

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.275	d2max (for USL)	2.681

Normal GOF Test

Shapiro Wilk Test Statistic	0.942	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.92	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.171	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.17	Data Not Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	35448	90% Percentile (z)	27888
	95% UPL (t)	31382	95% Percentile (z)	30652
	95% USL	38537	99% Percentile (z)	35838

Gamma GOF Test

A-D Test Statistic	0.359	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.117	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.171	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.869	k star (bias corrected MLE)	5.217
Theta hat (MLE)	3090	Theta star (bias corrected MLE)	3476
nu hat (MLE)	305.2	nu star (bias corrected)	271.3
MLE Mean (bias corrected)	18135	MLE Sd (bias corrected)	7940

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	33360	90% Percentile	28762
95% Hawkins Wixley (HW) Approx. Gamma UPL	33807	95% Percentile	32855

95% WH Approx. Gamma UTL with	95% Coverage	39865	99% Percentile	41488	
95% HW Approx. Gamma UTL with	95% Coverage	40856			
	95% WH USL	45335	95% HW USL	46906	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.92	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.133	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.17	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	45028	90% Percentile (z)	29134	
	95% UPL (t)	35627	95% Percentile (z)	34162	
	95% USL	53794	99% Percentile (z)	46053	

Nonparametric Distribution Free Background Statistics

Data appear Approximate Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		26	95% UTL with	95% Coverage	38900
Approx, f used to compute achieved CC		1.368	Approximate Actual Confidence Coefficient achieved by UTL		0.736
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	38900	95% BCA Bootstrap UTL with	95% Coverage	38900
	95% UPL	35120		90% Percentile	27400
	90% Chebyshev UPL	41400		95% Percentile	28000
	95% Chebyshev UPL	51938		99% Percentile	36200
	95% USL	38900			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:42:11 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Lead (sb)

Raw Statistics

Number of Valid Observations	7
Number of Distinct Observations	7
Minimum	8.5
Maximum	70.45
Mean of Raw Data	31.52
Standard Deviation of Raw Data	24.09
Khat	1.945
Theta hat	16.21
Kstar	1.207
Theta star	26.13
Mean of Log Transformed Data	3.172
Standard Deviation of Log Transformed Data	0.83

Normal GOF Test Results

Correlation Coefficient R	0.953
Shapiro Wilk Test Statistic	0.89
Shapiro Wilk Critical (0.05) Value	0.803
Approximate Shapiro Wilk P Value	0.39
Lilliefors Test Statistic	0.191
Lilliefors Critical (0.05) Value	0.304

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.981
A-D Test Statistic	0.289
A-D Critical (0.05) Value	0.716
K-S Test Statistic	0.193
K-S Critical(0.05) Value	0.315

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.98
Shapiro Wilk Test Statistic	0.935
Shapiro Wilk Critical (0.05) Value	0.803
Approximate Shapiro Wilk P Value	0.82
Lilliefors Test Statistic	0.16
Lilliefors Critical (0.05) Value	0.304

Data appear Lognormal at (0.05) Significance Level

Raw Statistics

Number of Valid Observations	18
Number of Missing Observations	2
Number of Distinct Observations	18
Minimum	13.6
Maximum	194
Mean of Raw Data	79.06
Standard Deviation of Raw Data	59.8
Khat	1.654
Theta hat	47.81
Kstar	1.415
Theta star	55.88
Mean of Log Transformed Data	4.038
Standard Deviation of Log Transformed Data	0.899

Normal GOF Test Results

Correlation Coefficient R	0.953
Shapiro Wilk Test Statistic	0.892
Shapiro Wilk Critical (0.05) Value	0.897
Approximate Shapiro Wilk P Value	0.0488
Lilliefors Test Statistic	0.147
Lilliefors Critical (0.05) Value	0.202

Data appear Approximate Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.968
A-D Test Statistic	0.401
A-D Critical (0.05) Value	0.755
K-S Test Statistic	0.151
K-S Critical(0.05) Value	0.207

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.97
Shapiro Wilk Test Statistic	0.921
Shapiro Wilk Critical (0.05) Value	0.897
Approximate Shapiro Wilk P Value	0.173
Lilliefors Test Statistic	0.15
Lilliefors Critical (0.05) Value	0.202

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:40:28 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Lead (sb)

General Statistics

Total Number of Observations	7	Number of Distinct Observations	7
Minimum	8.5	First Quartile	12.25
Second Largest	56.4	Median	24.8
Maximum	70.45	Third Quartile	46.2
Mean	31.52	SD	24.09
Coefficient of Variation	0.764	Skewness	0.788
Mean of logged Data	3.172	SD of logged Data	0.83

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test

Shapiro Wilk Test Statistic	0.89	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.191	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	113.4	90% Percentile (z)	62.39
	95% UPL (t)	81.56	95% Percentile (z)	71.14
	95% USL	78.2	99% Percentile (z)	87.55

Gamma GOF Test

A-D Test Statistic	0.289	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.716	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.193	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.315	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.945	k star (bias corrected MLE)	1.207
Theta hat (MLE)	16.21	Theta star (bias corrected MLE)	26.13
nu hat (MLE)	27.23	nu star (bias corrected)	16.89
MLE Mean (bias corrected)	31.52	MLE Sd (bias corrected)	28.7

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	102	90% Percentile	69.29
95% Hawkins Wixley (HW) Approx. Gamma UPL	107.3	95% Percentile	88.43
95% WH Approx. Gamma UTL with 95% Coverage	190.3	99% Percentile	132.3

95% HW Approx. Gamma UTL with	95% Coverage	216.1			
	95% WH USL	94.7		95% HW USL	98.92

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.935	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.16	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.304	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	400.6		90% Percentile (z)	69.11
	95% UPL (t)	133.8		95% Percentile (z)	93.42
	95% USL	119.2		99% Percentile (z)	164.5

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

	Order of Statistic, r	7	95% UTL with	95% Coverage	70.45
	Approx, f used to compute achieved CC	0.368	Approximate Actual Confidence Coefficient achieved by UTL		0.302
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	70.45	95% BCA Bootstrap UTL with	95% Coverage	70.45
	95% UPL	70.45		90% Percentile	62.02
	90% Chebyshev UPL	108.8		95% Percentile	66.24
	95% Chebyshev UPL	143.8		99% Percentile	69.61
	95% USL	70.45			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Lead (ss)

General Statistics

	Total Number of Observations	18		Number of Distinct Observations	18
				Number of Missing Observations	2
	Minimum	13.6		First Quartile	24.48
	Second Largest	180		Median	68.75
	Maximum	194		Third Quartile	108.4
	Mean	79.06		SD	59.8
	Coefficient of Variation	0.756		Skewness	0.73
	Mean of logged Data	4.038		SD of logged Data	0.899

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.453	d2max (for USL)	2.504

Normal GOF Test

Shapiro Wilk Test Statistic	0.892	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.147	**Lilliefors GOF Test**	

5% Lilliefors Critical Value	0.202	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	225.8	90% Percentile (z)	155.7
	95% UPL (t)	185.9	95% Percentile (z)	177.4
	95% USL	228.8	99% Percentile (z)	218.2

Gamma GOF Test

A-D Test Statistic	0.401	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.151	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.207	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.654	k star (bias corrected MLE)	1.415
Theta hat (MLE)	47.81	Theta star (bias corrected MLE)	55.88
nu hat (MLE)	59.53	nu star (bias corrected)	50.94
MLE Mean (bias corrected)	79.06	MLE Sd (bias corrected)	66.47

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		221.2	90% Percentile	167.1
95% Hawkins Wixley (HW) Approx. Gamma UPL		231.3	95% Percentile	210
95% WH Approx. Gamma UTL with	95% Coverage	315.7	99% Percentile	307.3
95% HW Approx. Gamma UTL with	95% Coverage	343.8		
	95% WH USL	323.9	95% HW USL	353.8

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.921	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.897	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.15	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.202	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	514.8	90% Percentile (z)	179.6
	95% UPL (t)	283	95% Percentile (z)	248.9
	95% USL	539	99% Percentile (z)	459.4

Nonparametric Distribution Free Background Statistics

Data appear Approximate Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		18	95% UTL with 95% Coverage	194
Approx, f used to compute achieved CC		0.947	Approximate Actual Confidence Coefficient achieved by UTL	0.603
			Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with	95% Coverage	194	95% BCA Bootstrap UTL with 95% Coverage	194
	95% UPL	194	90% Percentile	179.3
	90% Chebyshev UPL	263.4	95% Percentile	182.1
	95% Chebyshev UPL	346.9	99% Percentile	191.6
	95% USL	194		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:53:13 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Magnesium

Raw Statistics

Number of Valid Observations	27
Number of Distinct Observations	27
Minimum	237
Maximum	2290
Mean of Raw Data	860.6
Standard Deviation of Raw Data	603.9
Khat	2.526
Theta hat	340.7
Kstar	2.27
Theta star	379.1
Mean of Log Transformed Data	6.547
Standard Deviation of Log Transformed Data	0.648

Normal GOF Test Results

Correlation Coefficient R	0.91
Shapiro Wilk Test Statistic	0.82
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	1.9184E-4
Lilliefors Test Statistic	0.263
Lilliefors Critical (0.05) Value	0.167

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.969
A-D Test Statistic	1.083
A-D Critical (0.05) Value	0.754
K-S Test Statistic	0.209
K-S Critical(0.05) Value	0.17

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.974
Shapiro Wilk Test Statistic	0.935
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.102
Lilliefors Test Statistic	0.168
Lilliefors Critical (0.05) Value	0.167

Data appear Approximate_Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:52:16 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Magnesium

General Statistics

Total Number of Observations	27	Number of Distinct Observations	27
Minimum	237	First Quartile	454
Second Largest	2120	Median	577
Maximum	2290	Third Quartile	1225
Mean	860.6	SD	603.9
Coefficient of Variation	0.702	Skewness	1.19
Mean of logged Data	6.547	SD of logged Data	0.648

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test

Shapiro Wilk Test Statistic	0.82	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.263	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	2225	90% Percentile (z)	1635
	95% UPL (t)	1910	95% Percentile (z)	1854
	95% USL	2490	99% Percentile (z)	2266

Gamma GOF Test

A-D Test Statistic	1.083	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.754	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.209	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.17	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.526	k star (bias corrected MLE)	2.27
Theta hat (MLE)	340.7	Theta star (bias corrected MLE)	379.1
nu hat (MLE)	136.4	nu star (bias corrected)	122.6
MLE Mean (bias corrected)	860.6	MLE Sd (bias corrected)	571.2

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	2003	90% Percentile	1625
95% Hawkins Wixley (HW) Approx. Gamma UPL	2030	95% Percentile	1962
95% WH Approx. Gamma UTL with 95% Coverage	2555	99% Percentile	2704

95% HW Approx. Gamma UTL with	95% Coverage	2637			
	95% WH USL	3088		95% HW USL	3243

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.935	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.168	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data Not Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	3018		90% Percentile (z)	1600
	95% UPL (t)	2150		95% Percentile (z)	2025
	95% USL	4010		99% Percentile (z)	3151

Nonparametric Distribution Free Background Statistics

Data appear Approximate Lognormal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		27	95% UTL with	95% Coverage	2290
Approx, f used to compute achieved CC		1.421	Approximate Actual Confidence Coefficient achieved by UTL		0.75
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	2290	95% BCA Bootstrap UTL with	95% Coverage	2290
	95% UPL	2222		90% Percentile	1880
	90% Chebyshev UPL	2706		95% Percentile	2066
	95% Chebyshev UPL	3541		99% Percentile	2246
	95% USL	2290			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:57:08 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Manganese

Raw Statistics

Number of Valid Observations	26
Number of Missing Observations	1
Number of Distinct Observations	25
Minimum	123
Maximum	1030
Mean of Raw Data	410.9
Standard Deviation of Raw Data	241.6
Khat	3.371
Theta hat	121.9
Kstar	3.008
Theta star	136.6
Mean of Log Transformed Data	5.863
Standard Deviation of Log Transformed Data	0.568

Normal GOF Test Results

Correlation Coefficient R	0.944
Shapiro Wilk Test Statistic	0.887
Shapiro Wilk Critical (0.05) Value	0.92
Approximate Shapiro Wilk P Value	0.0075
Lilliefors Test Statistic	0.171
Lilliefors Critical (0.05) Value	0.17

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.988
A-D Test Statistic	0.329
A-D Critical (0.05) Value	0.75
K-S Test Statistic	0.1
K-S Critical(0.05) Value	0.172

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.993
Shapiro Wilk Test Statistic	0.976
Shapiro Wilk Critical (0.05) Value	0.92
Approximate Shapiro Wilk P Value	0.785
Lilliefors Test Statistic	0.0729
Lilliefors Critical (0.05) Value	0.17

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 10:56:10 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Manganese

General Statistics

Total Number of Observations	26	Number of Distinct Observations	25
		Number of Missing Observations	1
Minimum	123	First Quartile	231.1
Second Largest	897	Median	343
Maximum	1030	Third Quartile	470.3
Mean	410.9	SD	241.6
Coefficient of Variation	0.588	Skewness	1.14
Mean of logged Data	5.863	SD of logged Data	0.568

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.275	d2max (for USL)	2.681

Normal GOF Test

Shapiro Wilk Test Statistic	0.887	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.92	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.171	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.17	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	960.6	90% Percentile (z)	720.6
	95% UPL (t)	831.5	95% Percentile (z)	808.4
	95% USL	1059	99% Percentile (z)	973

Gamma GOF Test

A-D Test Statistic	0.329	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.1	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.172	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.371	k star (bias corrected MLE)	3.008
Theta hat (MLE)	121.9	Theta star (bias corrected MLE)	136.6
nu hat (MLE)	175.3	nu star (bias corrected)	156.4
MLE Mean (bias corrected)	410.9	MLE Sd (bias corrected)	236.9

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	879.1	90% Percentile	728.6
95% Hawkins Wixley (HW) Approx. Gamma UPL	891.6	95% Percentile	861.7

95% WH Approx. Gamma UTL with	95% Coverage	1098	99% Percentile	1150	
95% HW Approx. Gamma UTL with	95% Coverage	1131			
	95% WH USL	1286	95% HW USL	1343	

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.976	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.92	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0729	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.17	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	1282	90% Percentile (z)	728.7	
	95% UPL (t)	946	95% Percentile (z)	895.9	
	95% USL	1614	99% Percentile (z)	1320	

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r	26		95% UTL with	95% Coverage	1030
Approx, f used to compute achieved CC	1.368		Approximate Actual Confidence Coefficient achieved by UTL		0.736
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	1030	95% BCA Bootstrap UTL with	95% Coverage	1030
	95% UPL	983.5		90% Percentile	760.5
	90% Chebyshev UPL	1150		95% Percentile	887.3
	95% Chebyshev UPL	1484		99% Percentile	996.8
	95% USL	1030			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:02:13 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Mercury

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	14	13	48.15%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	13	0.11	0.14	0.117	0.115	0.00927
Statistics (Non-Detects Only)	14	0.02	0.19	0.075	0.0395	0.063
Statistics (All: NDs treated as DL value)	27	0.02	0.19	0.0954	0.11	0.0499
Statistics (All: NDs treated as DL/2 value)	27	0.02	0.19	0.0671	0.055	0.0455
Statistics (Normal ROS Imputed Data)	27	-0.00269	0.19	0.0648	0.0551	0.0505
Statistics (Gamma ROS Imputed Data)	27	0.01	0.19	0.0613	0.044	0.0498
Statistics (Lognormal ROS Imputed Data)	27	0.0195	0.19	0.0605	0.0423	0.0487

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	1.782	1.448	0.0421	-2.896	0.798	-0.275
Statistics (NDs = DL)	2.859	2.566	0.0334	-2.535	0.683	-0.27
Statistics (NDs = DL/2)	3.141	2.817	0.0214	-2.869	0.567	-0.198
Statistics (Gamma ROS Estimates)	2.046	1.844	0.0299	-3.056	0.731	-0.239
Statistics (Lognormal ROS Estimates)	--	--	--	-3.033	0.648	-0.213

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.89	0.961	0.853	0.924

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.776	0.874	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.911	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.73	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.852	0.923	Data Not Normal
Lilliefors (Detects Only)	0.282	0.226	Data Not Normal
Lilliefors (NDs = DL)	0.208	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.266	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.169	0.167	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.944	0.935	0.924	0.96

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.829	0.748	
Kolmogorov-Smirnov (Detects Only)	0.262	0.232	Data Not Gamma Distributed
Anderson-Darling (NDs = DL)	1.517	0.752	

Kolmogorov-Smirnov (NDs = DL)	0.264	0.17	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.274	0.751	
Kolmogorov-Smirnov (NDs = DL/2)	0.205	0.169	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.683	0.756	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.175	0.17	Detected Data appear Approximate Gamma Distri

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.956	0.93	0.963	0.966

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.893	0.874	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.853	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.925	0.923	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.921	0.923	Data Not Lognormal
Lilliefors (Detects Only)	0.228	0.226	Data Not Lognormal
Lilliefors (NDs = DL)	0.277	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.181	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.172	0.167	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:01:20 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Mercury

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	18		
Number of Detects	14	Number of Non-Detects	13
Number of Distinct Detects	13	Number of Distinct Non-Detects	5
Minimum Detect	0.02	Minimum Non-Detect	0.11
Maximum Detect	0.19	Maximum Non-Detect	0.14
Variance Detected	0.00397	Percent Non-Detects	48.15%
Mean Detected	0.075	SD Detected	0.063
Mean of Detected Logged Data	-2.896	SD of Detected Logged Data	0.798

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.776	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.282	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	0.0608	KM SD	0.0492
95% UTL95% Coverage	0.172	95% KM UPL (t)	0.146
90% KM Percentile (z)	0.124	95% KM Percentile (z)	0.142
99% KM Percentile (z)	0.175	95% KM USL	0.193

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	0.0671	SD	0.0455
95% UTL95% Coverage	0.17	95% UPL (t)	0.146
90% Percentile (z)	0.125	95% Percentile (z)	0.142
99% Percentile (z)	0.173	95% USL	0.19

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.829	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.748	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.262	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.232	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.782	k star (bias corrected MLE)	1.448
Theta hat (MLE)	0.0421	Theta star (bias corrected MLE)	0.0518
nu hat (MLE)	49.89	nu star (bias corrected)	40.53
MLE Mean (bias corrected)	0.075		
MLE Sd (bias corrected)	0.0623	95% Percentile of Chisquare (2kstar)	7.632

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0613
Maximum	0.19	Median	0.044
SD	0.0498	CV	0.812
k hat (MLE)	2.046	k star (bias corrected MLE)	1.844
Theta hat (MLE)	0.0299	Theta star (bias corrected MLE)	0.0332
nu hat (MLE)	110.5	nu star (bias corrected)	99.56
MLE Mean (bias corrected)	0.0613	MLE Sd (bias corrected)	0.0451
95% Percentile of Chisquare (2kstar)	8.977	90% Percentile	0.121
95% Percentile	0.149	99% Percentile	0.211

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	0.198	0.205	95% Approx. Gamma UPL	0.152	0.155
95% Gamma USL	0.242	0.257			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0608	SD (KM)	0.0492
Variance (KM)	0.00242	SE of Mean (KM)	0.011
k hat (KM)	1.527	k star (KM)	1.382
nu hat (KM)	82.44	nu star (KM)	74.62
theta hat (KM)	0.0398	theta star (KM)	0.044
80% gamma percentile (KM)	0.0949	90% gamma percentile (KM)	0.129
95% gamma percentile (KM)	0.163	99% gamma percentile (KM)	0.239

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	0.189	0.194	95% Approx. Gamma UPL	0.146	0.147
95% KM Gamma Percentile	0.14	0.14	95% Gamma USL	0.231	0.241

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.893	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.228	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Data Not Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	0.0605	Mean in Log Scale	-3.033
SD in Original Scale	0.0487	SD in Log Scale	0.648

95% UTL95% Coverage	0.208	95% BCA UTL95% Coverage	0.19
95% Bootstrap (%) UTL95% Coverage	0.19	95% UPL (t)	0.148
90% Percentile (z)	0.11	95% Percentile (z)	0.14
99% Percentile (z)	0.217	95% USL	0.276

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	-3.054	95% KM UTL (Lognormal)95% Coverage	0.217
KM SD of Logged Data	0.674	95% KM UPL (Lognormal)	0.152
95% KM Percentile Lognormal (z)	0.143	95% KM USL (Lognormal)	0.291

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	0.0671	Mean in Log Scale	-2.869
SD in Original Scale	0.0455	SD in Log Scale	0.567
95% UTL95% Coverage	0.205	95% UPL (t)	0.152
90% Percentile (z)	0.117	95% Percentile (z)	0.144
99% Percentile (z)	0.212	95% USL	0.262

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	0.19
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	0.19
95% USL	0.19	95% KM Chebyshev UPL	0.279

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:08:18 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Nickel

Raw Statistics

Number of Valid Observations	27
Number of Distinct Observations	24
Minimum	3.8
Maximum	25.7
Mean of Raw Data	11.09
Standard Deviation of Raw Data	6.451
Khat	3.256
Theta hat	3.406
Kstar	2.919
Theta star	3.799
Mean of Log Transformed Data	2.245
Standard Deviation of Log Transformed Data	0.585

Normal GOF Test Results

Correlation Coefficient R	0.952
Shapiro Wilk Test Statistic	0.893
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.00929
Lilliefors Test Statistic	0.172
Lilliefors Critical (0.05) Value	0.167

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.985
A-D Test Statistic	0.367
A-D Critical (0.05) Value	0.751
K-S Test Statistic	0.103
K-S Critical(0.05) Value	0.169

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.986
Shapiro Wilk Test Statistic	0.954
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.286
Lilliefors Test Statistic	0.102
Lilliefors Critical (0.05) Value	0.167

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:06:34 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Nickel

General Statistics

Total Number of Observations	27	Number of Distinct Observations	24
Minimum	3.8	First Quartile	6.2
Second Largest	25.2	Median	9.5
Maximum	25.7	Third Quartile	15.8
Mean	11.09	SD	6.451
Coefficient of Variation	0.582	Skewness	0.921
Mean of logged Data	2.245	SD of logged Data	0.585

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test

Shapiro Wilk Test Statistic	0.893	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.172	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	25.67	90% Percentile (z)	19.36
	95% UPL (t)	22.29	95% Percentile (z)	21.7
	95% USL	28.49	99% Percentile (z)	26.1

Gamma GOF Test

A-D Test Statistic	0.367	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.751	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.103	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.169	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.256	k star (bias corrected MLE)	2.919
Theta hat (MLE)	3.406	Theta star (bias corrected MLE)	3.799
nu hat (MLE)	175.8	nu star (bias corrected)	157.6
MLE Mean (bias corrected)	11.09	MLE Sd (bias corrected)	6.491

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	23.94	90% Percentile	19.79
95% Hawkins Wixley (HW) Approx. Gamma UPL	24.34	95% Percentile	23.46
95% WH Approx. Gamma UTL with 95% Coverage	29.85	99% Percentile	31.41

95% HW Approx. Gamma UTL with	95% Coverage	30.86			
	95% WH USL	35.48		95% HW USL	37.25

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.102	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	35.41		90% Percentile (z)	19.98
	95% UPL (t)	26.08		95% Percentile (z)	24.71
	95% USL	45.76		99% Percentile (z)	36.82

Nonparametric Distribution Free Background Statistics

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		27	95% UTL with	95% Coverage	25.7
Approx, f used to compute achieved CC		1.421	Approximate Actual Confidence Coefficient achieved by UTL		0.75
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	25.7	95% BCA Bootstrap UTL with	95% Coverage	25.7
	95% UPL	25.5		90% Percentile	19.44
	90% Chebyshev UPL	30.8		95% Percentile	24.3
	95% Chebyshev UPL	39.72		99% Percentile	25.57
	95% USL	25.7			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:13:58 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Potassium

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	23	4	14.81%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	4	551	581	564.8	563.5	15.02
Statistics (Non-Detects Only)	23	467	1750	1099	1000	382.1
Statistics (All: NDs treated as DL value)	27	467	1750	1020	987	401.2
Statistics (All: NDs treated as DL/2 value)	27	275.5	1750	977.8	987	459.2
Statistics (Normal ROS Imputed Data)	27	336.2	1750	985.8	987	446.9
Statistics (Gamma ROS Imputed Data)	27	450.7	1750	1003	987	422.6
Statistics (Lognormal ROS Imputed Data)	27	467	1750	1009	987	413.7

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	8.168	7.132	134.5	6.939	0.371	0.0534
Statistics (NDs = DL)	6.645	5.932	153.4	6.85	0.405	0.0591
Statistics (NDs = DL/2)	3.784	3.388	258.4	6.747	0.58	0.086
Statistics (Gamma ROS Estimates)	5.492	4.906	182.6	6.817	0.454	0.0666
Statistics (Lognormal ROS Estimates)	--	--	--	6.831	0.432	0.0633

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.987	0.972	0.985	0.983

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.96	0.914	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.926	0.923	Data Appear Normal
Shapiro-Wilk (NDs = DL/2)	0.952	0.923	Data Appear Normal
Shapiro-Wilk (Normal ROS Estimates)	0.947	0.923	Data Appear Normal
Lilliefors (Detects Only)	0.124	0.18	Data Appear Normal
Lilliefors (NDs = DL)	0.144	0.167	Data Appear Normal
Lilliefors (NDs = DL/2)	0.0838	0.167	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.0951	0.167	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.981	0.977	0.962	0.974

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.253	0.745	
Kolmogorov-Smirnov (Detects Only)	0.105	0.182	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.498	0.746	

Kolmogorov-Smirnov (NDs = DL)	0.134	0.168	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.573	0.75	
Kolmogorov-Smirnov (NDs = DL/2)	0.125	0.169	Data Appear Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.479	0.747	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.11	0.169	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.985	0.979	0.953	0.975

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.961	0.914	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.941	0.923	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.892	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.929	0.923	Data Appear Lognormal
Lilliefors (Detects Only)	0.0962	0.18	Data Appear Lognormal
Lilliefors (NDs = DL)	0.12	0.167	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.155	0.167	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.111	0.167	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:12:58 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Potassium

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	26		
Number of Detects	23	Number of Non-Detects	4
Number of Distinct Detects	22	Number of Distinct Non-Detects	4
Minimum Detect	467	Minimum Non-Detect	551
Maximum Detect	1750	Maximum Non-Detect	581
Variance Detected	146000	Percent Non-Detects	14.81%
Mean Detected	1099	SD Detected	382.1
Mean of Detected Logged Data	6.939	SD of Detected Logged Data	0.371

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.914	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.124	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.18	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	1005	KM SD	411.5
95% UTL95% Coverage	1935	95% KM UPL (t)	1720
90% KM Percentile (z)	1533	95% KM Percentile (z)	1682
99% KM Percentile (z)	1962	95% KM USL	2115

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	977.8	SD	459.2
95% UTL95% Coverage	2016	95% UPL (t)	1775
90% Percentile (z)	1566	95% Percentile (z)	1733
99% Percentile (z)	2046	95% USL	2217

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.253	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.105	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.182	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	8.168	k star (bias corrected MLE)	7.132
Theta hat (MLE)	134.5	Theta star (bias corrected MLE)	154.1
nu hat (MLE)	375.7	nu star (bias corrected)	328
MLE Mean (bias corrected)	1099		
MLE Sd (bias corrected)	411.4	95% Percentile of Chisquare (2kstar)	24.03

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	450.7	Mean	1003
Maximum	1750	Median	987
SD	422.6	CV	0.421
k hat (MLE)	5.492	k star (bias corrected MLE)	4.906
Theta hat (MLE)	182.6	Theta star (bias corrected MLE)	204.4
nu hat (MLE)	296.6	nu star (bias corrected)	264.9
MLE Mean (bias corrected)	1003	MLE Sd (bias corrected)	452.7
95% Percentile of Chisquare (2kstar)	18.05	90% Percentile	1609
95% Percentile	1844	99% Percentile	2342

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	2243	2303	95% Approx. Gamma UPL	1875	1902
95% Gamma USL	2586	2684			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1005	SD (KM)	411.5
Variance (KM)	169329	SE of Mean (KM)	80.97
k hat (KM)	5.967	k star (KM)	5.328
nu hat (KM)	322.2	nu star (KM)	287.7
theta hat (KM)	168.5	theta star (KM)	188.6
80% gamma percentile (KM)	1342	90% gamma percentile (KM)	1588
95% gamma percentile (KM)	1812	99% gamma percentile (KM)	2283

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	2195	2249	95% Approx. Gamma UPL	1843	1868
95% KM Gamma Percentile	1786	1806	95% Gamma USL	2522	2611

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.914	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0962	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.18	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	1009	Mean in Log Scale	6.831
SD in Original Scale	413.7	SD in Log Scale	0.432

95% UTL95% Coverage	2459	95% BCA UTL95% Coverage	1750
95% Bootstrap (%) UTL95% Coverage	1750	95% UPL (t)	1961
90% Percentile (z)	1611	95% Percentile (z)	1885
99% Percentile (z)	2530	95% USL	2971

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	6.822	95% KM UTL (Lognormal)95% Coverage	2466
KM SD of Logged Data	0.437	95% KM UPL (Lognormal)	1962
95% KM Percentile Lognormal (z)	1885	95% KM USL (Lognormal)	2987

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	977.8	Mean in Log Scale	6.747
SD in Original Scale	459.2	SD in Log Scale	0.58
95% UTL95% Coverage	3161	95% UPL (t)	2333
90% Percentile (z)	1792	95% Percentile (z)	2212
99% Percentile (z)	3285	95% USL	4076

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	1750
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	1750
95% USL	1750	95% KM Chebyshev UPL	2832

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:25:42 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Selenium (sb)

Raw Statistics

Number of Valid Observations	7
Number of Distinct Observations	7
Minimum	0.3
Maximum	0.78
Mean of Raw Data	0.543
Standard Deviation of Raw Data	0.156
Khat	12.97
Theta hat	0.0419
Kstar	7.507
Theta star	0.0723
Mean of Log Transformed Data	-0.65
Standard Deviation of Log Transformed Data	0.311

Normal GOF Test Results

Correlation Coefficient R	0.991
Shapiro Wilk Test Statistic	0.988
Shapiro Wilk Critical (0.05) Value	0.803
Approximate Shapiro Wilk P Value	0.971
Lilliefors Test Statistic	0.133
Lilliefors Critical (0.05) Value	0.304

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.985
A-D Test Statistic	0.195
A-D Critical (0.05) Value	0.708
K-S Test Statistic	0.148
K-S Critical(0.05) Value	0.312

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.976
Shapiro Wilk Test Statistic	0.961
Shapiro Wilk Critical (0.05) Value	0.803
Approximate Shapiro Wilk P Value	0.766
Lilliefors Test Statistic	0.173
Lilliefors Critical (0.05) Value	0.304

Data appear Lognormal at (0.05) Significance Level

Raw Statistics

Number of Valid Observations	20
Number of Distinct Observations	19
Minimum	0.31
Maximum	1.5
Mean of Raw Data	0.809
Standard Deviation of Raw Data	0.325
Khat	6.482
Theta hat	0.125
Kstar	5.543
Theta star	0.146
Mean of Log Transformed Data	-0.292
Standard Deviation of Log Transformed Data	0.417

Normal GOF Test Results

Correlation Coefficient R	0.974
Shapiro Wilk Test Statistic	0.943
Shapiro Wilk Critical (0.05) Value	0.905
Approximate Shapiro Wilk P Value	0.296
Lilliefors Test Statistic	0.137
Lilliefors Critical (0.05) Value	0.192

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.987
A-D Test Statistic	0.272
A-D Critical (0.05) Value	0.744
K-S Test Statistic	0.104
K-S Critical(0.05) Value	0.194

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.983
Shapiro Wilk Test Statistic	0.964
Shapiro Wilk Critical (0.05) Value	0.905
Approximate Shapiro Wilk P Value	0.633
Lilliefors Test Statistic	0.118
Lilliefors Critical (0.05) Value	0.192

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:20:18 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Selenium (sb)

General Statistics

Total Number of Observations	7	Number of Distinct Observations	7
Minimum	0.3	First Quartile	0.46
Second Largest	0.65	Median	0.53
Maximum	0.78	Third Quartile	0.635
Mean	0.543	SD	0.156
Coefficient of Variation	0.288	Skewness	-0.0298
Mean of logged Data	-0.65	SD of logged Data	0.311

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test

Shapiro Wilk Test Statistic	0.988	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.133	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	1.074	90% Percentile (z)	0.743
	95% UPL (t)	0.868	95% Percentile (z)	0.8
	95% USL	0.846	99% Percentile (z)	0.907

Gamma GOF Test

A-D Test Statistic	0.195	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.708	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.148	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.312	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	12.97	k star (bias corrected MLE)	7.507
Theta hat (MLE)	0.0419	Theta star (bias corrected MLE)	0.0723
nu hat (MLE)	181.6	nu star (bias corrected)	105.1
MLE Mean (bias corrected)	0.543	MLE Sd (bias corrected)	0.198

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	0.936	90% Percentile	0.807
95% Hawkins Wixley (HW) Approx. Gamma UPL	0.949	95% Percentile	0.904
95% WH Approx. Gamma UTL with 95% Coverage	1.281	99% Percentile	1.106

95% HW Approx. Gamma UTL with	95% Coverage	1.324			
	95% WH USL	0.904		95% HW USL	0.915

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.173	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.304	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	1.501		90% Percentile (z)	0.777
	95% UPL (t)	0.995		95% Percentile (z)	0.87
	95% USL	0.953		99% Percentile (z)	1.075

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

	Order of Statistic, r	7	95% UTL with	95% Coverage	0.78
	Approx, f used to compute achieved CC	0.368	Approximate Actual Confidence Coefficient achieved by UTL		0.302
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	0.78	95% BCA Bootstrap UTL with	95% Coverage	0.78
	95% UPL	0.78		90% Percentile	0.702
	90% Chebyshev UPL	1.044		95% Percentile	0.741
	95% Chebyshev UPL	1.272		99% Percentile	0.772
	95% USL	0.78			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Selenium (ss)

General Statistics

Total Number of Observations	20	Number of Distinct Observations	19
Minimum	0.31	First Quartile	0.573
Second Largest	1.4	Median	0.815
Maximum	1.5	Third Quartile	0.985
Mean	0.809	SD	0.325
Coefficient of Variation	0.401	Skewness	0.644
Mean of logged Data	-0.292	SD of logged Data	0.417

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.396	d2max (for USL)	2.557

Normal GOF Test

Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.905	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.137	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.192	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	1.586	90% Percentile (z)		1.224
	95% UPL (t)	1.384	95% Percentile (z)		1.342
	95% USL	1.638	99% Percentile (z)		1.564

Gamma GOF Test

A-D Test Statistic	0.272	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.104	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.194	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.482	k star (bias corrected MLE)	5.543
Theta hat (MLE)	0.125	Theta star (bias corrected MLE)	0.146
nu hat (MLE)	259.3	nu star (bias corrected)	221.7
MLE Mean (bias corrected)	0.809	MLE Sd (bias corrected)	0.343

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		1.471	90% Percentile		1.268
95% Hawkins Wixley (HW) Approx. Gamma UPL		1.49	95% Percentile		1.443
95% WH Approx. Gamma UTL with	95% Coverage	1.796	99% Percentile		1.813
95% HW Approx. Gamma UTL with	95% Coverage	1.841			
	95% WH USL	1.886	95% HW USL		1.941

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.905	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.118	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.192	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	2.03	90% Percentile (z)		1.275
	95% UPL (t)	1.565	95% Percentile (z)		1.484
	95% USL	2.171	99% Percentile (z)		1.972

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		20	95% UTL with	95% Coverage	1.5
Approx, f used to compute achieved CC		1.053	Approximate Actual Confidence Coefficient achieved by UTL		0.642
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	1.5	95% BCA Bootstrap UTL with	95% Coverage	1.5
	95% UPL	1.495		90% Percentile	1.31
	90% Chebyshev UPL	1.806		95% Percentile	1.405
	95% Chebyshev UPL	2.258		99% Percentile	1.481
	95% USL	1.5			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.

Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:32:07 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Silver

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	0	27	11	16	59.26%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	16	0.52	0.65	0.563	0.56	0.0295
Statistics (Non-Detects Only)	11	0.056	0.26	0.123	0.098	0.0691
Statistics (All: NDs treated as DL value)	27	0.056	0.65	0.384	0.54	0.226
Statistics (All: NDs treated as DL/2 value)	27	0.056	0.325	0.217	0.27	0.0909
Statistics (Normal ROS Imputed Data)	27	0.056	0.26	0.123	0.123	0.0501
Statistics (Gamma ROS Imputed Data)	27	0.056	0.26	0.12	0.115	0.0506
Statistics (Lognormal ROS Imputed Data)	27	0.056	0.26	0.117	0.109	0.0489

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	4.195	3.111	0.0294	-2.217	0.506	-0.228
Statistics (NDs = DL)	1.891	1.705	0.203	-1.244	0.881	-0.708
Statistics (NDs = DL/2)	4.075	3.647	0.0533	-1.655	0.571	-0.345
Statistics (Gamma ROS Estimates)	6.669	5.953	0.018	-2.199	0.393	-0.179
Statistics (Lognormal ROS Estimates)	--	--	--	-2.217	0.374	-0.169

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.915	0.884	0.89	0.945

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.83	0.85	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.761	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.776	0.923	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.893	0.923	Data Not Normal
Lilliefors (Detects Only)	0.246	0.251	Data Appear Normal
Lilliefors (NDs = DL)	0.319	0.167	Data Not Normal
Lilliefors (NDs = DL/2)	0.311	0.167	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.241	0.167	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.964	0.782	0.812	0.969

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.473	0.732	
Kolmogorov-Smirnov (Detects Only)	0.184	0.256	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	3.039	0.758	

Kolmogorov-Smirnov (NDs = DL)	0.343	0.171	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	3.145	0.749	
Kolmogorov-Smirnov (NDs = DL/2)	0.334	0.169	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.722	0.746	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.195	0.168	Detected Data appear Approximate Gamma Distri

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.973	0.881	0.871	0.973

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.933	0.85	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.759	0.923	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.748	0.923	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.946	0.923	Data Appear Lognormal
Lilliefors (Detects Only)	0.151	0.251	Data Appear Lognormal
Lilliefors (NDs = DL)	0.341	0.167	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.335	0.167	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.193	0.167	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:31:03 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Silver

General Statistics

Total Number of Observations	27	Number of Missing Observations	0
Number of Distinct Observations	20		
Number of Detects	11	Number of Non-Detects	16
Number of Distinct Detects	11	Number of Distinct Non-Detects	9
Minimum Detect	0.056	Minimum Non-Detect	0.52
Maximum Detect	0.26	Maximum Non-Detect	0.65
Variance Detected	0.00478	Percent Non-Detects	59.26%
Mean Detected	0.123	SD Detected	0.0691
Mean of Detected Logged Data	-2.217	SD of Detected Logged Data	0.506

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.83	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.246	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	0.123	KM SD	0.0659
95% UTL95% Coverage	0.272	95% KM UPL (t)	0.238
90% KM Percentile (z)	0.208	95% KM Percentile (z)	0.232
99% KM Percentile (z)	0.277	95% KM USL	0.301

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	0.217	SD	0.0909
95% UTL95% Coverage	0.423	95% UPL (t)	0.375
90% Percentile (z)	0.334	95% Percentile (z)	0.367
99% Percentile (z)	0.429	95% USL	0.462

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.473	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.732	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.184	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.256	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.195	k star (bias corrected MLE)	3.111
Theta hat (MLE)	0.0294	Theta star (bias corrected MLE)	0.0396
nu hat (MLE)	92.29	nu star (bias corrected)	68.45
MLE Mean (bias corrected)	0.123		
MLE Sd (bias corrected)	0.0699	95% Percentile of Chisquare (2kstar)	12.92

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.056	Mean	0.12
Maximum	0.26	Median	0.115
SD	0.0506	CV	0.422
k hat (MLE)	6.669	k star (bias corrected MLE)	5.953
Theta hat (MLE)	0.018	Theta star (bias corrected MLE)	0.0201
nu hat (MLE)	360.1	nu star (bias corrected)	321.5
MLE Mean (bias corrected)	0.12	MLE Sd (bias corrected)	0.0491
95% Percentile of Chisquare (2kstar)	20.9	90% Percentile	0.185
95% Percentile	0.21	99% Percentile	0.262

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	0.251	0.255	95% Approx. Gamma UPL	0.213	0.214
95% Gamma USL	0.287	0.294			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.123	SD (KM)	0.0659
Variance (KM)	0.00434	SE of Mean (KM)	0.0208
k hat (KM)	3.499	k star (KM)	3.135
nu hat (KM)	188.9	nu star (KM)	169.3
theta hat (KM)	0.0352	theta star (KM)	0.0393
80% gamma percentile (KM)	0.175	90% gamma percentile (KM)	0.217
95% gamma percentile (KM)	0.255	99% gamma percentile (KM)	0.339

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	0.297	0.302	95% Approx. Gamma UPL	0.244	0.245
95% KM Gamma Percentile	0.235	0.236	95% Gamma USL	0.347	0.357

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.933	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.151	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	0.117	Mean in Log Scale	-2.217
SD in Original Scale	0.0489	SD in Log Scale	0.374

95% UTL95% Coverage	0.253	95% BCA UTL95% Coverage	0.254
95% Bootstrap (%) UTL95% Coverage	0.26	95% UPL (t)	0.208
90% Percentile (z)	0.176	95% Percentile (z)	0.201
99% Percentile (z)	0.26	95% USL	0.298

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	-2.217	95% KM UTL (Lognormal)95% Coverage	0.324
KM SD of Logged Data	0.483	95% KM UPL (Lognormal)	0.252
95% KM Percentile Lognormal (z)	0.241	95% KM USL (Lognormal)	0.4

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	0.217	Mean in Log Scale	-1.655
SD in Original Scale	0.0909	SD in Log Scale	0.571
95% UTL95% Coverage	0.694	95% UPL (t)	0.515
90% Percentile (z)	0.397	95% Percentile (z)	0.489
99% Percentile (z)	0.721	95% USL	0.892

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	27	95% UTL with95% Coverage	0.65
Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL	0.75
Approximate Sample Size needed to achieve specified CC	59	95% UPL	0.626
95% USL	0.65	95% KM Chebyshev UPL	0.416

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:37:56 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Thallium

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	27	1	26	11	15	57.69%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	15	0.52	0.7	0.593	0.58	0.0516
Statistics (Non-Detects Only)	11	0.034	0.091	0.0678	0.069	0.0212
Statistics (All: NDs treated as DL value)	26	0.034	0.7	0.371	0.54	0.268
Statistics (All: NDs treated as DL/2 value)	26	0.034	0.35	0.2	0.27	0.118
Statistics (Normal ROS Imputed Data)	26	0.034	0.091	0.0678	0.0678	0.0146
Statistics (Gamma ROS Imputed Data)	26	0.034	0.091	0.067	0.0662	0.0146
Statistics (Lognormal ROS Imputed Data)	26	0.034	0.091	0.0661	0.0643	0.0149

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	9.627	7.062	0.00704	-2.744	0.357	-0.13
Statistics (NDs = DL)	1.198	1.085	0.31	-1.464	1.142	-0.78
Statistics (NDs = DL/2)	2.123	1.904	0.0941	-1.864	0.803	-0.431
Statistics (Gamma ROS Estimates)	19.39	17.18	0.00346	-2.729	0.242	-0.0888
Statistics (Lognormal ROS Estimates)	--	--	--	-2.744	0.246	-0.0896

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.956	0.882	0.906	0.971

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.889	0.85	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.756	0.92	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.8	0.92	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.938	0.92	Data Appear Normal
Lilliefors (Detects Only)	0.188	0.251	Data Appear Normal
Lilliefors (NDs = DL)	0.288	0.17	Data Not Normal
Lilliefors (NDs = DL/2)	0.272	0.17	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.154	0.17	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.92	0.779	0.835	0.961

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.576	0.73	
Kolmogorov-Smirnov (Detects Only)	0.204	0.255	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	3.08	0.769	

Kolmogorov-Smirnov (NDs = DL)	0.332	0.176	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	2.442	0.756	
Kolmogorov-Smirnov (NDs = DL/2)	0.312	0.173	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.719	0.744	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.162	0.171	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.938	0.884	0.905	0.952

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.861	0.85	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.761	0.92	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.802	0.92	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.905	0.92	Data Not Lognormal
Lilliefors (Detects Only)	0.195	0.251	Data Appear Lognormal
Lilliefors (NDs = DL)	0.338	0.17	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.317	0.17	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.154	0.17	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:37:00 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Thallium

General Statistics

Total Number of Observations	26	Number of Missing Observations	1
Number of Distinct Observations	22		
Number of Detects	11	Number of Non-Detects	15
Number of Distinct Detects	11	Number of Distinct Non-Detects	11
Minimum Detect	0.034	Minimum Non-Detect	0.52
Maximum Detect	0.091	Maximum Non-Detect	0.7
Variance Detected	4.4856E-4	Percent Non-Detects	57.69%
Mean Detected	0.0678	SD Detected	0.0212
Mean of Detected Logged Data	-2.744	SD of Detected Logged Data	0.357

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.275	d2max (for USL)	2.681

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.889	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.188	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	0.0678	KM SD	0.0202
95% UTL95% Coverage	0.114	95% KM UPL (t)	0.103
90% KM Percentile (z)	0.0937	95% KM Percentile (z)	0.101
99% KM Percentile (z)	0.115	95% KM USL	0.122

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	0.2	SD	0.118
95% UTL95% Coverage	0.468	95% UPL (t)	0.405
90% Percentile (z)	0.351	95% Percentile (z)	0.393
99% Percentile (z)	0.474	95% USL	0.515

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.576	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.73	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.204	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.255	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	9.627	k star (bias corrected MLE)	7.062
Theta hat (MLE)	0.00704	Theta star (bias corrected MLE)	0.0096
nu hat (MLE)	211.8	nu star (bias corrected)	155.4
MLE Mean (bias corrected)	0.0678		
MLE Sd (bias corrected)	0.0255	95% Percentile of Chisquare (2kstar)	23.85

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.034	Mean	0.067
Maximum	0.091	Median	0.0662
SD	0.0146	CV	0.218
k hat (MLE)	19.39	k star (bias corrected MLE)	17.18
Theta hat (MLE)	0.00346	Theta star (bias corrected MLE)	0.0039
nu hat (MLE)	1008	nu star (bias corrected)	893.4
MLE Mean (bias corrected)	0.067	MLE Sd (bias corrected)	0.0162
95% Percentile of Chisquare (2kstar)	49.04	90% Percentile	0.0884
95% Percentile	0.0956	99% Percentile	0.11

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	0.107	0.109	95% Approx. Gamma UPL	0.0964	0.0971
95% Gamma USL	0.116	0.118			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0678	SD (KM)	0.0202
Variance (KM)	4.0779E-4	SE of Mean (KM)	0.00639
k hat (KM)	11.28	k star (KM)	10
nu hat (KM)	586.5	nu star (KM)	520.2
theta hat (KM)	0.00601	theta star (KM)	0.00678
80% gamma percentile (KM)	0.0849	90% gamma percentile (KM)	0.0963
95% gamma percentile (KM)	0.107	99% gamma percentile (KM)	0.127

The following statistics are computed using gamma distribution and KM estimates

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	0.127	0.13	95% Approx. Gamma UPL	0.11	0.112
95% KM Gamma Percentile	0.107	0.109	95% Gamma USL	0.141	0.145

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.861	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.195	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects

Mean in Original Scale	0.0661	Mean in Log Scale	-2.744
SD in Original Scale	0.0149	SD in Log Scale	0.246

95% UTL95% Coverage	0.113	95% BCA UTL95% Coverage	0.091
95% Bootstrap (%) UTL95% Coverage	0.091	95% UPL (t)	0.0987
90% Percentile (z)	0.0882	95% Percentile (z)	0.0964
99% Percentile (z)	0.114	95% USL	0.124

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean of Logged Data	-2.744	95% KM UTL (Lognormal)95% Coverage	0.14
KM SD of Logged Data	0.34	95% KM UPL (Lognormal)	0.116
95% KM Percentile Lognormal (z)	0.113	95% KM USL (Lognormal)	0.16

Background DL/2 Statistics Assuming Lognormal Distribution

Mean in Original Scale	0.2	Mean in Log Scale	-1.864
SD in Original Scale	0.118	SD in Log Scale	0.803
95% UTL95% Coverage	0.965	95% UPL (t)	0.628
90% Percentile (z)	0.434	95% Percentile (z)	0.581
99% Percentile (z)	1.005	95% USL	1.337

DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.

Nonparametric Distribution Free Background Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)

Order of Statistic, r	26	95% UTL with95% Coverage	0.7
Approx, f used to compute achieved CC	1.368	Approximate Actual Confidence Coefficient achieved by UTL	0.736
Approximate Sample Size needed to achieve specified CC	59	95% UPL	0.697
95% USL	0.7	95% KM Chebyshev UPL	0.158

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:45:05 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Vanadium

Raw Statistics

Number of Valid Observations	27
Number of Distinct Observations	27
Minimum	2.3
Maximum	28.85
Mean of Raw Data	14.96
Standard Deviation of Raw Data	6.27
Khat	4.825
Theta hat	3.102
Kstar	4.313
Theta star	3.469
Mean of Log Transformed Data	2.599
Standard Deviation of Log Transformed Data	0.522

Normal GOF Test Results

Correlation Coefficient R	0.993
Shapiro Wilk Test Statistic	0.987
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.967
Lilliefors Test Statistic	0.0984
Lilliefors Critical (0.05) Value	0.167

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.988
A-D Test Statistic	0.245
A-D Critical (0.05) Value	0.748
K-S Test Statistic	0.0938
K-S Critical(0.05) Value	0.169

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.943
Shapiro Wilk Test Statistic	0.904
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.0169
Lilliefors Test Statistic	0.126
Lilliefors Critical (0.05) Value	0.167

Data appear Approximate_Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:43:12 PM
From File	C:\Users\[redacted]Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Vanadium

General Statistics

Total Number of Observations	27	Number of Distinct Observations	27
Minimum	2.3	First Quartile	10.75
Second Largest	25.4	Median	14.2
Maximum	28.85	Third Quartile	19.28
Mean	14.96	SD	6.27
Coefficient of Variation	0.419	Skewness	0.262
Mean of logged Data	2.599	SD of logged Data	0.522

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.26	d2max (for USL)	2.698

Normal GOF Test

Shapiro Wilk Test Statistic	0.987	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.923	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.0984	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.167	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	29.13	90% Percentile (z)	23
	95% UPL (t)	25.86	95% Percentile (z)	25.28
	95% USL	31.88	99% Percentile (z)	29.55

Gamma GOF Test

A-D Test Statistic	0.245	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0938	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.169	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.825	k star (bias corrected MLE)	4.313
Theta hat (MLE)	3.102	Theta star (bias corrected MLE)	3.469
nu hat (MLE)	260.5	nu star (bias corrected)	232.9
MLE Mean (bias corrected)	14.96	MLE Sd (bias corrected)	7.206

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	28.89	90% Percentile	24.62
95% Hawkins Wixley (HW) Approx. Gamma UPL	29.67	95% Percentile	28.44
95% WH Approx. Gamma UTL with 95% Coverage	34.86	99% Percentile	36.57

95% HW Approx. Gamma UTL with	95% Coverage	36.36			
	95% WH USL	40.45		95% HW USL	42.78

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.904	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.126	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	43.7		90% Percentile (z)	26.23
	95% UPL (t)	33.27		95% Percentile (z)	31.71
	95% USL	54.93		99% Percentile (z)	45.24

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

	Order of Statistic, r	27	95% UTL with	95% Coverage	28.85
	Approx, f used to compute achieved CC	1.421	Approximate Actual Confidence Coefficient achieved by UTL		0.75
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	28.85	95% BCA Bootstrap UTL with	95% Coverage	28.85
	95% UPL	27.47		90% Percentile	22.9
	90% Chebyshev UPL	34.12		95% Percentile	24.83
	95% Chebyshev UPL	42.8		99% Percentile	27.95
	95% USL	28.85			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:50:05 PM
From File	S-A Soil All-nCong Bkg_outliers removed.xls
Full Precision	OFF
Confidence Coefficient	0.95

Zinc (sb)

Raw Statistics

Number of Valid Observations	7
Number of Distinct Observations	7
Minimum	19.3
Maximum	67.15
Mean of Raw Data	35.24
Standard Deviation of Raw Data	20.41
Khat	4.003
Theta hat	8.803
Kstar	2.382
Theta star	14.79
Mean of Log Transformed Data	3.432
Standard Deviation of Log Transformed Data	0.534

Normal GOF Test Results

Correlation Coefficient R	0.895
Shapiro Wilk Test Statistic	0.781
Shapiro Wilk Critical (0.05) Value	0.803
Approximate Shapiro Wilk P Value	0.0409
Lilliefors Test Statistic	0.282
Lilliefors Critical (0.05) Value	0.304

Data appear Approximate Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.942
A-D Test Statistic	0.693
A-D Critical (0.05) Value	0.71
K-S Test Statistic	0.283
K-S Critical(0.05) Value	0.313

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.922
Shapiro Wilk Test Statistic	0.824
Shapiro Wilk Critical (0.05) Value	0.803
Approximate Shapiro Wilk P Value	0.121
Lilliefors Test Statistic	0.257
Lilliefors Critical (0.05) Value	0.304

Data appear Lognormal at (0.05) Significance Level

Raw Statistics

Number of Valid Observations	19
Number of Missing Observations	1
Number of Distinct Observations	19
Minimum	19.5
Maximum	180
Mean of Raw Data	78.43
Standard Deviation of Raw Data	47.92
Khat	2.841
Theta hat	27.61
Kstar	2.428
Theta star	32.31
Mean of Log Transformed Data	4.176
Standard Deviation of Log Transformed Data	0.645

Normal GOF Test Results

Correlation Coefficient R	0.961
Shapiro Wilk Test Statistic	0.913
Shapiro Wilk Critical (0.05) Value	0.901
Approximate Shapiro Wilk P Value	0.0937
Lilliefors Test Statistic	0.184
Lilliefors Critical (0.05) Value	0.197

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.985
A-D Test Statistic	0.253
A-D Critical (0.05) Value	0.749
K-S Test Statistic	0.109
K-S Critical(0.05) Value	0.2

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.991
Shapiro Wilk Test Statistic	0.971
Shapiro Wilk Critical (0.05) Value	0.901
Approximate Shapiro Wilk P Value	0.825
Lilliefors Test Statistic	0.0909
Lilliefors Critical (0.05) Value	0.197

Data appear Lognormal at (0.05) Significance Level

Background Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	ProUCL 5.15/11/2020 11:48:43 PM
From File	C:\Users\[redacted]\Documents\Shaffer-Arbuckle Creek\S-A Soil All-nCong Bkg_outliers removed.xlsx
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Zinc (sb)

General Statistics

Total Number of Observations	7	Number of Distinct Observations	7
Minimum	19.3	First Quartile	20.35
Second Largest	60.8	Median	23.9
Maximum	67.15	Third Quartile	47.8
Mean	35.24	SD	20.41
Coefficient of Variation	0.579	Skewness	1.019
Mean of logged Data	3.432	SD of logged Data	0.534

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.399	d2max (for USL)	1.938

Normal GOF Test

Shapiro Wilk Test Statistic	0.781	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.282	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	104.6	90% Percentile (z)	61.39
	95% UPL (t)	77.62	95% Percentile (z)	68.8
	95% USL	74.78	99% Percentile (z)	82.71

Gamma GOF Test

A-D Test Statistic	0.693	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.71	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.283	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.313	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.003	k star (bias corrected MLE)	2.382
Theta hat (MLE)	8.803	Theta star (bias corrected MLE)	14.79
nu hat (MLE)	56.04	nu star (bias corrected)	33.35
MLE Mean (bias corrected)	35.24	MLE Sd (bias corrected)	22.83

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	85.88	90% Percentile	65.81
95% Hawkins Wixley (HW) Approx. Gamma UPL	87.51	95% Percentile	79.16
95% WH Approx. Gamma UTL with 95% Coverage	140.1	99% Percentile	108.5

95% HW Approx. Gamma UTL with	95% Coverage	148.7			
	95% WH USL	81.17		95% HW USL	82.4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.824	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.257	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.304	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	190.2		90% Percentile (z)	61.35
	95% UPL (t)	93.86		95% Percentile (z)	74.49
	95% USL	87.13		99% Percentile (z)	107.2

Nonparametric Distribution Free Background Statistics

Data appear Approximate Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

	Order of Statistic, r	7	95% UTL with	95% Coverage	67.15
	Approx, f used to compute achieved CC	0.368	Approximate Actual Confidence Coefficient achieved by UTL		0.302
			Approximate Sample Size needed to achieve specified CC		59
95% Percentile Bootstrap UTL with	95% Coverage	67.15	95% BCA Bootstrap UTL with	95% Coverage	67.15
	95% UPL	67.15		90% Percentile	63.34
	90% Chebyshev UPL	100.7		95% Percentile	65.25
	95% Chebyshev UPL	130.3		99% Percentile	66.77
	95% USL	67.15			

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Zinc (ss)

General Statistics

Total Number of Observations		19	Number of Distinct Observations		19
			Number of Missing Observations		1
	Minimum	19.5		First Quartile	42.2
	Second Largest	157		Median	69
	Maximum	180		Third Quartile	111.5
	Mean	78.43		SD	47.92
	Coefficient of Variation	0.611		Skewness	0.79
	Mean of logged Data	4.176		SD of logged Data	0.645

Critical Values for Background Threshold Values (BTVs)

	Tolerance Factor K (For UTL)	2.423		d2max (for USL)	2.531

Normal GOF Test

Shapiro Wilk Test Statistic	0.913	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.901	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.184	**Lilliefors GOF Test**	

5% Lilliefors Critical Value	0.197	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with	95% Coverage	194.5	90% Percentile (z)	139.8
	95% UPL (t)	163.7	95% Percentile (z)	157.3
	95% USL	199.7	99% Percentile (z)	189.9

Gamma GOF Test

A-D Test Statistic	0.253	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.109	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.2	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.841	k star (bias corrected MLE)	2.428
Theta hat (MLE)	27.61	Theta star (bias corrected MLE)	32.31
nu hat (MLE)	108	nu star (bias corrected)	92.25
MLE Mean (bias corrected)	78.43	MLE Sd (bias corrected)	50.34

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL		181.3	90% Percentile	145.9
95% Hawkins Wixley (HW) Approx. Gamma UPL		185.6	95% Percentile	175.2
95% WH Approx. Gamma UTL with	95% Coverage	240.6	99% Percentile	239.6
95% HW Approx. Gamma UTL with	95% Coverage	252.5		
	95% WH USL	251.7	95% HW USL	265.3

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.901	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0909	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.197	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	310.6	90% Percentile (z)	148.8
	95% UPL (t)	205.1	95% Percentile (z)	188
	95% USL	333	99% Percentile (z)	291.8

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r		19	95% UTL with 95% Coverage	180
Approx, f used to compute achieved CC		1	Approximate Actual Confidence Coefficient achieved by UTL	0.623
			Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with	95% Coverage	180	95% BCA Bootstrap UTL with 95% Coverage	180
	95% UPL	180	90% Percentile	153.8
	90% Chebyshev UPL	225.9	95% Percentile	159.3
	95% Chebyshev UPL	292.7	99% Percentile	175.9
	95% USL	180		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

APPENDIX F

WIPE SCREENING LEVELS

TECHNICAL MEMORANDUM

DERIVATION OF A RESIDENTIAL WIPE SAMPLE SCREENING LEVEL FOR EXPOSURE TO DUST ON SURFACES CONTAINING PCBS

Introduction

Contaminated surfaces, such as walls and floors in a residence or industrial facility, pose a potential risk to those exposed to these surfaces. However, no standardized approach currently exists for evaluating wipe sample data from contaminated surfaces and evaluating potential risk to human health. This technical memorandum presents a quantitative approach, using standard risk assessment methodology outlined in U.S. Environmental Protection Agency (USEPA) Risk Assessment Guidance for Superfund (USEPA, 1989; USEPA, 2004; USEPA, 2009), to develop a wipe sample screening level for polychlorinated biphenyls (PCBs) that may be present in dust located in a residence.

Method

Risk associated with exposure to PCB-contaminated dust is primarily limited to dermal exposure and incidental ingestion of the dust as a result of hand-to-mouth interaction. While PCBs may have limited volatility, one's exposure to PCBs via inhalation as a result of volatilizing from surface dust is negligible relative to the combined exposure of dermal contact and incidental ingestion. Additionally, exposure to surface dust resulting from dispersion from surfaces and resuspending is also negligible relative to combined exposure of dermal contact and incidental ingestion.

Dermal exposure to the dust results in a chronic daily intake (CDI_{derm}) as defined by the following equation:

$$\mathbf{CDI_{derm} = (C_s * TC * ET * EF * ED * ABS_{derm} * FT) / (BW * AT * UCF)}$$

where:

C_s = Concentration of PCB on tested surface ($\mu g/cm^2$)

TC = Transfer coefficient from surface to skin (cm^2/hr)

ET = Exposure time (hr/day)

EF = Exposure frequency (days/year)

ED = Exposure duration (years)

ABS_{derm} = Dermal absorption factor for PCBs (unitless)

FT = Fraction transferred from surface to skin (unitless)

BW = Body weight (kg)

AT = Averaging time for exposure (days)

UCF = Unit conversion factor (1000 µg/mg)

Incidental ingestion (CDI_{ing}) of dust on one's hands is defined by the following equation:

$$\mathbf{CDI_{ing} = (C_s * SA_{ihand} * FQ_{ihand} * SE * ET * EF * ED * GIABS) / (BW * AT * UCF)}$$

where:

SA_{ihand}= Skin surface area exposed to surface dust and susceptible to ingestion (cm^2)

FQ_{ihand} = Frequency of hand-to-mouth events (hr^{-1})

SE = Saliva extraction factor (unitless)

GIABS = Fractional gastrointestinal absorption (unitless)

The CDI for dermal exposure and ingestion are expressed in units of milligrams PCB per kilogram body weight per day (mg/kg-day).

For the carcinogenic properties of PCBs, AT is defined as a lifetime equal to 70 years (25,550 days). For the noncarcinogenic properties of PCBs, AT is defined as the Exposure Duration (ED x 365 days/year).

The incremental lifetime cancer risk (CR), the incremental probability of an individual developing cancer over a lifetime as a result of exposure to PCBs in surface dust, is defined by the equation:

$$\mathbf{CR = CDI * CSF}$$

where:

CDI = cumulative chronic daily intake of dermal and ingestion pathways (mg/kg-day)

CSF = cancer slope factor [$(mg/kg\text{-}day)^{-1}$]

The likelihood of experiencing a noncarcinogenic effect to PCBs is defined as a ratio between the intake of the PCBs and the threshold dose that is likely to be considered safe, known as the hazard quotient. It is defined by the equation:

$$\mathbf{HQ = CDI / RfD}$$

where:

RfD = reference dose (mg/kg-day)

The CDI for PCBs will differ based on whether it is being evaluated for its carcinogenic or noncarcinogenic toxicity properties because the time over which exposure is averaged (AT) differs.

To determine a screening level for surface concentrations and wipe sample concentrations of PCBs in dust requires algebraic substitution and rearrangements of the above equations to solve for C_s. For the carcinogenic properties of PCBs,

$$\mathbf{CR = C_s * CSF * (EXP_{ch,derm} + EXP_{ad,derm} + EXP_{ch,ing} + EXP_{ad,ing})}$$

where CDI is equal to the product of C_s and the remaining exposure parameters used to derive the CDI. The remaining exposure parameters are constants for this exposure scenario and are defined as:

$EXP_{ch,derm}$ = Exposure constant for dermal exposure to PCBs by child resident

$EXP_{ad,derm}$ = Exposure constant for dermal exposure to PCBs by adult resident

$EXP_{ch,ing}$ = Exposure constant for incidental ingestion of PCBs by child resident

$EXP_{ad,ing}$ = Exposure constant for incidental ingestion of PCBs by adult resident

The units for these intermediate terms are (cm^2-mg PCB / kg body weight-day-µg PCB).

Rearranging the equation to solve for C_s results in the derivation of a screening level for PCBs on a surface for a target risk level (TR):

$$\mathbf{C_s = TR / [\ CSF * (EXP_{ch,derm} + EXP_{ad,derm} + EXP_{ch,ing} + EXP_{ad,ing})\ ]}$$

The EXP terms are derived using a carcinogenic AT of 70 years (25,550 days).

For the noncarcinogenic properties of PCBs,

$$\mathbf{HQ = C_s * (EXP_{ch,derm} + EXP_{ch,ing}) / RfD}$$

Only the exposures for children are evaluated, thus resulting in a more conservative estimate of the screening level. Rearranging the equation to solve for C_s results in the derivation of a screening level for PCBs on a surface for a target hazard quotient (HQ):

$$\mathbf{Cs = HQ * RfD / (EXP_{ch,derm} + EXP_{ch,ing})}$$

The EXP terms are derived using a noncarcinogenic AT equal to the ED of 6 years.

Inhalation Exposure

Risk associated with potential exposure to dust resuspended from surfaces is based on an exposure concentration of the contaminants in air instead of an intake, as calculated for ingestion and dermal

exposures. While inhalation of dust resuspended from surfaces is likely, its contribution to total risk is relatively insignificant relative to ingestion and dermal exposures.

The incremental cancer risk associated with inhalation exposure is defined by the equation (USEPA, 2009):

$$\mathbf{CR_{inh} = EC * IUR}$$

where:

EC = exposure concentration of contaminant in air ($\mu g/m^3$)

IUR = inhalation unit risk [$(\mu g/m^3)^{-1}$]

The hazard quotient associated with inhalation exposure is defined by the equation:

$$\mathbf{HQ_{inh} = EC / RfC}$$

where:

RfC = reference concentration (mg/m^3)

No air concentrations of PCBs in dust have been collected, but an estimate of the air concentration can be derived using a resuspension factor. The EC is defined by the following equation:

$$\mathbf{EC = C_s * K * ET * EF * ED / AT}$$

where:

K = resuspension factor (m^{-1})

The resuspension factor is a ratio between the surface concentration ($\mu g/m^2$) and the air concentration ($\mu g/m^3$), reported in units of m^{-1}. May (2002) describes studies conducted in which concentrations of contaminants in air and on surfaces were measured during various activities. For a construction worker, May (2002) estimated a K of 10^{-4} m^{-1}; for an industrial worker, May (2002) estimated a K of 5 $x10^{-8}$ m^{-1}. The EC is an exposure concentration consistent with exposures for ingestion and dermal pathways and varies for carcinogenic and noncarcinogenic risks based on the averaging time.

As with the ingestion and dermal pathways, the screening level surface concentration for the inhalation pathway ($C_{s,inh}$)is derived similarly.

Noting that EC = C_s * EXP_{inh},

$$\mathbf{C_{s,inh} = TR / [IUR * (EXP_{inh,ch} + EXP_{inh,ad}) * 10{,}000\ cm^2/m^2\ (carcinogens)}$$

$$\mathbf{C_{s,inh} = THQ * RfC / EXP_{inh,ch} * 10{,}000\ cm^2/m^2\ (noncarcinogens)}$$

The screening level for all exposure pathways ($C_{s,all}$) is defined as:

$$\mathbf{C_{s,all} = 1 / (1/C_s + 1/C_{s,inh})}$$

Exposure Parameters

For residential exposure, values for body weights of a child and adult, averaging times, exposure frequency, and exposure duration are equal to the default exposure assumptions used in the derivation of USEPA's Regional Screening Levels (USEPA, 2020). Exposure time to surfaces (direct exposure to dust) is assumed to be 2 hours per day. The Office of Pesticide Programs utilizes an exposure time of 2 hours/day to estimate dermal exposure to pesticides on a hard surface (see *Standard Operating Procedures for Residential Pesticide Exposure Assessment*) for a residential child (USEPA, 2012).

For skin surface area, professional judgment was used to determine which body parts would be exposed to the contaminated surfaces. For dermal contact by the child, it was assumed that the hands, arms, and feet were available for contact with surfaces. For dermal contact by the adult, it was assumed that the hands were available for contact with surfaces. A Transfer Coefficient (TC) was assumed to be 50 percent of the surface areas of these body parts available for contact (Kuusisto, et al., 2006). This results in a TC of 800 cm^2/hr for the child and 500 cm^2/hr for the adult. The fraction transferred from the surface to skin (FT_{skin}) is 50 percent (USEPA, 1987).

For incidental ingestion by the child, to account for hand-to-mouth contact, it was assumed that 100 percent of the surface area of the child's hands was available for contact. For incidental ingestion by the adult, it was assumed that 5 percent of the surface area of the adult's hands, the approximate surface area of three fingers, was available for contact (Kuusisto et al., 2006). The frequency of hand-to-mouth events (FQ_{ihand}) is assumed to be 9.5 events/hr for the child and 0.2 events/hr for the adult (Greene et al., 2004). A salivary extraction factor is also assumed to be 50 percent (Greene et al., 2004).

The following table identifies the fraction of the total average body surface area for the adult and child that each body part comprises.

Fraction of Total Body Surface Area[a]		
Body Part	**Adult[b]**	**Child[c]**
Arms	0.14	0.139
Hands	0.05	0.05
3 Fingers of Hands	0.0025	NA
Feet	0.067	0.064

[a] USEPA, 2011. Exposure Factors Handbook (Chapter 7).
[b]Average of the mean surface areas for men and women.
[c]Mean surface areas of weighted average for first 6 years of life.

Exposed surface areas for the adult and child for dermal contact and incidental ingestion are summarized in the following table.

Exposed Surface Area		
Receptor	**Adult**	**Child**
Total Body Surface Area (cm^2)	19,652	6,365
(SA_{ihand}) (cm^2)	49	318
TC (cm^2/hr)	500	800

The dermal absorption fraction for PCBs (ABS_{derm}) is 0.14 (USEPA, 2004). Fractional gastrointestinal absorption of PCBs (GIABS) is defined as 100 percent. These are the only chemical-specific parameters used in this analysis.

The exposure parameters are summarized in the following table:

Exposure Parameter		Units	Child Resident	Adult Resident
Body Weight	BW	kg	15	80
Averaging Time (carcinogen)	AT_c	days	25,550	25,550
Averaging Time (noncarcinogen)	AT_{nc}	days	2,190	Not Applicable
Exposure Frequency	EF	days/year	350	350
Exposure Duration	ED	years	6	20
Exposure Time	ET	hr/day	2	2
Transfer Coefficient	TC	cm^2/hr	800	500
Skin Surface Area (ingestion)	SA_{ihand}	cm^2	318	49
Frequency of hand-to-mouth events	FQ_{ihand}	hr^{-1}	9.5	0.2
Fraction transferred surface to skin	FT	unitless	0.5	0.5
Dermal Absorption	ABS_{derm}	unitless	0.14	0.14
Fraction Gastrointestinal Absorption	GIABS	unitless	1	1

Toxicity Assessment

A toxicity factor is a numerical expression of a substance's dose-response relationship. For carcinogens, this toxicity factor is the Cancer Slope Factor (CSF). In accordance with USEPA's risk assessment guidance, the evaluation of potential risk to a carcinogen is based on the presumption that cancer is a nonthreshold response. Based on the evaluation that a chemical is a known or probable human carcinogen, a value that defines the relationship between dose and the incidence of cancer is derived. The cancer slope factor is a plausible upper bound estimate of the probability of a carcinogenic response per unit intake of a chemical over a lifetime (USEPA, 1989).

For noncarcinogens, the toxicity factor is the Reference Dose (RfD). In accordance with USEPA's risk assessment guidance, the RfD is an evaluation of a daily exposure level for the human population, including sensitive subpopulations, that is unlikely to pose an appreciable risk of deleterious effects during a lifetime (USEPA, 1989).

After PCBs are released into the environment, PCB mixtures change through transformation, partitioning, and bioaccumulation. The PCBs to which people are exposed are typically different than the original PCB source because of changes in congener and impurity composition. While evaluation for Aroclor mixtures indicates a presence of PCBs, their weathering and transformation over time render the Aroclor data uncertain regarding what compounds receptors are likely to be exposed.

The range of potency for commercial mixtures is used to represent the potency of environmental mixtures. Environmental processes alter mixture composition, thereby altering the toxicity of those original mixtures. Congener information is important in refining the cancer and noncancer risks.

When evaluating potential cancer risk associated with exposure to PCBs, the exposure route, congeners identified, total PCB concentrations, and chlorine composition determine which CSF is applicable. For potential residential exposure to dust, the PCBs are classified as "high risk," which corresponds to the CSF of 2 $(mg/kg\text{-}day)^{-1}$. This CSF is appropriate for food consumption, soil or sediment ingestion, and dust or aerosol inhalation.

A limited number of congeners are classified as dioxin-like carcinogens (DLC). These include the following congeners (USEPA, 2010):

Congener	Toxicity Equivalence Factor
77	0.0001
81	0.0003
105	0.00003
114	0.00003
118	0.00003
123	0.00003
126	0.1
156	0.00003
157	0.00003
167	0.00003
169	0.03
189	0.0003

Multiplication of the toxicity equivalency factor (TEF) by the congener concentration results in an equivalent concentration to the dioxin 2,37,8-tetrachlorodibenzodioxin (2,3,7,8-TCDD).

- The oral CSF for 2,3,7,8-TCDD [1.3×10^5 $(mg/kg\text{-}day)^{-1}$] is applicable to the dioxin toxicity equivalent (TEQ) concentration.
- The IUR for 2,3,7,8-TCDD is [38 $(\mu g/m^3)^{-1}$] is also applicable to the dioxin TEQ concentration.

Dioxin-like PCB congeners also have noncarcinogenic toxicity properties. The corresponding toxicity values are presented in the following table:

Congener	RfD (mg/kg-day)	RfC (mg/m^3)
77	7×10^{-6}	4 x 10-4
81	2.3×10^{-6}	1.3×10^{-4}
105	2.3×10^{-5}	1.3×10^{-3}
114	2.3×10^{-5}	1.3×10^{-3}
118	2.3×10^{-5}	1.3×10^{-3}
123	2.3×10^{-5}	1.3×10^{-3}
126	7×10^{-9}	4×10^{-7}

Congener	RfD (mg/kg-day)	RfC (mg/m^3)
156	2.3×10^{-5}	1.3×10^{-3}
157	2.3×10^{-5}	1.3×10^{-3}
167	2.3×10^{-5}	1.3×10^{-3}
169	2.3×10^{-8}	1.3×10^{-6}
189	2.3×10^{-5}	1.3×10^{-3}

Screening Level

Incorporation of the exposure parameters and toxicity factor into the equations and solving for $C_{s,\ all}$ results in the surface screening levels for a target carcinogenic risk level of 1×10^{-6}, a one-in-one million probability of developing cancer as a result of exposure to surface dust, and a hazard quotient of 1. Wipe samples are collected to determine surface concentrations. Wipe samples are typically collected over a 100 cm^2 area. Therefore, the screening level for the mass of PCBs on a wipe sample, C_{wipe}, is equal to 100 times the screening level, $C_{s,all.}$ Attachment 1 provides the backup calculation for derivation of the screening levels.

Risks are directly proportional to concentration. The USEPA's target risk range is 10^{-4} to 10^{-6}. Therefore, for achieving higher risk levels, wipe sample screening levels increase by an order-of-magnitude for each risk level.

PCB	Carcinogen C_{wipe} 10^{-6} Risk Level ng/100 cm^2	Noncarcinogen C_{wipe} HQ = 1 ng/100 cm^2
High Risk PCBs	5.5	NA
Dioxin Like Congeners (TEQ)	8.4×10^{-5}	NA
77	NA	79
81	NA	26
105	NA	260
114	NA	260
118	NA	260
123	NA	260
126	NA	0.08
156	NA	260
157	NA	260
167	NA	260
169	NA	0.26
189	NA	260

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ATTACHMENT 1

DERIVATION OF A RESIDENTIAL WIPE SAMPLE SCREENING LEVEL FOR EXPOSURE TO DUST ON SURFACES CONTAINING PCBS

HIGH RISK PCBS

Exposure Factor		Units	Dermal		Ingestion		Inhalation	
			Adult	Child	Adult	Child	Adult	Child
Body Weight	BW	kg	80	15	80	15	NA	NA
Averaging Time (carcinogen)	AT_c	days	25550	25550	25550	25550	25550	25550
Averaging Time (carcinogen for inhalation)	AT_c	hr	NA	NA	NA	NA	613200	613200
Exposure Frequency	EF	days/year	350	350	350	350	350	350
Exposure Duration	ED	years	20	6	20	6	20	6
Exposure Time	ET	hr/day	2	2	2	2	2	2
Surface Area (3 fingers of hand)	SA_{ihand}	cm^2	49	318	49	318	NA	NA
Transfer Coefficient	TC	cm^2/hr	500	800	500	800	NA	NA
Frequency of Hand-to-Mouth Events	FQ_{ihand}	hr^{-1}	0.2	9.5	0.2	9.5	NA	NA
Fraction Transferred from Surface to Skin	FT_{skin}	unitless	0.5	0.5	0.5	0.5	NA	NA
Fractional Gastrointestinal Absorption	GIABS	unitless	1	1	1	1	NA	NA
Dermal Absorption	ABS_{der}	unitless	0.14	0.14	0.14	0.14	NA	NA
Saliva Extraction Factor	SE	unitless	0.5	0.5	0.5	0.5	NA	NA
Resuspension Factor	K	m^{-1}	NA	NA	NA	NA	5.00E-08	1.00E-04
Unit Conversion Factor	UCF	ug/mg	1000	1000	1000	1000	NA	NA

		$EXP_{derm,ad}$	$EXP_{derm,ch}$	$EXP_{ing,ad}$	$EXP_{ing,ch}$	$EXP_{inh,ad}$	$EXP_{inh,ch}$
Exposure Constant (by route and receptor)	EXP_i	0.00024	0.000614	1.68E-05	0.008277	1.14E-09	6.85E-07

EXP_{derm} = ($TC * ABS_{derm} * FT_{skin} * ET * EF * ED$) / ($BW * ATc * UCF$)

EXP_{ing} = ($SA_{ihand} * FQ_{ihand} * SE * GIABS * FT_{skin} * ET * EF * ED$)/ ($BW * ATc * UCF$)

EXP_{inh} = ($K * ET * EF * ED$) / (ATc)

Expoure Constant Child	EXP_{ch}	0.00889	
Expoure Constant Adult	EXP_{ad}	0.000257	

EXP_{ch} = $EXP_{derm,ch} + EXP_{ing,ch}$ cm2 / [kg bw - d - ug/mg]

EXP_{ad} = $EXP_{derm,ad} + EXP_{ing,ad}$ cm2 / [kg bw - d - ug/mg]

Cancer Slope Factor	CSF	$(mg/kg\text{-}day)^{-1}$	2
Inhalation Unit Risk	IUR	$(ug/m3)^{-1}$	5.70E-04
Target Risk	TR	unitless	1.00E-06
Surface Concentration of Dust (ing/derm)	C_s	ug/cm^2	5.47E-05

C_s = TR / [CSF * ($EXP_{ch} + EXP_{ad}$)]

Surface Concentration of Dust (inh)	$C_{s,inh}$	ug/cm^2	2.56E-01

$C_{s,inh}$ = TR / [IUR * ($EXP_{inh,ch} + EXP_{inh,ad}$) * 10,000 cm^2/m^2]

Surface Concentration of Dust (all)	$C_{s,all}$	ug/cm^2	5.47E-05

Cs,all = 1 / (1/C_s + 1/$C_{s,inh}$)

			Ing/Derm	Inh	All
Wipe Sample Concentration	C_{wipe}	ug/100 cm^2	5.47E-03	2.56E+01	5.47E-03
		ng/100 cm^2	5.47E+00	2.56E+04	5.47E+00

C_{wipe} = 100 * C_s

ATTACHMENT 1

DERIVATION OF A RESIDENTIAL WIPE SAMPLE SCREENING LEVEL FOR EXPOSURE TO DUST ON SURFACES CONTAINING PCBS

DIOXIN LIKE PCB CONGENERS

Exposure Factor		Units	Dermal		Ingestion		Inhalation	
			Adult	Child	Adult	Child	Adult	Child
Body Weight	BW	kg	80	15	80	15	NA	NA
Averaging Time (carcinogen)	AT_c	days	25550	25550	25550	25550	25550	25550
Averaging Time (carcinogen for inhalation)	AT_c	hr	NA	NA	NA	NA	613200	613200
Exposure Frequency	EF	days/year	350	350	350	350	350	350
Exposure Duration	ED	years	20	6	20	6	20	6
Exposure Time	ET	hr/day	2	2	2	2	2	2
Surface Area (3 fingers of hand)	SA_{ihand}	cm^2	49	318	49	318	NA	NA
Transfer Coefficient	TC	cm^2/hr	500	800	500	800	NA	NA
Frequency of Hand-to-Mouth Events	FQ_{ihand}	hr^{-1}	0.2	9.5	0.2	9.5	NA	NA
Fraction Transferred from Surface to Skin	FT_{skin}	unitless	0.5	0.5	0.5	0.5	NA	NA
Fractional Gastrointestinal Absorption	GIABS	unitless	1	1	1	1	NA	NA
Dermal Absorption	ABS_{der}	unitless	0.14	0.14	0.14	0.14	NA	NA
Saliva Extraction Factor	SE	unitless	0.5	0.5	0.5	0.5	NA	NA
Resuspension Factor	K	m^{-1}	NA	NA	NA	NA	5.00E-08	1.00E-04
Unit Conversion Factor	UCF	ug/mg	1000	1000	1000	1000	NA	NA

		$EXP_{derm,ad}$	$EXP_{derm,ch}$	$EXP_{ing,ad}$	$EXP_{ing,ch}$	$EXP_{inh,ad}$	$EXP_{inh,ch}$
Exposure Constant (by route and receptor)	EXP_i	0.00024	0.000614	1.68E-05	0.008277	1.14E-09	6.85E-07

EXP_{derm} = ($TC * ABS_{derm} * FT_{skin} * ET * EF * ED$) / ($BW * ATc * UCF$)

EXP_{ing} = ($SA_{ihand} * FQ_{ihand} * SE * GIABS * FT_{skin} * ET * EF * ED$)/ ($BW * ATc * UCF$)

EXP_{inh} = ($K * ET * EF * ED$) / (ATc)

Expoure Constant Child	EXP_{ch}	0.00889	
Expoure Constant Adult	EXP_{ad}	0.000257	

EXP_{ch} = $EXP_{derm,ch} + EXP_{ing,ch}$ cm2 / [kg bw - d - ug/mg]

EXP_{ad} = $EXP_{derm,ad} + EXP_{ing,ad}$ cm2 / [kg bw - d - ug/mg]

Cancer Slope Factor	CSF	$(mg/kg\text{-}day)^{-1}$	1.30E+05
Inhalation Unit Risk	IUR	$(ug/m3)^{-1}$	3.80E+01
Target Risk	TR	unitless	1.00E-06
Surface Concentration of Dust (ing/derm)	C_s	ug/cm^2	8.41E-10

C_s = TR / [CSF * ($EXP_{ch} + EXP_{ad}$)]

Surface Concentration of Dust (inh)	$C_{s,inh}$	ug/cm^2	3.84E-06

$C_{s,inh}$ = TR / [IUR * ($EXP_{inh,ch} + EXP_{inh,ad}$) * 10,000 cm^2/m^2]

Surface Concentration of Dust (all)	$C_{s,all}$	ug/cm^2	8.41E-10

Cs,all = 1 / ($1/C_s + 1/C_{s,inh}$)

			Ing/Derm	Inh	All
Wipe Sample Concentration	C_{wipe}	$ug/100\ cm^2$	8.41E-08	3.84E-04	8.41E-08
		$ng/100\ cm^2$	8.41E-05	3.84E-01	8.41E-05

C_{wipe} = 100 * C_s

ATTACHMENT 1

DERIVATION OF A RESIDENTIAL WIPE SAMPLE SCREENING LEVEL FOR EXPOSURE TO DUST ON SURFACES CONTAINING PCBS CONGENER #77

Exposure Factor		Units	Dermal		Ingestion		Inhalation	
			Adult	Child	Adult	Child	Adult	Child
Body Weight	BW	kg	NA	15	NA	15	NA	NA
Averaging Time (noncarcinogen)	AT_c	days	NA	25550	NA	25550	NA	2190
Averaging Time (noncarcinogen) for inhalation	AT_c	hr	NA	NA	NA	NA	NA	52560
Exposure Frequency	EF	days/year	NA	350	NA	350	NA	350
Exposure Duration	ED	years	NA	6	NA	6	NA	6
Exposure Time	ET	hr/day	NA	2	NA	2	NA	2
Surface Area (3 fingers of hand)	SA_{ihand}	cm^2	NA	318	NA	318	NA	NA
Transfer Coefficient	TC	cm^2/hr	NA	800	NA	800	NA	NA
Frequency of Hand-to-Mouth Events	FQ_{ihand}	hr^{-1}	NA	9.5	NA	9.5	NA	NA
Fraction Transferred from Surface to Skin	FT_{skin}	unitless	NA	0.5	NA	0.5	NA	NA
Fractional Gastrointestinal Absorption	GIABS	unitless	NA	1	NA	1	NA	NA
Dermal Absorption	ABS_{der}	unitless	NA	0.14	NA	0.14	NA	NA
Saliva Extraction Factor	SE	unitless	NA	0.5	NA	0.5	NA	NA
Resuspension Factor	K	m^{-1}	NA	NA	NA	NA	NA	1.00E-04
Unit Conversion Factor	UCF	ug/mg	NA	1000	NA	1000	NA	1000

		$EXP_{derm,ad}$	$EXP_{derm,ch}$	$EXP_{ing,ad}$	$EXP_{ing,ch}$	$EXP_{inh,ad}$	$EXP_{inh,ch}$
Exposure Constant (by route and receptor)	EXP_i	NA	0.000614	NA	0.008277	NA	7.99E-09

EXP_{derm} = (TC * ABS_{derm} * FT_{skin} * ET * EF * ED) / (BW * ATc * UCF)

EXP_{ing} = (SA_{ihand} * FQ_{ihand} * SE * GIABS * FT_{skin} * ET * EF * ED)/ (BW * ATc * UCF)

EXP_{inh} = (K * ET * EF * ED) / (ATnc * UCF)

Expoure Constant Child	EXP_{ch}	0.00889	
Expoure Constant Adult	EXP_{ad}	NA	

EXP_{ch} = $EXP_{derm,ch}$ + $EXP_{ing,ch}$ cm2 / [kg bw - d - ug/mg]

EXP_{ad} = $EXP_{derm,ad}$ + $EXP_{ing,ad}$ cm2 / [kg bw - d - ug/mg]

Reference Dose	RfD	(mg/kg-day)	7.00E-06
Reference Concentration	RfC	mg/m^3	4.00E-04
Hazard Quotient	HQ	unitless	1.00E+00

Surface Concentration of Dust (ing/derm)	C_s	ug/cm^2	7.87E-04

C_s = [THQ * RfD] / (EXP_{ch})

Surface Concentration of Dust (inh)	$C_{s,inh}$	ug/cm^2	5.01E+00

$C_{s,inh}$ = THQ * RfC / ($EXP_{inh,ch)}$ * 10,000 cm^2/m^2)

Surface Concentration of Dust (all)	Cs,all	ug/cm^2	7.87E-04

Cs,all = 1 / (1/C_s + 1/$C_{s,inh}$)

			Ing/Derm	Inh	All
Wipe Sample Concentration	C_{wipe}	$ug/100\ cm^2$	7.87E-02	5.01E+02	7.87E-02
		$ng/100\ cm^2$	7.87E+01	5.01E+05	7.87E+01

C_{wipe} = 100 * C_s

ATTACHMENT 1

DERIVATION OF A RESIDENTIAL WIPE SAMPLE SCREENING LEVEL FOR EXPOSURE TO DUST ON SURFACES CONTAINING PCBS CONGENER #81

Exposure Factor		Units	Dermal		Ingestion		Inhalation	
			Adult	Child	Adult	Child	Adult	Child
Body Weight	BW	kg	NA	15	NA	15	NA	NA
Averaging Time (noncarcinogen)	AT_c	days	NA	25550	NA	25550	NA	2190
Averaging Time (noncarcinogen) for inhalation	AT_c	hr	NA	NA	NA	NA	NA	52560
Exposure Frequency	EF	days/year	NA	350	NA	350	NA	350
Exposure Duration	ED	years	NA	6	NA	6	NA	6
Exposure Time	ET	hr/day	NA	2	NA	2	NA	2
Surface Area (3 fingers of hand)	SA_{ihand}	cm^2	NA	318	NA	318	NA	NA
Transfer Coefficient	TC	cm^2/hr	NA	800	NA	800	NA	NA
Frequency of Hand-to-Mouth Events	FQ_{ihand}	hr^{-1}	NA	9.5	NA	9.5	NA	NA
Fraction Transferred from Surface to Skin	FT_{skin}	unitless	NA	0.5	NA	0.5	NA	NA
Fractional Gastrointestinal Absorption	GIABS	unitless	NA	1	NA	1	NA	NA
Dermal Absorption	ABS_{der}	unitless	NA	0.14	NA	0.14	NA	NA
Saliva Extraction Factor	SE	unitless	NA	0.5	NA	0.5	NA	NA
Resuspension Factor	K	m^{-1}	NA	NA	NA	NA	NA	1.00E-04
Unit Conversion Factor	UCF	ug/mg	NA	1000	NA	1000	NA	1000

		$EXP_{derm,ad}$	$EXP_{derm,ch}$	$EXP_{ing,ad}$	$EXP_{ing,ch}$	$EXP_{inh,ad}$	$EXP_{inh,ch}$
Exposure Constant (by route and receptor)	EXP_i	NA	0.000614	NA	0.008277	NA	7.99E-09

EXP_{derm} = (TC * ABS_{derm} * FT_{skin} * ET * EF * ED) / (BW * ATc * UCF)

EXP_{ing} = (SA_{ihand} * FQ_{ihand} * SE * GIABS * FT_{skin} * ET * EF * ED)/ (BW * ATc * UCF)

EXP_{inh} = (K * ET * EF * ED) / (ATnc * UCF)

Expoure Constant Child	EXP_{ch}	0.00889	
Expoure Constant Adult	EXP_{ad}	NA	

EXP_{ch} = $EXP_{derm,ch}$ + $EXP_{ing,ch}$ cm2 / [kg bw - d - ug/mg]

EXP_{ad} = $EXP_{derm,ad}$ + $EXP_{ing,ad}$ cm2 / [kg bw - d - ug/mg]

Reference Dose	RfD	(mg/kg-day)	2.30E-06
Reference Concentration	RfC	mg/m^3	1.30E-04
Hazard Quotient	HQ	unitless	1.00E+00

Surface Concentration of Dust (ing/derm)	C_s	ug/cm^2	2.59E-04

C_s = [THQ * RfD] / (EXP_{ch})

Surface Concentration of Dust (inh)	$C_{s,inh}$	ug/cm^2	1.63E+00

$C_{s,inh}$ = THQ * RfC / ($EXP_{inh,ch)}$ * 10,000 cm^2/m^2)

Surface Concentration of Dust (all)	Cs,all	ug/cm^2	2.59E-04

Cs,all = 1 / (1/C_s + 1/$C_{s,inh}$)

			Ing/Derm	Inh	All
Wipe Sample Concentration	C_{wipe}	$ug/100\ cm^2$	2.59E-02	1.63E+02	2.59E-02
		$ng/100\ cm^2$	2.59E+01	1.63E+05	2.59E+01

C_{wipe} = 100 * C_s

ATTACHMENT 1

DERIVATION OF A RESIDENTIAL WIPE SAMPLE SCREENING LEVEL FOR EXPOSURE TO DUST ON SURFACES CONTAINING PCBS CONGENER #105, 114, 118, 123, 156, 157, 167, 189

Exposure Factor		Units	Dermal		Ingestion		Inhalation	
			Adult	Child	Adult	Child	Adult	Child
Body Weight	BW	kg	NA	15	NA	15	NA	NA
Averaging Time (noncarcinogen)	AT_c	days	NA	25550	NA	25550	NA	2190
Averaging Time (noncarcinogen) for inhalation	AT_c	hr	NA	NA	NA	NA	NA	52560
Exposure Frequency	EF	days/year	NA	350	NA	350	NA	350
Exposure Duration	ED	years	NA	6	NA	6	NA	6
Exposure Time	ET	hr/day	NA	2	NA	2	NA	2
Surface Area (3 fingers of hand)	SA_{ihand}	cm^2	NA	318	NA	318	NA	NA
Transfer Coefficient	TC	cm^2/hr	NA	800	NA	800	NA	NA
Frequency of Hand-to-Mouth Events	FQ_{ihand}	hr^{-1}	NA	9.5	NA	9.5	NA	NA
Fraction Transferred from Surface to Skin	FT_{skin}	unitless	NA	0.5	NA	0.5	NA	NA
Fractional Gastrointestinal Absorption	GIABS	unitless	NA	1	NA	1	NA	NA
Dermal Absorption	ABS_{der}	unitless	NA	0.14	NA	0.14	NA	NA
Saliva Extraction Factor	SE	unitless	NA	0.5	NA	0.5	NA	NA
Resuspension Factor	K	m^{-1}	NA	NA	NA	NA	NA	1.00E-04
Unit Conversion Factor	UCF	ug/mg	NA	1000	NA	1000	NA	1000

		$EXP_{derm,ad}$	$EXP_{derm,ch}$	$EXP_{ing,ad}$	$EXP_{ing,ch}$	$EXP_{inh,ad}$	$EXP_{inh,ch}$
Exposure Constant (by route and receptor)	EXP_i	NA	0.000614	NA	0.008277	NA	7.99E-09

EXP_{derm} = (TC * ABS_{derm} * FT_{skin} * ET * EF * ED) / (BW * ATc * UCF)

EXP_{ing} = (SA_{ihand} * FQ_{ihand} * SE * GIABS * FT_{skin} * ET * EF * ED)/ (BW * ATc * UCF)

EXP_{inh} = (K * ET * EF * ED) / (ATnc * UCF)

Expoure Constant Child	EXP_{ch}	0.00889	
Expoure Constant Adult	EXP_{ad}	NA	

EXP_{ch} = $EXP_{derm,ch}$ + $EXP_{ing,ch}$ cm2 / [kg bw - d - ug/mg]

EXP_{ad} = $EXP_{derm,ad}$ + $EXP_{ing,ad}$ cm2 / [kg bw - d - ug/mg]

Reference Dose	RfD	(mg/kg-day)	2.30E-05
Reference Concentration	RfC	mg/m^3	1.30E-03
Hazard Quotient	HQ	unitless	1.00E+00

Surface Concentration of Dust (ing/derm)	C_s	ug/cm^2	2.59E-03

C_s = [THQ * RfD] / (EXP_{ch})

Surface Concentration of Dust (inh)	$C_{s,inh}$	ug/cm^2	1.63E+01

$C_{s,inh}$ = THQ * RfC / ($EXP_{inh,ch)}$ * 10,000 cm^2/m^2)

Surface Concentration of Dust (all)	Cs,all	ug/cm^2	2.59E-03

Cs,all = 1 / (1/C_s + 1/$C_{s,inh}$)

			Ing/Derm	Inh	All
Wipe Sample Concentration	C_{wipe}	$ug/100\ cm^2$	2.59E-01	1.63E+03	2.59E-01
		$ng/100\ cm^2$	2.59E+02	1.63E+06	2.59E+02

C_{wipe} = 100 * C_s

ATTACHMENT 1

DERIVATION OF A RESIDENTIAL WIPE SAMPLE SCREENING LEVEL FOR EXPOSURE TO DUST ON SURFACES CONTAINING PCBS CONGENER #126

Exposure Factor		Units	Dermal		Ingestion		Inhalation	
			Adult	Child	Adult	Child	Adult	Child
Body Weight	BW	kg	NA	15	NA	15	NA	NA
Averaging Time (noncarcinogen)	AT_c	days	NA	25550	NA	25550	NA	2190
Averaging Time (noncarcinogen) for inhalation	AT_c	hr	NA	NA	NA	NA	NA	52560
Exposure Frequency	EF	days/year	NA	350	NA	350	NA	350
Exposure Duration	ED	years	NA	6	NA	6	NA	6
Exposure Time	ET	hr/day	NA	2	NA	2	NA	2
Surface Area (3 fingers of hand)	SA_{ihand}	cm^2	NA	318	NA	318	NA	NA
Transfer Coefficient	TC	cm^2/hr	NA	800	NA	800	NA	NA
Frequency of Hand-to-Mouth Events	FQ_{ihand}	hr^{-1}	NA	9.5	NA	9.5	NA	NA
Fraction Transferred from Surface to Skin	FT_{skin}	unitless	NA	0.5	NA	0.5	NA	NA
Fractional Gastrointestinal Absorption	GIABS	unitless	NA	1	NA	1	NA	NA
Dermal Absorption	ABS_{der}	unitless	NA	0.14	NA	0.14	NA	NA
Saliva Extraction Factor	SE	unitless	NA	0.5	NA	0.5	NA	NA
Resuspension Factor	K	m^{-1}	NA	NA	NA	NA	NA	1.00E-04
Unit Conversion Factor	UCF	ug/mg	NA	1000	NA	1000	NA	1000

		$EXP_{derm,ad}$	$EXP_{derm,ch}$	$EXP_{ing,ad}$	$EXP_{ing,ch}$	$EXP_{inh,ad}$	$EXP_{inh,ch}$
Exposure Constant (by route and receptor)	EXP_i	NA	0.000614	NA	0.008277	NA	7.99E-09

EXP_{derm} = (TC * ABS_{derm} * FT_{skin} * ET * EF * ED) / (BW * ATc * UCF)

EXP_{ing} = (SA_{ihand} * FQ_{ihand} * SE * GIABS * FT_{skin} * ET * EF * ED)/ (BW * ATc * UCF)

EXP_{inh} = (K * ET * EF * ED) / (ATnc * UCF)

Expoure Constant Child	EXP_{ch}	0.00889	
Expoure Constant Adult	EXP_{ad}	NA	

EXP_{ch} = $EXP_{derm,ch}$ + $EXP_{ing,ch}$ cm2 / [kg bw - d - ug/mg]

EXP_{ad} = $EXP_{derm,ad}$ + $EXP_{ing,ad}$ cm2 / [kg bw - d - ug/mg]

Reference Dose	RfD	(mg/kg-day)	7.00E-09
Reference Concentration	RfC	mg/m^3	4.00E-07
Hazard Quotient	HQ	unitless	1.00E+00

Surface Concentration of Dust (ing/derm)	C_s	ug/cm^2	7.87E-07

C_s = [THQ * RfD] / (EXP_{ch})

Surface Concentration of Dust (inh)	$C_{s,inh}$	ug/cm^2	5.01E-03

$C_{s,inh}$ = THQ * RfC / ($EXP_{inh,ch)}$ * 10,000 cm^2/m^2)

Surface Concentration of Dust (all)	Cs,all	ug/cm^2	7.87E-07

Cs,all = 1 / (1/C_s + 1/$C_{s,inh}$)

			Ing/Derm	Inh	All
Wipe Sample Concentration	C_{wipe}	$ug/100\ cm^2$	7.87E-05	5.01E-01	7.87E-05
		$ng/100\ cm^2$	7.87E-02	5.01E+02	7.87E-02

C_{wipe} = 100 * C_s

ATTACHMENT 1

DERIVATION OF A RESIDENTIAL WIPE SAMPLE SCREENING LEVEL FOR EXPOSURE TO DUST ON SURFACES CONTAINING PCBS CONGENER #169

Exposure Factor		Units	Dermal		Ingestion		Inhalation	
			Adult	Child	Adult	Child	Adult	Child
Body Weight	BW	kg	NA	15	NA	15	NA	NA
Averaging Time (noncarcinogen)	AT_c	days	NA	25550	NA	25550	NA	2190
Averaging Time (noncarcinogen) for inhalation	AT_c	hr	NA	NA	NA	NA	NA	52560
Exposure Frequency	EF	days/year	NA	350	NA	350	NA	350
Exposure Duration	ED	years	NA	6	NA	6	NA	6
Exposure Time	ET	hr/day	NA	2	NA	2	NA	2
Surface Area (3 fingers of hand)	SA_{ihand}	cm^2	NA	318	NA	318	NA	NA
Transfer Coefficient	TC	cm^2/hr	NA	800	NA	800	NA	NA
Frequency of Hand-to-Mouth Events	FQ_{ihand}	hr^{-1}	NA	9.5	NA	9.5	NA	NA
Fraction Transferred from Surface to Skin	FT_{skin}	unitless	NA	0.5	NA	0.5	NA	NA
Fractional Gastrointestinal Absorption	GIABS	unitless	NA	1	NA	1	NA	NA
Dermal Absorption	ABS_{der}	unitless	NA	0.14	NA	0.14	NA	NA
Saliva Extraction Factor	SE	unitless	NA	0.5	NA	0.5	NA	NA
Resuspension Factor	K	m^{-1}	NA	NA	NA	NA	NA	1.00E-04
Unit Conversion Factor	UCF	ug/mg	NA	1000	NA	1000	NA	1000

		$EXP_{derm,ad}$	$EXP_{derm,ch}$	$EXP_{ing,ad}$	$EXP_{ing,ch}$	$EXP_{inh,ad}$	$EXP_{inh,ch}$
Exposure Constant (by route and receptor)	EXP_i	NA	0.000614	NA	0.008277	NA	7.99E-09

EXP_{derm} = (TC * ABS_{derm} * FT_{skin} * ET * EF * ED) / (BW * ATc * UCF)

EXP_{ing} = (SA_{ihand} * FQ_{ihand} * SE * GIABS * FT_{skin} * ET * EF * ED)/ (BW * ATc * UCF)

EXP_{inh} = (K * ET * EF * ED) / (ATnc * UCF)

Expoure Constant Child	EXP_{ch}	0.00889	
Expoure Constant Adult	EXP_{ad}	NA	

EXP_{ch} = $EXP_{derm,ch}$ + $EXP_{ing,ch}$ cm2 / [kg bw - d - ug/mg]

EXP_{ad} = $EXP_{derm,ad}$ + $EXP_{ing,ad}$ cm2 / [kg bw - d - ug/mg]

Reference Dose	RfD	(mg/kg-day)	2.30E-08
Reference Concentration	RfC	mg/m^3	1.30E-06
Hazard Quotient	HQ	unitless	1.00E+00

Surface Concentration of Dust (ing/derm)	C_s	ug/cm^2	2.59E-06

C_s = [THQ * RfD] / (EXP_{ch})

Surface Concentration of Dust (inh)	$C_{s,inh}$	ug/cm^2	1.63E-02

$C_{s,inh}$ = THQ * RfC / ($EXP_{inh,ch)}$ * 10,000 cm^2/m^2)

Surface Concentration of Dust (all)	Cs,all	ug/cm^2	2.59E-06

Cs,all = 1 / (1/C_s + 1/$C_{s,inh}$)

			Ing/Derm	Inh	All
Wipe Sample Concentration	C_{wipe}	$ug/100\ cm^2$	2.59E-04	1.63E+00	2.59E-04
		$ng/100\ cm^2$	2.59E-01	1.63E+03	2.59E-01

C_{wipe} = 100 * C_s

APPENDIX G

ANALYTICAL DATA

APPENDIX ID	APPENDIX TITLE
G.1	BACKGROUND ANALYTICAL DATA
G.2	SHAFFER EQUIPMENT COMPANY PROPERTY ANALYTICAL DATA
G.3	POSSIBLE TRANSFORMER STORAGE AREA ANALYTICAL DATA
G.4	BRITT BATH HOUSE ANALYTICAL DATA
G.5	BERWIND GREEN HILL MINE DUMP AREA ANALYTICAL DATA
G.6	ROCKLICK ROAD ANALYTICAL DATA
G.7	NR&P SUPPLY HOUSE ANALYTICAL DATA
G.8	RESIDENTIAL ANALYTICAL DATA
G.9	ARBUCKLE CREEK AND WETLAND ANALYTICAL DATA
G.10	NEW RIVER ANALYTICAL DATA
G.11	MINES ANALYTICAL DATA

GLOSSARY OF DATA QUALIFIER CODES

Validation Qualifiers: In order of descending precedence, these qualifiers may apply to a result.

R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
B	The result is presumed a blank contaminant. This qualifier is used only for drinking water samples.
Z	The isomer was identified with an ion ratio outside the 15% theoretical ion abundance ratio; the associated numerical value is reported as the Estimated Maximum Possible Concentration (EMPC) and is considered estimated.

APPENDIX G.1

BACKGROUND ANALYTICAL DATA

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-300	SB-300	SB-300	SB-301	SB-301	SB-301	SB-301	SB-302	SB-302	SB-302	SB-303
SAMPLE ID	SB300-20191125-0006	SB300-20191125-0624	SB300-20191125-2448	SB301-20191125-0006	SB301-20191125-0624	SB301-20191125-0624-D	SB301-20191125-2448	SB302-20191125-0006	SB302-20191125-0624	SB302-20191125-2448	SB303-20191125-0006
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125
DUPLICATE						SB301-20191125-0624					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SB	SS	SS	SS	SB	SS	SS	SB	SS
TOP DEPTH	0	0.5	2	0	0.5	0.5	2	0	0.5	2	0
BOTTOM DEPTH	0.5	2	4	0.5	2	2	4	0.5	2	4	0.5
VOLATILES (MG/KG)											
1,1,1-TRICHLOROETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
1,1,2,2-TETRACHLOROETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
1,1,2-TRICHLOROETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
1,1-DICHLOROETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
1,1-DICHLOROETHENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 UJ	0.0054 U	0.0041 U	0.0039 UJ	0.0041 U
1,2,3-TRICHLOROBENZENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 UJ	0.0041 U	0.0039 U	0.0041 U
1,2,4-TRICHLOROBENZENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 UJ	0.0041 U	0.0039 U	0.0041 U
1,2-DIBROMO-3-CHLOROPROPANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 UJ	0.0041 U	0.0039 U	0.0041 U
1,2-DIBROMOETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
1,2-DICHLOROBENZENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 UJ	0.0041 U	0.0039 U	0.0041 U
1,2-DICHLOROETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
1,2-DICHLOROPROPANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
1,3-DICHLOROBENZENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 UJ	0.0041 U	0.0039 U	0.0041 U
1,4-DICHLOROBENZENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 UJ	0.0041 U	0.0039 U	0.0041 U
2-BUTANONE	0.0086 U	0.0081 U	0.0085 U	0.0058 J	0.0044 J	0.004 J	0.0091 U	0.011 U	0.0082 U	0.0079 U	0.0083 U
2-HEXANONE	0.0086 U	0.0081 U	0.0085 U	0.012 U	0.0094 U	0.0093 U	0.0091 U	0.011 U	0.0082 U	0.0079 U	0.0083 U
4-METHYL-2-PENTANONE	0.0086 U	0.0081 U	0.0085 U	0.012 U	0.0094 U	0.0093 U	0.0091 U	0.011 U	0.0082 U	0.0079 U	0.0083 U
ACETONE	0.0086 U	0.0044 J	0.0085 U	0.012 U	0.0094 U	0.0093 U	0.0091 U	0.011 U	0.0082 U	0.0079 U	0.0083 U
BENZENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
BROMOCHLOROMETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
BROMODICHLOROMETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
BROMOFORM	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 UJ	0.0041 U	0.0039 U	0.0041 U
BROMOMETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
CARBON DISULFIDE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
CARBON TETRACHLORIDE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
CHLOROBENZENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
CHLORODIBROMOMETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
CHLOROETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
CHLOROFORM	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
CHLOROMETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
CIS-1,2-DICHLOROETHENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 UJ	0.0054 U	0.0041 U	0.0039 UJ	0.0041 U
CIS-1,3-DICHLOROPROPENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
CYCLOHEXANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
DICHLORODIFLUOROMETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
ETHYLBENZENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
ISOPROPYLBENZENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
M+P-XYLENES	0.00091 J	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
METHYL ACETATE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
METHYL CYCLOHEXANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
METHYL TERT-BUTYL ETHER	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
METHYLENE CHLORIDE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.003 J	0.0029 J	0.0054 U	0.0041 U	0.0039 U	0.0041 U
O-XYLENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
STYRENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
TETRACHLOROETHENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
TOLUENE	0.0011 J	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
TRANS-1,2-DICHLOROETHENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 UJ	0.0054 U	0.0041 U	0.0039 UJ	0.0041 U
TRANS-1,3-DICHLOROPROPENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
TRICHLOROETHENE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
TRICHLOROFLUOROMETHANE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
VINYL CHLORIDE	0.0043 U	0.0041 U	0.0043 U	0.006 U	0.0047 U	0.0047 U	0.0045 U	0.0054 U	0.0041 U	0.0039 U	0.0041 U
SEMIVOLATILES (MG/KG)											
1,1-BIPHENYL	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
1,2,4,5-TETRACHLOROBENZENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
1,4-DIOXANE	0.088 U	0.073 U	0.077 U	0.081 U	0.079 UJ	0.077 U	0.078 U	0.088 UJ	0.081 UJ	0.075 U	0.081 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
2,3,4,6-TETRACHLOROPHENOL	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
2,4,5-TRICHLOROPHENOL	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
2,4,6-TRICHLOROPHENOL	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
2,4-DICHLOROPHENOL	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
2,4-DIMETHYLPHENOL	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
2,4-DINITROPHENOL	0.43 UJ	0.36 UJ	0.38 UJ	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
2,4-DINITROTOLUENE	0.22 UJ	0.19 UJ	0.19 UJ	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
2,6-DINITROTOLUENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
2-CHLORONAPHTHALENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
2-CHLOROPHENOL	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
2-METHYLNAPHTHALENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
2-METHYLPHENOL	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
2-NITROANILINE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
2-NITROPHENOL	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
3&4-METHYLPHENOL	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
3,3'-DICHLOROBENZIDINE	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
3-NITROANILINE	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
4,6-DINITRO-2-METHYLPHENOL	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
4-BROMOPHENYL PHENYL ETHER	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
4-CHLORO-3-METHYLPHENOL	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
4-CHLOROANILINE	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
4-CHLOROPHENYL PHENYL ETHER	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
4-NITROANILINE	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
4-NITROPHENOL	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-300	SB-300	SB-300	SB-301	SB-301	SB-301	SB-301	SB-302	SB-302	SB-302	SB-303
SAMPLE ID	SB300-20191125-0006	SB300-20191125-0624	SB300-20191125-2448	SB301-20191125-0006	SB301-20191125-0624	SB301-20191125-0624-D	SB301-20191125-2448	SB302-20191125-0006	SB302-20191125-0624	SB302-20191125-2448	SB303-20191125-0006
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125
DUPLICATE						SB301-20191125-0624					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SB	SS	SS	SS	SB	SS	SS	SB	SS
TOP DEPTH	0	0.5	2	0	0.5	0.5	2	0	0.5	2	0
BOTTOM DEPTH	0.5	2	4	0.5	2	2	4	0.5	2	4	0.5
ACENAPHTHENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
ACENAPHTHYLENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
ACETOPHENONE	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
ANTHRACENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
ATRAZINE	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
BAP EQUIVALENT-HALFND	0.22 U	0.19 U	0.19 U	0.171721	0.2 U	0.19 U	0.2 U	0.248253	0.21 U	0.19 U	0.21 U
BAP EQUIVALENT-POS	0.22 U	0.19 U	0.19 U	0.055171	0.2 U	0.19 U	0.2 U	0.005153	0.21 U	0.19 U	0.21 U
BENZALDEHYDE	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
BENZO(A)ANTHRACENE	0.22 U	0.19 U	0.19 U	0.043 J	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
BENZO(A)PYRENE	0.22 U	0.19 U	0.19 U	0.044 J	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
BENZO(B)FLUORANTHENE	0.22 U	0.19 U	0.19 U	0.068 J	0.2 U	0.19 U	0.2 U	0.051 J	0.21 U	0.19 U	0.21 U
BENZO(G,H,I)PERYLENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
BENZO(K)FLUORANTHENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
BIS(2-CHLOROETHOXY)METHANE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
BIS(2-CHLOROETHYL)ETHER	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.11 J	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
BUTYL BENZYL PHTHALATE	0.065 J	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
CAPROLACTAM	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
CARBAZOLE	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
CHRYSENE	0.22 U	0.19 U	0.19 U	0.071 J	0.2 U	0.19 U	0.2 U	0.053 J	0.21 U	0.19 U	0.21 U
DIBENZO(A,H)ANTHRACENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
DIBENZOFURAN	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
DIETHYL PHTHALATE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
DIMETHYL PHTHALATE	0.33	0.25	0.38	0.14 J	0.11 J	0.12 J	0.3	0.083 J	0.15 J	0.23	0.11 J
DI-N-BUTYL PHTHALATE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
DI-N-OCTYL PHTHALATE	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
FLUORANTHENE	0.058 J	0.36 U	0.38 U	0.12 J	0.39 U	0.38 U	0.38 U	0.063 J	0.4 U	0.37 U	0.4 U
FLUORENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
HEXACHLOROBENZENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
HEXACHLOROBUTADIENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
HEXACHLOROCYCLOPENTADIENE	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
HEXACHLOROETHANE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
HIGH MOLECULAR WEIGHT PAHS	0.066	0 U	0 U	0.326	0 U	0 U	0 U	0.164	0 U	0 U	0 U
INDENO(1,2,3-CD)PYRENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
ISOPHORONE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
LOW MOLECULAR WEIGHT PAHS	0.058	0 U	0 U	0.2	0 U	0 U	0 U	0.109	0 U	0 U	0 U
NAPHTHALENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
NITROBENZENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
N-NITROSO-DI-N-PROPYLAMINE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
N-NITROSODIPHENYLAMINE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 U
PENTACHLOROPHENOL	0.43 U	0.36 U	0.38 U	0.4 U	0.39 U	0.38 U	0.38 U	0.43 U	0.4 U	0.37 U	0.4 U
PHENANTHRENE	0.22 U	0.19 U	0.19 U	0.08 J	0.2 U	0.19 U	0.2 U	0.046 J	0.21 U	0.19 U	0.21 U
PHENOL	0.14 J	0.11 J	0.17 J	0.17 J	0.11 J	0.13 J	0.17 J	0.08 J	0.13 J	0.18 J	0.4 U
PYRENE	0.066 J	0.19 U	0.19 U	0.1 J	0.2 U	0.19 U	0.2 U	0.06 J	0.21 U	0.19 U	0.21 U
TOTAL PAHS	0.124	0 U	0 U	0.526	0 U	0 U	0 U	0.273	0 U	0 U	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K											
2-METHYLNAPHTHALENE	0.0047	0.0012 J	0.0038 U	0.012	0.00098 J	0.0014 J	0.0038 U	0.0044	0.004 U	0.0037 U	0.004 U
ACENAPHTHENE	0.0043 U	0.0036 U	0.0038 U	0.0018 J	0.0039 U	0.0038 U	0.0038 U	0.0043 U	0.004 U	0.0037 U	0.004 U
ACENAPHTHYLENE	0.0062	0.0013 J	0.0038 U	0.0083	0.0039 U	0.0038 U	0.0012 J	0.006	0.0011 J	0.0037 U	0.004 U
ANTHRACENE	0.0035 J	0.0036 U	0.0038 U	0.0091	0.0039 U	0.00092 J	0.0038 U	0.0033 J	0.004 U	0.0037 U	0.004 U
BAP EQUIVALENT-HALFND	0.040574	0.003395	0.0038 U	0.064683	0.004577	0.008527	0.0038 U	0.043174	0.007819	0.0037 U	0.005942
BAP EQUIVALENT-POS	0.040574	0.001577	0.0038 U	0.064683	0.004577	0.008527	0.0038 U	0.043174	0.005819	0.0037 U	0.003942
BENZO(A)ANTHRACENE	0.027	0.00076 J	0.0038 U	0.043	0.0029 J	0.0074	0.0038 U	0.031	0.0042	0.0037 U	0.0033 J
BENZO(A)PYRENE	0.027	0.0012 J	0.0038 U	0.043	0.0027 J	0.0056	0.0038 U	0.027	0.0044	0.0037 U	0.003 J
BENZO(B)FLUORANTHENE	0.04	0.0019 J	0.0038 U	0.063	0.0041	0.0088	0.0038 U	0.057	0.007	0.0037 U	0.004
BENZO(G,H,I)PERYLENE	0.019	0.0012 J	0.0038 U	0.028	0.0023 J	0.0032 J	0.0038 U	0.02	0.0033 J	0.0037 U	0.0021 J
BENZO(K)FLUORANTHENE	0.014	0.0036 U	0.0038 U	0.022	0.0012 J	0.0026 J	0.0038 U	0.022	0.0023 J	0.0037 U	0.0019 J
CHRYSENE	0.034	0.0011 J	0.0038 U	0.063	0.0055	0.011	0.0038 U	0.054	0.0062	0.0037 U	0.0036 J
DIBENZO(A,H)ANTHRACENE	0.005	0.0036 U	0.0038 U	0.0084	0.001 J	0.00099 J	0.0038 U	0.0054	0.004 U	0.0037 U	0.004 U
FLUORANTHENE	0.055	0.00076 J	0.0038 U	0.11	0.005	0.013	0.0038 U	0.061	0.0087	0.0037 U	0.0059
FLUORENE	0.001 J	0.0036 U	0.0038 U	0.0041	0.0039 U	0.0038 U	0.0038 U	0.0013 J	0.004 U	0.0037 U	0.004 U
HIGH MOLECULAR WEIGHT PAHS	0.238	0.0081	0 U	0.3774	0.0272	0.05839	0 U	0.2994	0.0401	0 U	0.0261
INDENO(1,2,3-CD)PYRENE	0.017	0.0011 J	0.0038 U	0.024	0.0016 J	0.0028 J	0.0038 U	0.017	0.0027 J	0.0037 U	0.0019 J
LOW MOLECULAR WEIGHT PAHS	0.0926	0.00414	0 U	0.215	0.0094	0.02342	0.0012	0.1221	0.0144	0 U	0.0081
NAPHTHALENE	0.0039 J	0.0011 J	0.0038 U	0.0097	0.0039 U	0.001 J	0.0038 U	0.0035 J	0.004 U	0.0037 U	0.004 U
PENTACHLOROPHENOL	0.0088 U	0.0073 U	0.0077 U	0.0081 U	0.0079 U	0.0077 U	0.0078 U	0.0088 U	0.0081 U	0.0075 U	0.0081 U
PHENANTHRENE	0.023	0.00098 J	0.0038 U	0.072	0.0044	0.0085	0.0038 U	0.047	0.0046	0.0037 U	0.0022 J
PYRENE	0.055	0.00084 J	0.0038 U	0.083	0.0059	0.016	0.0038 U	0.066	0.01	0.0037 U	0.0063
TOTAL PAHS	0.034	0.0011	0.0038	0.063	0.0055	0.011	0.0038	0.054	0.0062	0.0037	0.0036
PESTICIDES (MG/KG)											
4,4'-DDD	0.0017 J	0.0036 U	0.0038 U	0.0021 J	0.00049 J	0.00038 J	0.0038 U	0.0018 J	0.004 U	0.0037 U	0.004 UJ
4,4'-DDE	0.00028 J	0.0036 U	0.0038 U	0.0039 J	0.00019 J	0.00018 J	0.0038 U	0.0043 U	0.004 U	0.0037 U	0.004 UJ
4,4'-DDT	0.0043 U	0.0036 U	0.0038 U	0.0027 J	0.0039 U	0.0038 U	0.0038 U	0.0043 U	0.004 U	0.0037 U	0.004 UJ
ALDRIN	0.0022 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.0022 U	0.0021 U	0.0019 U	0.0021 UJ
ALPHA-BHC	0.0022 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.0022 U	0.0021 U	0.0019 U	0.0021 UJ
ALPHA-CHLORDANE	0.0022 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.0022 U	0.0021 U	0.0019 U	0.0021 UJ
BETA-BHC	0.0022 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.0022 U	0.0021 U	0.0019 U	0.0021 UJ
DELTA-BHC	0.0022 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.0022 U	0.0021 U	0.0019 U	0.0021 UJ
DIELDRIN	0.0043 U	0.0036 U	0.0038 U	0.004 U	0.0039 U	0.0038 U	0.0038 U	0.0043 U	0.004 U	0.0037 U	0.004 UJ
ENDOSULFAN I	0.0022 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.0022 U	0.0021 U	0.0019 U	0.0021 UJ
ENDOSULFAN II	0.0043 U	0.0036 U	0.0038 U	0.004 U	0.0039 U	0.0038 U	0.0038 U	0.0043 U	0.004 U	0.0037 U	0.004 UJ

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-300	SB-300	SB-300	SB-301	SB-301	SB-301	SB-301	SB-302	SB-302	SB-302	SB-303
SAMPLE ID	SB300-20191125-0006	SB300-20191125-0624	SB300-20191125-2448	SB301-20191125-0006	SB301-20191125-0624	SB301-20191125-0624-D	SB301-20191125-2448	SB302-20191125-0006	SB302-20191125-0624	SB302-20191125-2448	SB303-20191125-0006
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125
DUPLICATE						SB301-20191125-0624					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SB	SS	SS	SS	SB	SS	SS	SB	SS
TOP DEPTH	0	0.5	2	0	0.5	0.5	2	0	0.5	2	0
BOTTOM DEPTH	0.5	2	4	0.5	2	2	4	0.5	2	4	0.5
ENDOSULFAN SULFATE	0.0013 J	0.0036 U	0.0038 U	0.004 U	0.0039 U	0.0038 U	0.0038 U	0.0011 J	0.004 U	0.0037 U	0.004 UJ
ENDRIN	0.00028 R	0.0036 U	0.0038 U	0.00036 J	0.0039 U	0.0038 U	0.0038 U	0.00027 J	0.004 U	0.0037 U	0.004 UJ
ENDRIN ALDEHYDE	0.0043 U	0.0036 U	0.0038 U	0.004 U	0.0039 U	0.0038 U	0.0038 U	0.0043 U	0.004 U	0.0037 U	0.004 UJ
ENDRIN KETONE	0.0043 U	0.0036 U	0.0038 U	0.004 U	0.0039 U	0.0038 U	0.0038 U	0.0043 U	0.004 U	0.0037 U	0.004 UJ
GAMMA-BHC (LINDANE)	0.00061 J	0.0019 U	0.0019 U	0.00092 J	0.00021 J	0.0019 U	0.002 U	0.0012 J	0.0021 U	0.0019 U	0.0021 UJ
GAMMA-CHLORDANE	0.0022 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.0022 U	0.0021 U	0.0019 U	0.0021 UJ
HEPTACHLOR	0.0022 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.0022 U	0.0021 U	0.0019 U	0.0021 UJ
HEPTACHLOR EPOXIDE	0.0022 U	0.0019 U	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.002 U	0.0022 U	0.0021 U	0.0019 U	0.0021 UJ
METHOXYCHLOR	0.022 U	0.019 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.022 U	0.021 U	0.019 U	0.021 UJ
TOXAPHENE	0.22 U	0.19 U	0.19 U	0.21 U	0.2 U	0.19 U	0.2 U	0.22 U	0.21 U	0.19 U	0.21 UJ
PCBS (MG/KG)											
AROCLOR-1016	0.043 U	0.036 U	0.038 U	0.04 U	0.039 U	0.038 U	0.038 U	0.043 U	0.04 U	0.037 U	0.04 U
AROCLOR-1221	0.043 U	0.036 U	0.038 U	0.04 U	0.039 U	0.038 U	0.038 U	0.043 U	0.04 U	0.037 U	0.04 U
AROCLOR-1232	0.043 U	0.036 U	0.038 U	0.04 U	0.039 U	0.038 U	0.038 U	0.043 U	0.04 U	0.037 U	0.04 U
AROCLOR-1242	0.043 U	0.036 U	0.038 U	0.04 U	0.039 U	0.038 U	0.038 U	0.043 U	0.04 U	0.037 U	0.04 U
AROCLOR-1248	0.043 U	0.036 U	0.038 U	0.04 U	0.039 U	0.038 U	0.038 U	0.043 U	0.04 U	0.037 U	0.04 U
AROCLOR-1254	0.043 U	0.036 U	0.038 U	0.04 U	0.039 U	0.038 U	0.038 U	0.043 U	0.04 U	0.037 U	0.04 U
AROCLOR-1260	0.011 J	0.036 U	0.038 U	0.04 U	0.039 U	0.038 U	0.038 U	0.043 U	0.04 U	0.037 U	0.04 U
AROCLOR-1262	0.043 U	0.036 U	0.038 U	0.04 U	0.039 U	0.038 U	0.038 U	0.043 U	0.04 U	0.037 U	0.04 U
AROCLOR-1268	0.043 U	0.036 U	0.038 U	0.04 U	0.039 U	0.038 U	0.038 U	0.043 U	0.04 U	0.037 U	0.04 U
TOTAL AROCLOR	0.011	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U
TOTAL AROCLOR HALFND	0.183	0.162	0.171	0.18	0.1755	0.171	0.171	0.1935	0.18	0.1665	0.18
MOBILE LAB PESTICIDES/PCBS (MG/KG)											
AROCLOR-1016	--	0.281 U	0.291 U	--	0.284 U	--	0.281 U	--	0.291 U	0.281 U	--
AROCLOR-1221	--	0.562 U	0.581 U	--	0.568 U	--	0.562 U	--	0.581 U	0.562 U	--
AROCLOR-1232	--	0.281 U	0.291 U	--	0.284 U	--	0.281 U	--	0.291 U	0.281 U	--
AROCLOR-1242	--	0.281 U	0.291 U	--	0.284 U	--	0.281 U	--	0.291 U	0.281 U	--
AROCLOR-1248	--	0.281 U	0.291 U	--	0.284 U	--	0.281 U	--	0.291 U	0.281 U	--
AROCLOR-1254	--	0.281 U	0.291 U	--	0.284 U	--	0.281 U	--	0.291 U	0.281 U	--
AROCLOR-1260	--	0.281 U	0.291 U	--	0.284 U	--	0.281 U	--	0.291 U	0.281 U	--
AROCLOR-1262	--	0.281 U	0.291 U	--	0.284 U	--	0.281 U	--	0.291 U	0.281 U	--
AROCLOR-1268	--	0.281 U	0.291 U	--	0.284 U	--	0.281 U	--	0.291 U	0.281 U	--
TOTAL AROCLOR	--	0 U	0 U	--	0 U	--	0 U	--	0 U	0 U	--
TOTAL AROCLOR HALFND	--	1.405	1.4545	--	1.42	--	1.405	--	1.4545	1.405	--
PCB CONGENERS (MG/KG)											
DICHLOROBIPHENYLS	0.000048 J	0.0000046 J	0 UJ	0.00018 J	0.000016 J	0.000011 J	0.0000028 J	0 UJ	0.0000091 J	0 UJ	0.0000035 J
HEPTACHLOROBIPHENYLS	0.011 J	0.001 J	0.0011 J	0.0026 J	0.00024 J	0.00046 J	0.00021 J	0.0013 J	0.00018 J	0.000028 J	0.000087 J
HEXACHLOROBIPHENYLS	0.014 J	0.0013 J	0.0012 J	0.0094 J	0.00047 J	0.00088 J	0.00024 J	0.0023 J	0.00027 J	0.000036 J	0.00012 J
MONOCHLOROBIPHENYLS	0.000018 J	0.0000014 J	0 UJ	0.000057 J	0.0000083 J	0.000012 J	0.00000049 J	0.000034 J	0.000019 J	0 UJ	0 UJ
NONACHLOROBIPHENYLS	0.00063 J	0.00003 J	0.00002 J	0.00092 J	0.0001 J	0.00017 J	0.0000069 J	0.00097 J	0.00012 J	0.0000022 J	0.000033 J
OCTACHLOROBIPHENYLS	0.003 J	0.00024 J	0.00028 J	0.00093 J	0.000094 J	0.00017 J	0.000055 J	0.0007 J	0.000076 J	0.0000076 J	0.000037 J
PCB-1	0.0000037	0.0000019 UJ	0.0000019 UJ	0.00001 J	0.000002	0.0000029	0.0000019 U	0.0000094 J	0.0000024	0.000002 U	0.000002 UJ
PCB-10	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-103	0.00000067 J	0.0000019 U	0.0000019 U	0.0000032	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-104	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-105	0.00031	0.0000073	0.000005 Z	0.00089	0.00002	0.000037	0.000002	0.00012	0.0000082	0.000002 U	0.0000027
PCB-106	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-107	0.000002 U	0.0000019 U	0.0000019 U	0.00016	0.0000039	0.000007	0.0000019 U	0.00002 U	0.0000016 J	0.000002 U	0.000002 U
PCB-108/124	0.000038	0.0000038 U	0.0000038 U	0.00011	0.0000039 U	0.0000061	0.0000038 U	0.00004 U	0.0000039 U	0.0000039 U	0.000004 U
PCB-11	0.000019	0.0000019 U	0.0000019 U	0.00011	0.0000068	0.0000019 U	0.000003 U	0.00002 U	0.0000063	0.000002 U	0.0000035
PCB-110/115	0.00058	0.000045	0.000038	0.0025	0.000056	0.00011	0.000009	0.00021	0.000022	0.0000026 J	0.0000056
PCB-111	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-112	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-114	0.0000071	0.00000079 U	0.0000013 U	0.000034	0.00000091 J	0.0000016 Z	0.00000035 U	0.000002 U	0.00000047 U	0.00000025 U	0.00000079 U
PCB-118	0.00067	0.000025	0.000019	0.0023	0.00005	0.000092	0.0000061	0.00022	0.000016	0.000002 U	0.0000055
PCB-12/13	0.0000045	0.0000038 U	0.0000038 U	0.000014	0.0000016 J	0.0000039 U	0.0000038 U	0.00004 U	0.0000028 J	0.0000039 U	0.000004 U
PCB-120	0.0000049	0.0000019 U	0.0000019 U	0.0000033	0.0000003 J	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-121	0.000002 U	0.0000019 U	0.0000019 U	0.0000015 J	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-122	0.000002 U	0.0000019 U	0.0000019 U	0.000026	0.00000082 J	0.0000014 J	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-123	0.000012	0.00000075 U	0.0000012 U	0.000038	0.0000013 Z	0.0000027	0.00000035 U	0.0000018 U	0.0000014 Z	0.00000024 U	0.00000076 U
PCB-126	0.000034	0.00000091 U	0.0000015 U	0.000034	0.0000015 J	0.000003	0.00000039 U	0.0000021 U	0.0000012 Z	0.00000029 U	0.00000087 U
PCB-127	0.000002 U	0.0000019 U	0.0000019 U	0.0000039	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-128/166	0.00035	0.000017	0.000017	0.00042	0.000015	0.000025	0.0000025 J	0.000097	0.0000089	0.00000078 J	0.0000038 J
PCB-129/138/163	0.0044	0.00029	0.00025	0.0029	0.00013	0.00024	0.000051	0.0007	0.000084	0.0000085	0.000031
PCB-130	0.00017	0.0000077	0.0000061	0.00016	0.0000067	0.000012	0.0000016 J	0.000035	0.0000019 U	0.000002 U	0.0000013 J
PCB-131	0.0000071	0.0000019 U	0.0000019 U	0.000017	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-132	0.00031	0.000062	0.000063	0.00052	0.000016	0.000035	0.000013	0.00009	0.000009	0.0000019 J	0.0000046
PCB-133	0.000054	0.0000029	0.0000025	0.000033	0.0000016 J	0.0000033	0.00000052 J	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-134	0.000048	0.000011	0.00001	0.000099	0.0000019 U	0.0000054	0.000002	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-135/151	0.00056	0.00012	0.00012	0.00036	0.000025	0.000057	0.000023	0.0001	0.000013	0.0000039 U	0.0000084 J
PCB-136	0.000052	0.000039	0.000039	0.000082	0.0000032	0.0000082	0.0000073	0.000019 J	0.0000019	0.0000011 J	0.0000019 J
PCB-137	0.000044	0.0000014 J	0.0000019 U	0.00013	0.0000041	0.000007	0.00000044 J	0.000028	0.0000024	0.000002 U	0.000002 U
PCB-139/140	0.0000099	0.0000038 U	0.0000038 U	0.000031	0.0000039 U	0.0000019 J	0.0000038 U	0.00004 U	0.0000039 U	0.0000039 U	0.000004 U
PCB-14	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-141	0.00055	0.000064	0.000064	0.00034	0.00002	0.000039	0.000014	0.000076	0.00001	0.000002	0.0000051
PCB-142	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-143	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-144	0.000051	0.000016	0.000016	0.000025 J	0.000002	0.0000045	0.0000031	0.00002 U	0.00000095 J	0.00000058 J	0.00000087 J
PCB-145	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-146	0.00055	0.000038	0.000031	0.0002 J	0.000015	0.00003	0.0000066	0.000097	0.00001	0.0000011 J	0.0000047
PCB-147/149	0.0012	0.00023	0.00023	0.0012	0.000059	0.00013	0.000043	0.00026	0.000029	0.0000062	0.000017

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-300	SB-300	SB-300	SB-301	SB-301	SB-301	SB-301	SB-302	SB-302	SB-302	SB-303
SAMPLE ID	SB300-20191125-0006	SB300-20191125-0624	SB300-20191125-2448	SB301-20191125-0006	SB301-20191125-0624	SB301-20191125-0624-D	SB301-20191125-2448	SB302-20191125-0006	SB302-20191125-0624	SB302-20191125-2448	SB303-20191125-0006
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125
DUPLICATE						SB301-20191125-0624					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SB	SS	SS	SS	SB	SS	SS	SB	SS
TOP DEPTH	0	0.5	2	0	0.5	0.5	2	0	0.5	2	0
BOTTOM DEPTH	0.5	2	4	0.5	2	2	4	0.5	2	4	0.5
PCB-148	0.00000088 J	0.0000019 U	0.0000019 U	0.0000013 J	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-15	0.000017	0.0000019 U	0.0000019 U	0.000047	0.0000044	0.0000071	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-150	0.00000047 J	0.0000019 U	0.0000019 U	0.00000087 J	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-152	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-153/168	0.0042	0.0003	0.00026	0.002	0.00013	0.00022	0.000056	0.00056	0.000084	0.0000085	0.000033
PCB-154	0.000008	0.0000019 U	0.0000019 U	0.000012	0.0000019 U	0.0000017 J	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-155	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-156/157	0.00041	0.000015	0.000013	0.00035	0.000012	0.000021	0.0000038 U	0.000072	0.0000073	0.0000039 U	0.000004 U
PCB-158	0.00028	0.000021	0.000019	0.00023	0.0000085	0.000016	0.0000037	0.000044	0.0000053	0.00000072 J	0.0000022
PCB-159	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-16	0.0000018 J	0.0000013 J	0.0000019 U	0.0000059	0.00000049 J	0.0000019 U	0.0000003 J	0.00002 U	0.0000005 J	0.000002 U	0.000002 U
PCB-160	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-161	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-162	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-164	0.00024	0.000018	0.000014	0.00015	0.0000073	0.000014	0.0000031	0.00004	0.0000045	0.000002 U	0.0000016 J
PCB-165	0.0000013 J	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-167	0.00018	0.0000072	0.0000053	0.00012	0.0000055	0.0000098	0.0000019 U	0.000038	0.0000037	0.000002 U	0.000002 U
PCB-169	0.0000087 Z	0.00000086 U	0.0000021 U	0.0000032 Z	0.0000004 U	0.0000011 U	0.00000035 U	0.0000014 U	0.00000055 U	0.00000032 U	0.00000071 U
PCB-17	0.0000021	0.0000014 J	0.0000019 U	0.0000062	0.00000054 J	0.000001 J	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-170	0.0016	0.00012	0.00012	0.00033	0.000028	0.000053	0.000024	0.00015	0.000023	0.0000032	0.00001
PCB-171/173	0.00028	0.000033	0.000035	0.000082	0.0000061	0.000013	0.0000068	0.000033 J	0.0000051	0.000001 J	0.0000027 J
PCB-172	0.00027	0.000021	0.000022	0.000038 J	0.0000054	0.000011	0.0000043	0.000038	0.0000045	0.0000007 J	0.0000022 J
PCB-174	0.0011	0.00012	0.00014	0.00031	0.000028	0.000055	0.000027	0.00015	0.000019	0.0000034	0.0000093
PCB-175	0.000027	0.0000049	0.0000057	0.0000086	0.00000075 J	0.0000015 J	0.000001 J	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-176	0.000042	0.000015	0.000019	0.000018	0.0000016 J	0.0000032	0.0000034	0.0000096 J	0.00000098 J	0.00000046 J	0.00000078 J
PCB-177	0.00088	0.000075	0.000076	0.00019	0.000016	0.000032	0.000014	0.0001	0.000013	0.0000021	0.0000057
PCB-178	0.0004	0.00003	0.000027	0.00009	0.0000085	0.000017	0.0000052	0.000064	0.0000065	0.00000084 J	0.0000032
PCB-179	0.00027	0.000056	0.00006	0.00012	0.000011	0.000023	0.000011	0.000055	0.0000074	0.0000015 J	0.0000041
PCB-18/30	0.0000035 J	0.0000031 J	0.0000038 U	0.00001	0.000001 J	0.0000016 J	0.00000061 J	0.00004 U	0.00000096 J	0.00000042 J	0.000004 U
PCB-180/193	0.0032	0.00028	0.0003	0.00073	0.000071	0.00012	0.000058	0.00033	0.000054	0.0000079	0.000024
PCB-181	0.0000052	0.0000019 U	0.0000019 U	0.000004	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-182	0.000002 U	0.0000019 U	0.0000019 U	0.0000013 J	0.00000031 J	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-183/185	0.00055	0.000082	0.000094	0.00017	0.000014	0.000028	0.000017	0.000084	0.000011	0.0000023 J	0.0000058
PCB-184	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-186	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-187	0.0018	0.00017	0.00016	0.0004	0.00004	0.00008	0.000029	0.00027	0.000034	0.0000042	0.000016
PCB-188	0.0000013 J	0.0000019 U	0.0000019 U	0.0000011 J	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-189	0.00008	0.0000038	0.0000042	0.000018	0.0000012 J	0.0000026	0.00000082 J	0.0000012 U	0.0000012 J	0.00000032 U	0.00000076 U
PCB-19	0.000002 U	0.00000058 J	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-190	0.00044	0.000027	0.000025	0.000089	0.0000071	0.000013	0.0000054	0.000036	0.0000053	0.00000065 J	0.0000026
PCB-191	0.000044	0.0000044	0.0000049	0.00001	0.00000089 J	0.0000017 J	0.0000009 J	0.00002 U	0.00000078 J	0.000002 U	0.000002 U
PCB-192	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-194	0.00069	0.000055	0.00007	0.00017	0.000016	0.000029	0.000013	0.0001	0.000011	0.000002 U	0.0000071
PCB-195	0.00035	0.000025	0.000029	0.000064	0.0000063	0.000011	0.0000055	0.00004	0.0000047	0.00000071 J	0.0000029
PCB-196	0.00019	0.000026	0.000037	0.000069 J	0.0000069	0.000012	0.0000068	0.000048	0.0000058	0.00000096 J	0.000003
PCB-197/200	0.000072	0.0000096	0.000012	0.000026	0.0000026 J	0.0000048	0.0000022 J	0.000018 J	0.000002 J	0.00000039 J	0.000004 U
PCB-198/199	0.00093	0.000066	0.000074	0.00032	0.000034	0.000063	0.000015	0.00027	0.000028	0.0000021 J	0.000012
PCB-2	0.000004	0.0000019 UJ	0.0000019 UJ	0.000013	0.0000012 J	0.0000019	0.0000019 U	0.00002 U	0.0000082	0.000002 U	0.000002 UJ
PCB-20/28	0.00002	0.0000038 U	0.0000041	0.000058	0.0000052	0.0000082	0.0000038 U	0.00004 U	0.0000039 U	0.0000039 U	0.000004 U
PCB-201	0.000033	0.000007	0.0000089	0.000023	0.0000023	0.0000042	0.0000016 J	0.000019 J	0.000002	0.00000028 J	0.000002 U
PCB-202	0.00017	0.000014	0.000012	0.00009	0.00001	0.000017	0.0000024	0.000091	0.0000095	0.00000052 J	0.0000033
PCB-203	0.0005	0.000037	0.000042	0.00016	0.000015	0.000026	0.000008	0.00011	0.000011	0.000002 U	0.0000062
PCB-204	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-205	0.000055	0.000003	0.0000019 U	0.00001	0.0000019 U	0.0000019	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.00000053 J
PCB-206	0.00042	0.00002	0.000015	0.00055	0.00006	0.0001	0.0000045	0.00058	0.000074	0.0000022	0.000021
PCB-207	0.000036	0.0000022	0.0000023	0.000082	0.0000081	0.000013	0.00000064 J	0.000053	0.000006	0.000002 U	0.000002
PCB-208	0.00018	0.000008	0.000003	0.00029	0.000035	0.000058	0.0000018 J	0.00033	0.000041	0.000002 U	0.00001
PCB-209	0.00061	0.000023	0.0000019 U	0.0016	0.00027	0.00027	0.0000063	0.001	0.00013	0.0000041	0.000053
PCB-21/33	0.0000072	0.0000034 J	0.0000038 U	0.000029	0.0000039 U	0.0000039 U	0.0000038 U	0.00004 U	0.0000039 U	0.0000039 U	0.00000049 J
PCB-22	0.0000059	0.0000021	0.0000019 U	0.00001	0.0000017 J	0.0000028	0.0000005 J	0.00002 U	0.0000006 J	0.00000025 J	0.00000046 J
PCB-23	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-24	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-25	0.0000011 J	0.0000019 U	0.0000019 U	0.0000036	0.00000041 J	0.00000064 J	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-26/29	0.0000026 J	0.00000096 J	0.0000038 U	0.0000071	0.0000039 U	0.0000012 J	0.00000029 J	0.00004 U	0.0000039 U	0.0000039 U	0.000004 U
PCB-27	0.000002 U	0.0000019 U	0.0000019 U	0.00000096 J	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-3	0.00001	0.0000014 J	0.0000019 UJ	0.000034	0.000005	0.0000074	0.00000049 J	0.000024	0.0000083	0.000002 U	0.000002 UJ
PCB-31	0.000016	0.0000048	0.0000026	0.000057	0.0000045	0.0000067	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.00000091 J
PCB-32	0.0000019 J	0.0000019 U	0.00000077 J	0.0000037	0.00000048 J	0.00000075 J	0.00000022 J	0.00002 U	0.00000032 J	0.000002 U	0.000002 U
PCB-34	0.000002 U	0.0000019 U	0.0000019 U	0.00000085 J	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-35	0.000002 U	0.0000019 U	0.0000019 U	0.0000062	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.00000056 J	0.000002 U	0.000002 U
PCB-36	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-37	0.000016	0.0000019 U	0.0000019 U	0.000055	0.0000035	0.0000059	0.00000035 J	0.000015 J	0.0000015 J	0.00000026 J	0.000002 U
PCB-38	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.00000055 J	0.000002 U	0.000002 U
PCB-39	0.00000078 J	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-4	0.000002 U	0.0000019 UJ	0.0000019 UJ	0.000002 UJ	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 UJ
PCB-40/71	0.000004 U	0.0000014 J	0.0000038 U	0.000042	0.0000011 J	0.0000017 J	0.00000042 J	0.00004 U	0.0000008 J	0.00000038 J	0.000004 U
PCB-41	0.000002 U	0.0000019 U	0.0000019 U	0.0000047	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-42	0.0000034	0.0000019 U	0.0000019 U	0.000039	0.00000089 J	0.0000018 J	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-43	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-44/47/65	0.000018	0.0000057 U	0.0000056 U	0.00023	0.0000058 U	0.0000083	0.0000057 U	0.00006 U	0.0000058 U	0.0000059 U	0.0000006 U
PCB-45/51	0.0000019 J	0.0000008 J	0.0000006 J	0.0000046	0.0000039 U	0.0000039 U	0.0000038 U	0.00004 U	0.0000039 U	0.0000039 U	0.000004 U

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-300	SB-300	SB-300	SB-301	SB-301	SB-301	SB-301	SB-302	SB-302	SB-302	SB-303
SAMPLE ID	SB300-20191125-0006	SB300-20191125-0624	SB300-20191125-2448	SB301-20191125-0006	SB301-20191125-0624	SB301-20191125-0624-D	SB301-20191125-2448	SB302-20191125-0006	SB302-20191125-0624	SB302-20191125-2448	SB303-20191125-0006
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125
DUPLICATE						SB301-20191125-0624					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SB	SS	SS	SS	SB	SS	SS	SB	SS
TOP DEPTH	0	0.5	2	0	0.5	0.5	2	0	0.5	2	0
BOTTOM DEPTH	0.5	2	4	0.5	2	2	4	0.5	2	4	0.5
PCB-46	0.00000053 J	0.00000032 J	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-48	0.0000018 J	0.0000019 U	0.0000026	0.0000082 J	0.00000047 J	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-49/69	0.000017	0.000002 J	0.0000038 U	0.00017 J	0.000005	0.0000098	0.0000007 J	0.000016 J	0.0000024 J	0.00000066 J	0.000004 U
PCB-5	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-50/53	0.000004 U	0.0000038 U	0.0000038 U	0.0000039 J	0.0000039 U	0.0000039 U	0.0000038 U	0.00004 U	0.00000029 J	0.00000032 J	0.000004 U
PCB-52	0.00003	0.0000097	0.0000019 U	0.00049	0.0000066	0.000011	0.0000021	0.000021	0.0000029	0.000002 U	0.000002
PCB-54	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-55	0.000002 U	0.0000019 U	0.0000019 U	0.0000017 J	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-56	0.000021	0.0000023	0.0000019 U	0.00012	0.0000037	0.0000064	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.00000058 J
PCB-57	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-58	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-59/62/75	0.0000017 J	0.0000057 U	0.0000056 U	0.0000061	0.0000058 U	0.0000058 U	0.0000057 U	0.00006 U	0.00000037 J	0.0000004 J	0.000006 U
PCB-6	0.0000019 J	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-60	0.0000087	0.0000014 J	0.000001 J	0.000026	0.0000018 J	0.0000035	0.00000029 J	0.00002 U	0.00000079 J	0.000002 U	0.000002 U
PCB-61/70/74/76	0.00011	0.000008	0.0000056 J	0.00082	0.000022	0.000038	0.0000076 U	0.000079 U	0.0000077 U	0.0000078 U	0.0000025 J
PCB-63	0.0000015 J	0.0000019 U	0.0000019 U	0.000007	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-64	0.0000086	0.0000015 J	0.000001 J	0.000069	0.0000026	0.0000045	0.00000043 J	0.00002 U	0.0000012 J	0.00000038 J	0.000002 U
PCB-66	0.000042	0.0000038	0.0000027	0.00032	0.0000073	0.000012	0.0000019 U	0.00002 U	0.0000026	0.000002 U	0.0000014 J
PCB-67	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-68	0.000002 U	0.0000019 U	0.0000019 U	0.000013	0.0000004 J	0.00000094 J	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-7	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-72	0.0000012 J	0.0000019 U	0.0000019 U	0.0000042	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-73	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-77	0.000022	0.0000019 U	0.00000077 U	0.000068	0.0000029	0.0000058	0.00000027 U	0.000019 J	0.0000017 J	0.00000031 U	0.000002 U
PCB-78	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-79	0.0000029	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.00000066 J	0.000002 U	0.000002 U
PCB-8	0.0000063	0.0000046	0.0000019 U	0.000014	0.000003	0.0000044	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 UJ
PCB-80	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-81	0.00000084 U	0.00000046 U	0.00000069 U	0.0000029	0.00000029 U	0.00000083 U	0.00000027 U	0.0000013 U	0.00000035 U	0.00000029 U	0.00000036 U
PCB-82	0.000018	0.0000011 J	0.0000019 U	0.00017	0.0000026	0.0000047	0.00000031 J	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-83	0.000007	0.00000097 J	0.0000019 U	0.000029	0.00000062 J	0.0000014 J	0.00000033 J	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-84	0.000012	0.0000034	0.0000029	0.00012	0.0000017 J	0.000004	0.00000074 J	0.00002 U	0.00000073 J	0.000002 U	0.000002 U
PCB-85/116/117	0.00008	0.0000027 J	0.0000056 U	0.00035	0.0000095	0.000018	0.00000058 J	0.00006 U	0.000005 J	0.00000047 J	0.0000015 J
PCB-86/87/97/109/119/125	0.00018	0.000014	0.000012	0.0011	0.000022	0.000042	0.000011 U	0.0002	0.00002	0.000012 U	0.0000028 J
PCB-88/91	0.000012	0.0000038 U	0.0000038 U	0.00012	0.0000024 J	0.0000053	0.00000029 J	0.00004 U	0.00000091 J	0.0000039 U	0.000004 U
PCB-89	0.000002 U	0.0000019 U	0.0000019 U	0.000002	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-9	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-90/101/113	0.00052	0.000087	0.000074	0.0018	0.000044	0.000083	0.000018	0.00015	0.000018	0.0000059 U	0.0000087
PCB-92	0.000072	0.0000087	0.0000071	0.00028	0.0000072	0.000015	0.0000019	0.000029	0.0000029	0.00000042 J	0.0000013 J
PCB-93/100	0.000004 U	0.0000038 U	0.0000038 U	0.0000026 J	0.0000039 U	0.0000039 U	0.0000038 U	0.00004 U	0.0000039 U	0.0000039 U	0.000004 U
PCB-94	0.000002 U	0.0000019 U	0.0000019 U	0.0000018 J	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-95	0.0001	0.000066	0.000052	0.00055	0.000011	0.000025	0.000011	0.000047	0.0000045	0.0000022	0.0000037
PCB-96	0.000002 U	0.0000019 U	0.0000019 U	0.00000088 J	0.0000019 U	0.0000019 U	0.0000019 U	0.00002 U	0.0000019 U	0.000002 U	0.000002 U
PCB-98/102	0.000004 U	0.0000038 U	0.0000038 U	0.0000076	0.0000039 U	0.0000039 U	0.0000038 U	0.00004 U	0.0000039 U	0.0000039 U	0.000004 U
PCB-99	0.0002	0.0000065	0.0000076	0.00091	0.000022	0.000041	0.0000016 J	0.00013	0.000013	0.000002 U	0.000003
PENTACHLOROBIPHENYLS	0.0028 J	0.00027 J	0.00021 J	0.011 J	0.00026 J	0.0005 J	0.000056 J	0.0011 J	0.00012 J	0.000013 J	0.000035 J
TEQ DIOXIN-LIKE PCBs (BIRD)	4.5908E-06	2.59E-09	2.085E-09	7.2454E-06	2.9887E-07	5.9703E-07	2.69E-10	9.7178E-07	2.0677E-07	0.000002 U	3.25E-10
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	4.6328E-06	1.1906E-07	1.3196E-07	7.2454E-06	3.1357E-07	6.3908E-07	4.0411E-08	1.1426E-06	2.2457E-07	0.000002 U	1.1244E-07
TEQ DIOXIN-LIKE PCBs (FISH)	1.8098E-07	2.91E-10	2.32E-10	1.9716E-07	8.243E-09	1.6413E-08	4.4E-11	4.15E-09	6.358E-09	0.000002 U	4E-11
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	1.8119E-07	2.799E-09	4.25E-09	1.9716E-07	8.325E-09	1.6647E-08	1.12E-09	9.772E-09	6.459E-09	0.000002 U	2.44E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	3.7133E-06	1.749E-09	1.395E-09	3.6162E-06	1.5302E-07	3.0558E-07	2.67E-10	1.54E-08	1.213E-07	0.000002 U	2.46E-10
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	3.7134E-06	6.0335E-08	1.0807E-07	3.6162E-06	1.5906E-07	3.2221E-07	2.5165E-08	1.4167E-07	1.2961E-07	0.000002 U	5.4673E-08
TETRACHLOROBIPHENYLS	0.00029 J	0.000035 J	0.000016 J	0.0025 J	0.00006 J	0.0001 J	0.0000084 J	0.00015 J	0.000023 J	0.0000074 J	0.0000075 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0017338	0.0000583	0.0000465	0.0038581	0.00009531	0.0001755	0.00000892	0.000469	0.0000407	0 U	0.0000082
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.03047223	0.00286233	0.00274997	0.02608386	0.00142597	0.00242563	0.00055605	0.006976	0.00090615	0.00007965	0.00036132
TOTAL PCB CONGENERS ZEROND	0.03220603	0.00292063	0.00279647	0.02994196	0.00152128	0.00260113	0.00056497	0.007445	0.00094685	0.00007965	0.00036952
TOTAL PCB CONGENERS-NOAA	0.0185498	0.0013855	0.0012558	0.015106	0.0008874	0.0013765	0.00026561	0.004238	0.00054526	0.00004051	0.000215
TOTAL PCB CONGENERS-NOAA HALFND	0.03226445	0.00301277	0.00291125	0.02998296	0.00160193	0.0026775	0.00067556	0.0087394	0.00104209	0.00022086	0.00049765
TOTAL PCB CONGENERS-NOAA X2	0.0370996	0.002771	0.0025116	0.030212	0.0017748	0.002753	0.00053122	0.008476	0.00109052	0.00008102	0.00043
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0370996	0.0027805	0.0025267	0.030212	0.0017806	0.002753	0.00054452	0.008656	0.00110212	0.00010672	0.000446
TRICHLOROBIPHENYLS	0.000079 J	0.000018 J	0.0000074 J	0.00025 J	0.00002 J	0.000032 J	0.0000052 J	0.000025 J	0.00001 J	0.0000016 J	0.0000019 J
DIOXINS/FURANS (NG/KG)											
1,2,3,4,6,7,8,9-OCDD	--	--	--	240	100	62	310	740	350	530	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	15	2 U	1.8 U	1.8 U	28	2.3 J	1.7 U	--
1,2,3,4,6,7,8-HPCDD	--	--	--	28	3.7 J	2.9 J	2.7 J	35	6.5	7	--
1,2,3,4,6,7,8-HPCDF	--	--	--	13	2.4 U	2.2 U	2.2 U	21	3.6 J	2.1 U	--
1,2,3,4,7,8,9-HPCDF	--	--	--	2.1 U	2.4 U	2.1 U	2.1 U	2.1 U	2.1 U	2 U	--
1,2,3,4,7,8-HXCDD	--	--	--	1.4 U	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.3 U	--
1,2,3,4,7,8-HXCDF	--	--	--	1.5 U	1.7 U	1.5 U	1.5 U	3.1 J	1.5 U	1.4 U	--
1,2,3,6,7,8-HXCDD	--	--	--	1.9 J	1.3 U	1.2 U	1.2 U	2.2 J	1.1 U	1.1 U	--
1,2,3,6,7,8-HXCDF	--	--	--	1.8 U	2 U	1.8 U	1.8 U	2.7 J	1.8 U	1.7 U	--
1,2,3,7,8,9-HXCDD	--	--	--	2.3 U	2.5 U	2.3 U	2.3 U	2.3 U	2.2 U	2.2 U	--
1,2,3,7,8,9-HXCDF	--	--	--	1.4 UJ	1.6 U	1.4 U	1.4 U	1.4 UJ	1.4 U	1.3 U	--
1,2,3,7,8-PECDD	--	--	--	1.8 U	2 U	1.8 U	1.8 U	1.8 U	1.8 U	1.7 U	--
1,2,3,7,8-PECDF	--	--	--	1.6 U	1.8 U	1.6 U	1.6 U	1.9 J	1.6 U	1.5 U	--
2,3,4,6,7,8-HXCDF	--	--	--	1 J	1 U	0.91 U	0.92 U	3.9 J	0.89 U	0.87 U	--
2,3,4,7,8-PECDF	--	--	--	1.6 J	0.95 U	0.85 U	0.86 U	3.4 J	0.83 U	0.81 U	--
2,3,7,8-TCDD	--	--	--	0.29 Z	0.21 U	0.19 U	0.19 U	0.36 Z	0.2 U	0.18 U	--
2,3,7,8-TCDF	--	--	--	2	0.63 J	0.54 J	0.24 U	3.1	0.59 J	0.22 U	--
TEQ DIOXINS (BIRD)	--	--	--	4.1925	0.6437	0.5491	0.0337	8.3638	0.66773	0.06	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	5.568	2.8243	2.50719	2.11729	9.4943	2.60323	2.022085	--

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-300	SB-300	SB-300	SB-301	SB-301	SB-301	SB-301	SB-302	SB-302	SB-302	SB-302	SB-303
SAMPLE ID	SB300-20191125-0006	SB300-20191125-0624	SB300-20191125-2448	SB301-20191125-0006	SB301-20191125-0624	SB301-20191125-0624-D	SB301-20191125-2448	SB302-20191125-0006	SB302-20191125-0624	SB302-20191125-2448	SB303-20191125-0006
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125
DUPLICATE						SB301-20191125-0624						
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SB	SS	SS	SS	SB	SS	SS	SB	SS
TOP DEPTH	0	0.5	2	0	0.5	0.5	2	0	0.5	2	0
BOTTOM DEPTH	0.5	2	4	0.5	2	2	4	0.5	2	4	0.5
TEQ DIOXINS (FISH)	--	--	--	1.4925	0.0452	0.0361	0.0337	3.6238	0.10723	0.06	--
TEQ DIOXINS (FISH) HALFND	--	--	--	3.0395	2.1908	1.95319	1.95979	4.9658	2.01123	1.871085	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	1.7465	0.13	0.1016	0.12	3.7274	0.26569	0.229	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	3.101	2.0138	1.79537	1.82777	4.8929	1.93919	1.838255	--
TOTAL HPCDD	--	--	--	63 J	7.7 J	6 J	5.5 J	72 J	13 J	13 J	--
TOTAL HPCDF	--	--	--	25 J	2.4 UJ	2.1 UJ	2.1 UJ	35 J	3.6 J	2 UJ	--
TOTAL HXCDD	--	--	--	18 J	1.3 UJ	1.2 UJ	1.2 UJ	28 J	7.2 J	1.7 J	--
TOTAL HXCDF	--	--	--	12 J	1 UJ	0.91 UJ	0.92 UJ	31 J	3 J	0.87 UJ	--
TOTAL PECDD	--	--	--	5.2 J	2 UJ	1.8 UJ	1.8 UJ	12 J	2.4 J	1.7 UJ	--
TOTAL PECDF	--	--	--	17 J	0.95 UJ	0.85 UJ	0.86 UJ	41 J	5.1 J	0.81 UJ	--
TOTAL TCDD	--	--	--	5.8 J	0.86 J	1.1 J	0.19 UJ	14 J	3 J	0.18 UJ	--
TOTAL TCDF	--	--	--	24 J	2.8 J	1.2 J	0.24 UJ	55 J	8.1 J	0.22 UJ	--
METALS (MG/KG)												
ALUMINUM	6020	8850	8040	8050	13600	13800	13000	9190	8430	8810	13000
ANTIMONY	1.3 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.7	1.1 U	1.1 U	1.2 U
ARSENIC	7.9	6	5.6	8.3	7.1	7.1	6.7 J	11.7	4	6.5	8.3
BARIUM	60.5	51.5	27.2	63.8	88.3	101	41.4 J	101	35.2	95.4	77.3
BERYLLIUM	0.71	0.45 J	0.37 J	0.52 J	0.4 J	0.48 J	0.25 J	0.67	0.32 J	0.53 J	1
CADMIUM	0.27 J	0.54 U	0.55 U	0.24 J	0.16 J	0.15 J	0.56 U	1.1	0.54 U	0.56 U	0.092 J
CALCIUM	1400	367 J	274 J	466 J	294 J	310 J	171 J	677	231 J	161 J	449 J
CHROMIUM	12.6	11	11.7	9.2	13.4	13.5	22.8 J	13.6	8.9	11.1	16.3
COBALT	6.5	7.2	11.3	3.5	5.4	4.2	5.3 J	14.1	7.7	20.7	20.8
COPPER	21.3	11.2	5.1	23.7	10.8	9.5	5.1 J	414	13.2	8.1	20
CYANIDE	0.65 R	0.57 R	0.58 R	0.61 R	0.57 R	0.57 R	0.54 R	0.64 R	0.54 R	0.57 R	0.58 R
IRON	15800	14900	16000	12900	13200	18100	14900	26000	11800	38900	28100
LEAD	86.7	46.2	14.3	127	52.3	42.4	10.2	179	15.2	24.8	20.4
MAGNESIUM	446 J	512 J	433 J	547 J	892	914	742	531 J	462 J	510 J	1940
MANGANESE	311	186	277	165	211	192	170 J	1540	357	1030	858
MERCURY	0.087 J	0.11 U	0.027 J	0.12 UJ	0.11 UJ	0.12 UJ	0.11 U	0.19	0.039 J	0.11 UJ	0.03 J
NICKEL	6.9	5.8	3.8	5.9	9	9	6.5 J	9.5	3.8	11	25.7
POTASSIUM	851	719	706	581 UJ	605	583	641 J	1550	1000	1190	1660
SELENIUM	0.66 J	0.54 J	0.53 J	0.83 J	1 J	0.96 J	0.3 J	0.84 J	0.31 J	0.47 J	0.85 J
SILVER	0.65 U	0.54 U	0.55 U	0.12 J	0.58 U	0.056 J	0.56 U	0.16 J	0.54 U	0.56 U	0.59 U
SODIUM	637 UJ	566 UJ	543 UJ	581 UJ	575 UJ	557 UJ	532 UJ	634 UJ	558 UJ	525 UJ	594 UJ
THALLIUM	0.053 J	0.069 J	0.036 J	0.6 U	0.58 U	0.54 U	0.056 J	0.088 J	0.54 U	0.56 U	0.089 J
VANADIUM	12.1	21.1	19.1	16.4	29.6	28.1	25.4 J	14.2	11	15.6	22.5
ZINC	117	31	19.3	45.3	47.1	53.6	23.9 J	309	24.3	20.8	75.7
MISCELLANEOUS (%)												
TOTAL SOLIDS	--	--	--	--	--	--	--	77	--	--	--
MISCELLANEOUS (MG/KG)												
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	53800	--	--	--
MOBILE LAB MISCELLANEOUS (%)												
PERCENT SOLIDS	--	89	86	--	88	--	89	--	86	89	--

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-303	SB-304	SB-304	SB-305	SB-305	SB-306	SB-306	SB-306	SB-306	SB-307	SB-307
SAMPLE ID	SB303-20191125-0624	SB304-20191125-0006	SB304-20191125-0624	SB305-20191125-0006	SB305-20191125-0624	SB306-20191125-0006	SB306-20191125-0006-D	SB306-20191125-0624	SB306-20191125-2448	SB307-20191125-0006	SB307-20191125-0624
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125
DUPLICATE							SB306-20191125-0006				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SB	SS	SS
TOP DEPTH	0.5	0	0.5	0	0.5	0	0	0.5	2	0	0.5
BOTTOM DEPTH	2	0.5	2	0.5	2	0.5	0.5	2	4	0.5	2
VOLATILES (MG/KG)											
1,1,1-TRICHLOROETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
1,1,2,2-TETRACHLOROETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
1,1,2-TRICHLOROETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
1,1-DICHLOROETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
1,1-DICHLOROETHENE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
1,2,3-TRICHLOROBENZENE	0.0041 U	0.0046 U	0.004 U	0.0077 R	0.0058 U	0.0045 UJ	0.0045 UJ	0.0045 U	0.0041 U	0.0046 U	0.0045 U
1,2,4-TRICHLOROBENZENE	0.0041 U	0.0046 U	0.004 U	0.0077 R	0.0058 U	0.0045 UJ	0.0045 UJ	0.0045 U	0.0041 U	0.0046 U	0.0045 U
1,2-DIBROMO-3-CHLOROPROPANE	0.0041 U	0.0046 U	0.004 U	0.0077 R	0.0058 U	0.0045 UJ	0.0045 UJ	0.0045 U	0.0041 U	0.0046 U	0.0045 U
1,2-DIBROMOETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
1,2-DICHLOROBENZENE	0.0041 U	0.0046 U	0.004 U	0.0077 R	0.0058 U	0.0045 UJ	0.0045 UJ	0.0045 U	0.0041 U	0.0046 U	0.0045 U
1,2-DICHLOROETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
1,2-DICHLOROPROPANE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
1,3-DICHLOROBENZENE	0.0041 U	0.0046 U	0.004 U	0.0077 R	0.0058 U	0.0045 UJ	0.0045 UJ	0.0045 U	0.0041 U	0.0046 U	0.0045 U
1,4-DICHLOROBENZENE	0.0041 U	0.0046 U	0.004 U	0.0077 R	0.0058 U	0.0045 UJ	0.0045 UJ	0.0045 U	0.0041 U	0.0046 U	0.0045 U
2-BUTANONE	0.0082 U	0.0093 U	0.0079 U	0.015 U	0.012 U	0.0091 U	0.009 U	0.0089 U	0.0082 U	0.0091 U	0.009 U
2-HEXANONE	0.0082 U	0.0093 U	0.0079 U	0.015 UJ	0.012 U	0.0091 U	0.009 U	0.0089 U	0.0082 U	0.0091 U	0.009 U
4-METHYL-2-PENTANONE	0.0082 U	0.0093 U	0.0079 U	0.015 UJ	0.012 U	0.0091 U	0.009 U	0.0089 U	0.0082 U	0.0091 U	0.009 U
ACETONE	0.0082 U	0.0093 U	0.0079 U	0.02	0.012 U	0.0094 U	0.009 U	0.0089 U	0.0082 U	0.0091 U	0.009 U
BENZENE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
BROMOCHLOROMETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
BROMODICHLOROMETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
BROMOFORM	0.0041 U	0.0046 U	0.004 U	0.0077 R	0.0058 U	0.0045 UJ	0.0045 UJ	0.0045 U	0.0041 U	0.0046 U	0.0045 U
BROMOMETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
CARBON DISULFIDE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
CARBON TETRACHLORIDE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
CHLOROBENZENE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
CHLORODIBROMOMETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
CHLOROETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
CHLOROFORM	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
CHLOROMETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
CIS-1,2-DICHLOROETHENE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
CIS-1,3-DICHLOROPROPENE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
CYCLOHEXANE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
DICHLORODIFLUOROMETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
ETHYLBENZENE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
ISOPROPYLBENZENE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
M+P-XYLENES	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
METHYL ACETATE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
METHYL CYCLOHEXANE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
METHYL TERT-BUTYL ETHER	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
METHYLENE CHLORIDE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0037 J	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
O-XYLENE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
STYRENE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
TETRACHLOROETHENE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
TOLUENE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
TRANS-1,2-DICHLOROETHENE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
TRANS-1,3-DICHLOROPROPENE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
TRICHLOROETHENE	0.0041 U	0.0046 U	0.004 U	0.0077 UJ	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
TRICHLOROFLUOROMETHANE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
VINYL CHLORIDE	0.0041 U	0.0046 U	0.004 U	0.0077 U	0.0058 U	0.0045 U	0.0045 U	0.0045 U	0.0041 U	0.0046 U	0.0045 U
SEMIVOLATILES (MG/KG)											
1,1-BIPHENYL	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
1,2,4,5-TETRACHLOROBENZENE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
1,4-DIOXANE	0.078 U	0.092 U	0.074 U	0.097 U	0.083 UJ	0.082 U	0.083 U	0.077 U	0.072 U	0.081 U	0.079 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
2,3,4,6-TETRACHLOROPHENOL	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
2,4,5-TRICHLOROPHENOL	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
2,4,6-TRICHLOROPHENOL	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
2,4-DICHLOROPHENOL	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
2,4-DIMETHYLPHENOL	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
2,4-DINITROPHENOL	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 R	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
2,4-DINITROTOLUENE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
2,6-DINITROTOLUENE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
2-CHLORONAPHTHALENE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
2-CHLOROPHENOL	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
2-METHYLNAPHTHALENE	0.2 U	0.23 U	0.19 U	0.052 J	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
2-METHYLPHENOL	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
2-NITROANILINE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 R	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
2-NITROPHENOL	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
3&4-METHYLPHENOL	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
3,3'-DICHLOROBENZIDINE	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
3-NITROANILINE	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 R	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
4,6-DINITRO-2-METHYLPHENOL	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
4-BROMOPHENYL PHENYL ETHER	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
4-CHLORO-3-METHYLPHENOL	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
4-CHLOROANILINE	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
4-CHLOROPHENYL PHENYL ETHER	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
4-NITROANILINE	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 R	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
4-NITROPHENOL	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 R	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-303	SB-304	SB-304	SB-305	SB-305	SB-306	SB-306	SB-306	SB-306	SB-307	SB-307
SAMPLE ID	SB303-20191125-0624	SB304-20191125-0006	SB304-20191125-0624	SB305-20191125-0006	SB305-20191125-0624	SB306-20191125-0006	SB306-20191125-0006-D	SB306-20191125-0624	SB306-20191125-2448	SB307-20191125-0006	SB307-20191125-0624
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125
DUPLICATE							SB306-20191125-0006				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SB	SS	SS
TOP DEPTH	0.5	0	0.5	0	0.5	0	0	0.5	2	0	0.5
BOTTOM DEPTH	2	0.5	2	0.5	2	0.5	0.5	2	4	0.5	2
ACENAPHTHENE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
ACENAPHTHYLENE	0.2 U	0.056 J	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
ACETOPHENONE	0.38 U	0.45 U	0.36 U	0.062 J	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
ANTHRACENE	0.2 U	0.069 J	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
ATRAZINE	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
BAP EQUIVALENT-HALFND	0.222795	0.6041	0.19 U	0.21274	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.3521	0.2 U
BAP EQUIVALENT-POS	0.121795	0.6041	0.19 U	0.06149	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.2471	0.2 U
BENZALDEHYDE	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
BENZO(A)ANTHRACENE	0.092 J	0.39	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.19 J	0.2 U
BENZO(A)PYRENE	0.094 J	0.41	0.19 U	0.053 J	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.19 J	0.2 U
BENZO(B)FLUORANTHENE	0.13 J	0.56	0.19 U	0.084 J	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.25	0.2 U
BENZO(G,H,I)PERYLENE	0.066 J	0.3	0.19 U	0.054 J	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.14 J	0.2 U
BENZO(K)FLUORANTHENE	0.2 U	0.17 J	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.09 J	0.2 U
BIS(2-CHLOROETHOXY)METHANE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
BIS(2-CHLOROETHYL)ETHER	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 U	0.23 U	0.19 U	0.21 J	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
BUTYL BENZYL PHTHALATE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
CAPROLACTAM	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
CARBAZOLE	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
CHRYSENE	0.095 J	0.4	0.19 U	0.09 J	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.2 J	0.2 U
DIBENZO(A,H)ANTHRACENE	0.2 U	0.072 J	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
DIBENZOFURAN	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
DIETHYL PHTHALATE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
DIMETHYL PHTHALATE	0.12 J	0.14 J	0.16 J	0.17 J	0.15 J	0.25	0.28	0.21	0.11 J	0.22	0.24
DI-N-BUTYL PHTHALATE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
DI-N-OCTYL PHTHALATE	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
FLUORANTHENE	0.23 J	0.91	0.36 U	0.093 J	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.5	0.39 U
FLUORENE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
HEXACHLOROBENZENE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
HEXACHLOROBUTADIENE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
HEXACHLOROCYCLOPENTADIENE	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
HEXACHLOROETHANE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
HIGH MOLECULAR WEIGHT PAHS	0.742	3.372	0 U	0.38	0 U	0 U	0 U	0 U	0 U	1.61	0 U
INDENO(1,2,3-CD)PYRENE	0.055 J	0.25	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.12 J	0.2 U
ISOPHORONE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
LOW MOLECULAR WEIGHT PAHS	0.325	1.355	0 U	0.193	0 U	0 U	0 U	0 U	0 U	0.73	0 U
NAPHTHALENE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
NITROBENZENE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
N-NITROSO-DI-N-PROPYLAMINE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
N-NITROSODIPHENYLAMINE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.21 U	0.2 U
PENTACHLOROPHENOL	0.38 U	0.45 U	0.36 U	0.48 U	0.41 U	0.4 U	0.41 U	0.38 U	0.36 U	0.4 U	0.39 U
PHENANTHRENE	0.095 J	0.32	0.19 U	0.1 J	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.23	0.2 U
PHENOL	0.043 J	0.056 J	0.15 J	0.21 J	0.14 J	0.12 J	0.13 J	0.11 J	0.041 J	0.11 J	0.11 J
PYRENE	0.21	0.82	0.19 U	0.099 J	0.21 U	0.21 U	0.21 U	0.19 U	0.18 U	0.43	0.2 U
TOTAL PAHS	1.067	4.727	0 U	0.573	0 U	0 U	0 U	0 U	0 U	2.34	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K											
2-METHYLNAPHTHALENE	0.00085 J	0.0056	0.0036 U	0.049	0.005	0.013	0.013	0.0063	0.00083 J	0.0034 J	0.0039 U
ACENAPHTHENE	0.0022 J	0.0085	0.0036 U	0.0016 J	0.0041 U	0.004 U	0.0041 U	0.0038 U	0.0036 U	0.0041	0.0039 U
ACENAPHTHYLENE	0.015	0.061	0.0021 J	0.012	0.00094 J	0.00097 J	0.0012 J	0.0015 J	0.0036 U	0.035	0.0013 J
ANTHRACENE	0.017	0.057	0.0013 J	0.007	0.0041 U	0.0016 J	0.0017 J	0.0013 J	0.0036 U	0.035	0.00082 J
BAP EQUIVALENT-HALFND	0.13756	0.58559	0.012778	0.085522	0.005127	0.007771	0.008681	0.011079	0.004028	0.28821	0.00772
BAP EQUIVALENT-POS	0.13756	0.58559	0.012778	0.085522	0.005127	0.007771	0.008681	0.011079	0.00023	0.28821	0.00577
BENZO(A)ANTHRACENE	0.098	0.38 J	0.0081	0.044	0.0034 J	0.006	0.007	0.0079	0.00079 J	0.2	0.0048
BENZO(A)PYRENE	0.095	0.41 J	0.0088	0.053	0.0029 J	0.005	0.0056	0.0073	0.0036 U	0.2	0.0044
BENZO(B)FLUORANTHENE	0.13	0.53 J	0.012	0.082	0.0066	0.0082	0.0091	0.011	0.0015 J	0.26	0.0061
BENZO(G,H,I)PERYLENE	0.059	0.27	0.006	0.051	0.0029 J	0.0037 J	0.0038 J	0.005	0.00081 J	0.14	0.0027 J
BENZO(K)FLUORANTHENE	0.046	0.22	0.005	0.024	0.0016 J	0.0029 J	0.0028 J	0.0037 J	0.0036 U	0.1	0.0025 J
CHRYSENE	0.1	0.39 J	0.0088	0.082	0.011	0.012	0.013	0.012	0.0017 J	0.21	0.0054
DIBENZO(A,H)ANTHRACENE	0.014	0.059	0.0014 J	0.016	0.001 J	0.001 J	0.0011 J	0.0014 J	0.0036 U	0.03	0.0039 U
FLUORANTHENE	0.21	0.78 J	0.016	0.09	0.0066	0.014	0.015	0.016	0.0014 J	0.46 J	0.0095
FLUORENE	0.0057	0.018	0.0036 U	0.005	0.0041 U	0.0015 J	0.0016 J	0.00082 J	0.0036 U	0.013	0.0039 U
HIGH MOLECULAR WEIGHT PAHS	0.814	3.309	0.0732	0.458	0.0385	0.0559	0.0607	0.0697	0.0063	1.71	0.0384
INDENO(1,2,3-CD)PYRENE	0.052	0.23	0.0051	0.036	0.002 J	0.0031 J	0.0033 J	0.0044	0.0036 U	0.11	0.0025 J
LOW MOLECULAR WEIGHT PAHS	0.3429	1.2265	0.02565	0.2446	0.02544	0.04607	0.0465	0.03682	0.0031	0.7713	0.01762
NAPHTHALENE	0.002 J	0.012	0.00075 J	0.033	0.0029 J	0.005	0.005	0.0032 J	0.0036 U	0.0042	0.0039 U
PENTACHLOROPHENOL	0.0078 U	0.0092 U	0.0074 U	0.0097 U	0.0083 U	0.00083 J	0.00099 J	0.0077 U	0.0072 U	0.0081 U	0.0079 U
PHENANTHRENE	0.091	0.29	0.0055	0.096	0.015	0.023	0.022	0.014	0.0017 J	0.22	0.006
PYRENE	0.22	0.82 J	0.018	0.07	0.0071	0.014	0.015	0.017	0.0015 J	0.46 J	0.01
TOTAL PAHS	0.1	0.39	0.0088	0.082	0.011	0.012	0.013	0.012	0.0017	0.21	0.0054
PESTICIDES (MG/KG)											
4,4'-DDD	0.0038 U	0.0022 J	0.0036 U	0.0047 J	0.00075 J	0.00077 J	0.00056 J	0.00046 J	0.0036 U	0.0011 J	0.0039 UJ
4,4'-DDE	0.0038 U	0.00052 J	0.0036 U	0.0033 J	0.00029 J	0.004 UJ	0.0041 UJ	0.0038 UJ	0.0036 U	0.004 U	0.0039 UJ
4,4'-DDT	0.0038 U	0.001 J	0.0036 U	0.011	0.00034 J	0.004 UJ	0.0041 UJ	0.0038 UJ	0.0036 U	0.004 U	0.0039 UJ
ALDRIN	0.002 U	0.0023 U	0.0019 U	0.0025 U	0.0021 U	0.0021 UJ	0.0021 UJ	0.0019 UJ	0.0018 U	0.0021 U	0.002 UJ
ALPHA-BHC	0.002 U	0.0023 U	0.0019 U	0.0025 U	0.0021 U	0.0021 UJ	0.0021 UJ	0.0019 UJ	0.0018 U	0.0021 U	0.002 UJ
ALPHA-CHLORDANE	0.002 U	0.0023 U	0.0019 U	0.0025 U	0.0021 U	0.0021 UJ	0.0021 UJ	0.0019 UJ	0.0018 U	0.0021 U	0.002 UJ
BETA-BHC	0.002 U	0.0023 U	0.0019 U	0.0025 U	0.0021 U	0.0021 UJ	0.0021 UJ	0.0019 UJ	0.0018 U	0.0021 U	0.002 UJ
DELTA-BHC	0.002 U	0.0023 U	0.0019 U	0.0025 U	0.0021 U	0.0021 UJ	0.0021 UJ	0.0019 UJ	0.0018 U	0.0021 U	0.002 UJ
DIELDRIN	0.0038 U	0.0046 U	0.0036 U	0.0048 U	0.0041 U	0.004 UJ	0.0041 UJ	0.0038 UJ	0.0036 U	0.004 U	0.0039 UJ
ENDOSULFAN I	0.002 U	0.0023 U	0.0019 U	0.0025 U	0.0021 U	0.0021 UJ	0.0021 UJ	0.0019 UJ	0.0018 U	0.0021 U	0.002 UJ
ENDOSULFAN II	0.0038 U	0.0046 U	0.0036 U	0.0048 U	0.0041 U	0.004 UJ	0.0041 UJ	0.0038 UJ	0.0036 U	0.004 U	0.0039 UJ

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-303	SB-304	SB-304	SB-305	SB-305	SB-306	SB-306	SB-306	SB-306	SB-307	SB-307
SAMPLE ID	SB303-20191125-0624	SB304-20191125-0006	SB304-20191125-0624	SB305-20191125-0006	SB305-20191125-0624	SB306-20191125-0006	SB306-20191125-0006-D	SB306-20191125-0624	SB306-20191125-2448	SB307-20191125-0006	SB307-20191125-0624
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125
DUPLICATE							SB306-20191125-0006				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SB	SS	SS
TOP DEPTH	0.5	0	0.5	0	0.5	0	0	0.5	2	0	0.5
BOTTOM DEPTH	2	0.5	2	0.5	2	0.5	0.5	2	4	0.5	2
ENDOSULFAN SULFATE	0.0038 U	0.0046 U	0.0036 U	0.0048 U	0.00025 R	0.004 UJ	0.0041 UJ	0.0038 UJ	0.0036 U	0.004 U	0.0039 UJ
ENDRIN	0.0038 U	0.0003 R	0.0036 U	0.0048 U	0.0041 U	0.00025 J	0.0041 UJ	0.0038 UJ	0.0036 U	0.00023 R	0.0039 UJ
ENDRIN ALDEHYDE	0.0038 U	0.0046 U	0.0036 U	0.0048 U	0.0041 U	0.004 UJ	0.0041 UJ	0.0038 UJ	0.0036 U	0.004 U	0.0039 UJ
ENDRIN KETONE	0.0038 U	0.0046 U	0.0036 U	0.0048 U	0.0041 U	0.004 UJ	0.0041 UJ	0.0038 UJ	0.0036 U	0.004 U	0.0039 UJ
GAMMA-BHC (LINDANE)	0.00029 J	0.0022 J	0.0019 U	0.0021 J	0.00039 J	0.00076 J	0.00056 J	0.00042 J	0.0018 U	0.0028	0.002 UJ
GAMMA-CHLORDANE	0.002 U	0.0023 U	0.0019 U	0.0025 U	0.0021 U	0.0021 UJ	0.0021 UJ	0.0019 UJ	0.0018 U	0.0021 U	0.002 UJ
HEPTACHLOR	0.002 U	0.0023 U	0.0019 U	0.0025 U	0.0021 U	0.0021 UJ	0.0021 UJ	0.0019 UJ	0.0018 U	0.0021 U	0.002 UJ
HEPTACHLOR EPOXIDE	0.002 U	0.0023 U	0.0019 U	0.0025 U	0.0021 U	0.0021 UJ	0.0021 UJ	0.0019 UJ	0.0018 U	0.0021 U	0.002 UJ
METHOXYCHLOR	0.02 U	0.023 U	0.019 U	0.025 U	0.021 U	0.021 UJ	0.021 UJ	0.019 UJ	0.018 U	0.021 U	0.02 UJ
TOXAPHENE	0.2 U	0.23 U	0.19 U	0.25 U	0.21 U	0.21 UJ	0.21 UJ	0.19 UJ	0.18 U	0.21 U	0.2 UJ
PCBS (MG/KG)											
AROCLOR-1016	0.038 U	0.046 U	0.036 U	0.048 U	0.041 U	0.04 U	0.041 U	0.038 U	0.036 U	0.04 U	0.039 U
AROCLOR-1221	0.038 U	0.046 U	0.036 U	0.048 U	0.041 U	0.04 U	0.041 U	0.038 U	0.036 U	0.04 U	0.039 U
AROCLOR-1232	0.038 U	0.046 U	0.036 U	0.048 U	0.041 U	0.04 U	0.041 U	0.038 U	0.036 U	0.04 U	0.039 U
AROCLOR-1242	0.038 U	0.046 U	0.036 U	0.048 U	0.041 U	0.04 U	0.041 U	0.038 U	0.036 U	0.04 U	0.039 U
AROCLOR-1248	0.038 U	0.046 U	0.036 U	0.048 U	0.041 U	0.04 U	0.041 U	0.038 U	0.036 U	0.04 U	0.039 U
AROCLOR-1254	0.038 U	0.046 U	0.036 U	0.048 U	0.041 U	0.04 U	0.041 U	0.038 U	0.036 U	0.04 U	0.039 U
AROCLOR-1260	0.038 U	0.046 U	0.036 U	0.048 U	0.041 U	0.04 U	0.041 U	0.038 U	0.036 U	0.04 U	0.039 U
AROCLOR-1262	0.038 U	0.046 U	0.036 U	0.048 U	0.041 U	0.04 U	0.041 U	0.038 U	0.036 U	0.04 U	0.039 U
AROCLOR-1268	0.038 U	0.046 U	0.036 U	0.048 U	0.041 U	0.04 U	0.041 U	0.038 U	0.036 U	0.04 U	0.039 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U
TOTAL AROCLOR HALFND	0.171	0.207	0.162	0.216	0.1845	0.18	0.1845	0.171	0.162	0.18	0.1755
MOBILE LAB PESTICIDES/PCBS (MG/KG)											
AROCLOR-1016	0.294 U	--	0.284 U	--	0.313 U	--	--	0.291 U	0.281 U	--	0.298 U
AROCLOR-1221	0.588 U	--	0.568 U	--	0.625 U	--	--	0.581 U	0.562 U	--	0.595 U
AROCLOR-1232	0.294 U	--	0.284 U	--	0.313 U	--	--	0.291 U	0.281 U	--	0.298 U
AROCLOR-1242	0.294 U	--	0.284 U	--	0.313 U	--	--	0.291 U	0.281 U	--	0.298 U
AROCLOR-1248	0.294 U	--	0.284 U	--	0.313 U	--	--	0.291 U	0.281 U	--	0.298 U
AROCLOR-1254	0.294 U	--	0.284 U	--	0.313 U	--	--	0.291 U	0.281 U	--	0.298 U
AROCLOR-1260	0.294 U	--	0.284 U	--	0.313 U	--	--	0.291 U	0.281 U	--	0.298 U
AROCLOR-1262	0.294 U	--	0.284 U	--	0.313 U	--	--	0.291 U	0.281 U	--	0.298 U
AROCLOR-1268	0.294 U	--	0.284 U	--	0.313 U	--	--	0.291 U	0.281 U	--	0.298 U
TOTAL AROCLOR	0 U	--	0 U	--	0 U	--	--	0 U	0 U	--	0 U
TOTAL AROCLOR HALFND	1.47	--	1.42	--	1.5645	--	--	1.4545	1.405	--	1.4895
PCB CONGENERS (MG/KG)											
DICHLOROBIPHENYLS	0.0000093 J	0.00014 J	0.0000036 J	0.00026 J	0.000012 J	0.00035 J	0.00032 J	0.00006 J	0 UJ	0.000042 J	0.0000075 J
HEPTACHLOROBIPHENYLS	0.00029 J	0.0023 J	0.00065 J	0.0032 J	0.00033 J	0.0015 J	0.0016 J	0.00048 J	0.00027 J	0.0012 J	0.00029 J
HEXACHLOROBIPHENYLS	0.00038 J	0.0044 J	0.0008 J	0.0064 J	0.0006 J	0.0022 J	0.0021 J	0.00083 J	0.00034 J	0.0014 J	0.00052 J
MONOCHLOROBIPHENYLS	0.0000016 J	0.000041 J	0.0000028 J	0.000059 J	0.000008 J	0.00022 J	0.00019 J	0.000033 J	0.00000084 J	0.000014 J	0.000003 J
NONACHLOROBIPHENYLS	0.000042 J	0.001 J	0.000055 J	0.0042 J	0.00038 J	0.000062 J	0.000072 J	0.00026 J	0.0004 J	0.00074 J	0.00004 J
OCTACHLOROBIPHENYLS	0.000094 J	0.00091 J	0.0002 J	0.0021 J	0.00019 J	0.00034 J	0.00036 J	0.00018 J	0.00013 J	0.00057 J	0.000068 J
PCB-1	0.0000019 U	0.0000099	0.00000099 J	0.0000077 J	0.0000019 UJ	0.00012 J	0.00009 J	0.0000012 J	0.000002 UJ	0.0000029	0.0000019 U
PCB-10	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000039	0.000002 U	0.0000018 U	0.000002 U	0.000002 U	0.0000019 U
PCB-103	0.0000019 U	0.000002 U	0.0000018 U	0.0000022	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.000002 U	0.0000019 U
PCB-104	0.0000019 U	0.000002 U	0.0000018 U	0.00000028 J	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.000002 U	0.0000019 U
PCB-105	0.000011	0.00025	0.000017	0.00037	0.000041	0.000035	0.000042	0.000037	0.0000056	0.000045	0.000006
PCB-106	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.000002 U	0.0000019 U
PCB-107	0.0000028	0.000047	0.0000029	0.000075	0.0000064	0.0000067	0.0000071	0.0000053	0.00000076 J	0.0000098	0.0000013 J
PCB-108/124	0.0000016 J	0.00003	0.0000026 J	0.000047	0.000004	0.0000039	0.0000044	0.000005	0.0000039 U	0.0000067	0.0000011 J
PCB-11	0.000003	0.000035	0.0000018 U	0.00021	0.000012	0.000058	0.000067	0.0000098	0.000002 U	0.000031	0.0000032
PCB-110/115	0.000025	0.00049	0.000049	0.00092	0.000097	0.00014	0.00015	0.00012	0.000023	0.000094	0.000025
PCB-111	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.000002 U	0.0000019 U
PCB-112	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.000002 U	0.0000019 U
PCB-114	0.00000052 U	0.0000066	0.00000086 U	0.000017	0.0000018 J	0.0000019 Z	0.0000022	0.0000016 J	0.00000071 U	0.0000017 Z	0.00000057 U
PCB-118	0.000021	0.00043	0.000033	0.00086	0.000091	0.000082	0.000098	0.000083	0.000013	0.000093	0.000017
PCB-12/13	0.0000038 U	0.000011	0.0000037 U	0.000014	0.0000038 U	0.000027	0.000026	0.0000037 U	0.0000039 U	0.0000028 J	0.0000038 U
PCB-120	0.0000019 U	0.0000026	0.0000018 U	0.0000026	0.00000033 J	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.000002 U	0.0000019 U
PCB-121	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.000002 U	0.0000019 U
PCB-122	0.0000019 U	0.0000063	0.0000018 U	0.000012	0.0000011 J	0.0000011 J	0.000002 U	0.0000013 J	0.000002 U	0.0000013 J	0.0000019 U
PCB-123	0.00000053 J	0.000014	0.0000012 Z	0.000014	0.0000015 Z	0.0000013 Z	0.0000017 J	0.0000024	0.00000067 U	0.0000037	0.0000006 J
PCB-126	0.0000006 U	0.000013	0.00000097 U	0.000023	0.0000026	0.0000019 U	0.00000082 U	0.00000065 U	0.00000077 U	0.0000011 U	0.00000062 U
PCB-127	0.0000019 U	0.000002 U	0.0000018 U	0.0000036	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.000002 U	0.0000019 U
PCB-128/166	0.000011	0.00015	0.000014	0.00022	0.000023	0.000028	0.000033	0.000026	0.0000054	0.000055	0.000011
PCB-129/138/163	0.0001	0.0013	0.0002	0.0018	0.00017	0.00045	0.00048	0.00021	0.000077	0.00049	0.00012
PCB-130	0.0000049	0.000061	0.0000065	0.0001	0.0000019 U	0.000015	0.000017	0.0000094	0.0000028	0.000019	0.0000038
PCB-131	0.0000019 U	0.0000037	0.0000018 U	0.000011	0.0000001 J	0.0000028	0.000003	0.0000014 J	0.000002 U	0.000002 U	0.0000019 U
PCB-132	0.000013	0.00015	0.000031	0.00034	0.000034	0.00012	0.00012	0.000047	0.00002	0.000036	0.000025
PCB-133	0.0000016 J	0.000018	0.0000022	0.000026	0.0000019	0.0000058	0.0000059	0.0000023	0.000002 U	0.0000055	0.0000015 J
PCB-134	0.0000024	0.000027	0.000005	0.000058	0.0000052	0.000021	0.00002	0.0000074	0.000002 U	0.0000054	0.0000047
PCB-135/151	0.000023	0.00028	0.000066	0.00036 J	0.000034	0.00023 J	0.0002 J	0.000062 J	0.000035	0.000063	0.000052
PCB-136	0.0000053	0.000051	0.000017	0.000076	0.000008	0.000077	0.000064	0.000019	0.000011	0.0000091	0.00002
PCB-137	0.0000023	0.000034	0.0000033	0.000056	0.0000072	0.0000019 U	0.000002 U	0.000006	0.000001 J	0.000002 U	0.0000014 J
PCB-139/140	0.0000038 U	0.0000077	0.0000037 U	0.000017	0.0000017 J	0.0000038 U	0.0000019 J	0.0000021 J	0.0000039 U	0.0000023 J	0.0000038 U
PCB-14	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.000002 U	0.0000019 U
PCB-141	0.000016	0.00017	0.000041	0.00023	0.000027	0.00011	0.00011	0.000036	0.000019	0.000045	0.000024
PCB-142	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.000002 U	0.0000019 U
PCB-143	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.000002 U	0.0000019 U
PCB-144	0.0000033	0.000024	0.0000071	0.000043	0.0000043	0.000031	0.000025	0.000008	0.000002 U	0.0000048	0.0000061
PCB-145	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.000002 U	0.0000019 U
PCB-146	0.000016	0.00016	0.000027	0.00014 J	0.000016	0.00006	0.000064	0.000023	0.0000097	0.000054	0.000014
PCB-147/149	0.000048	0.00054	0.00012	0.00091	0.000088	0.00046	0.00043	0.00014	0.000068	0.00012	0.000097

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-303	SB-304	SB-304	SB-305	SB-305	SB-306	SB-306	SB-306	SB-306	SB-306	SB-307	SB-307
SAMPLE ID	SB303-20191125-0624	SB304-20191125-0006	SB304-20191125-0624	SB305-20191125-0006	SB305-20191125-0624	SB306-20191125-0006	SB306-20191125-0006-D	SB306-20191125-0624	SB306-20191125-2448		SB307-20191125-0006	SB307-20191125-0624
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125		20191125	20191125
DUPLICATE							SB306-20191125-0006					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL		NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO		SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019		Remedial Investigation 2019	Remedial Investigation 2019
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background		Background	Background
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SB		SS	SS
TOP DEPTH	0.5	0	0.5	0	0.5	0	0	0.5	2		0	0.5
BOTTOM DEPTH	2	0.5	2	0.5	2	0.5	0.5	2	4		0.5	2
PCB-148	0.0000019 U	0.000002 U	0.0000018 U	0.0000018 J	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-15	0.0000033	0.000059	0.0000036	0.000028 J	0.0000019 U	0.000062	0.000058	0.000017	0.000002 U		0.0000087	0.0000013 J
PCB-150	0.0000019 U	0.000002 U	0.0000018 U	0.0000014 J	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-152	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-153/168	0.0001	0.0011	0.00022	0.0016	0.00013	0.00047	0.00048	0.00018	0.000076		0.00038	0.00011
PCB-154	0.00000046 J	0.0000054	0.0000018 U	0.0000072	0.00000087 J	0.0000019 U	0.000002 U	0.00000085 J	0.000002 U		0.0000012 J	0.0000019 U
PCB-155	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-156/157	0.0000099	0.00012	0.000013	0.00017 J	0.000019	0.000026	0.000031	0.000019	0.0000053		0.000046	0.0000081
PCB-158	0.0000084	0.000082	0.000012	0.00015	0.000014	0.000035	0.000037	0.000017	0.0000058		0.000002 U	0.000008
PCB-159	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-16	0.0000018 J	0.0000086	0.0000013 J	0.000002 U	0.0000019 U	0.000014	0.000013	0.000004	0.000002 U		0.0000012 J	0.00000087 J
PCB-160	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000035	0.0000019 U
PCB-161	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-162	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-164	0.0000063	0.000073	0.00001	0.0001	0.0000091	0.000029	0.000029	0.000012	0.0000051		0.000024	0.0000073
PCB-165	0.0000019 U	0.000002 U	0.0000018 U	0.0000011 J	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-167	0.0000044	0.000045	0.0000051	0.000064	0.0000066	0.000011	0.000012 Z	0.0000071	0.000002 U		0.000018	0.0000031
PCB-169	0.00000075 U	0.00000092 U	0.0000011 U	0.0000013 U	0.00000054 U	0.00000085 U	0.00000097 U	0.00000071 U	0.00000094 U		0.000002 Z	0.00000065 U
PCB-17	0.0000017 J	0.0000091	0.0000018 U	0.0000045	0.00000051 J	0.000017	0.000015	0.0000048	0.000002 U		0.0000014 J	0.00000096 J
PCB-170	0.000035	0.00026	0.000065	0.00032	0.000039	0.00016	0.00017	0.00005	0.00003		0.00014	0.000027
PCB-171/173	0.0000092	0.000055	0.000014	0.000095	0.00001	0.000049	0.000051	0.000015	0.000009		0.000024	0.0000086
PCB-172	0.0000075	0.000055	0.000013	0.000056	0.0000066 J	0.000028 J	0.000031 J	0.0000099 J	0.0000053		0.00003	0.0000055
PCB-174	0.00003	0.00026	0.000068	0.0004	0.000038	0.0002	0.0002	0.000057	0.000035		0.00012	0.000037
PCB-175	0.0000012 J	0.0000063	0.0000021	0.000013	0.0000017 J	0.0000079	0.0000079	0.0000026	0.000002 U		0.0000031	0.0000015 J
PCB-176	0.000003	0.000018	0.0000067	0.000032	0.0000032	0.000027	0.000024	0.0000067	0.0000046		0.0000057	0.0000059
PCB-177	0.00002	0.00016	0.00004	0.00022	0.000023	0.00011	0.00012	0.000034	0.000019		0.00008	0.000021
PCB-178	0.0000094	0.000098	0.000019	0.00012	0.00001	0.000046	0.000045	0.000014	0.0000074		0.000047	0.00001
PCB-179	0.000013	0.00012	0.000033	0.00018	0.000015	0.0001	0.000093	0.000027	0.000016		0.000042	0.000023
PCB-18/30	0.0000036 J	0.000019	0.0000024 J	0.0000067	0.00000084 J	0.000031	0.000027	0.000009	0.00000091 J		0.0000024 J	0.0000022 J
PCB-180/193	0.000081	0.00062	0.00021	0.00083	0.000096	0.00039	0.00042	0.00013	0.000072		0.00033	0.000068
PCB-181	0.0000019 U	0.000002 U	0.0000018 U	0.0000025	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-182	0.0000019 U	0.000002 U	0.0000018 U	0.00002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-183/185	0.000022	0.00012	0.000041	0.00026	0.000026	0.00013	0.00013	0.000039	0.000022		0.000056	0.000024
PCB-184	0.0000019 U	0.000002 U	0.0000018 U	0.000002 UJ	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-186	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-187	0.000051	0.00048	0.00012	0.00051	0.000054	0.00027	0.00028	0.000082	0.000043		0.00024	0.000054
PCB-188	0.0000019 U	0.000001 J	0.0000018 U	0.0000024	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-189	0.0000019 U	0.000012	0.0000024	0.000015	0.000002 J	0.0000054	0.0000058	0.0000022	0.000002 U		0.0000064	0.0000019 U
PCB-19	0.00000073 J	0.0000026	0.0000018 U	0.000002 U	0.0000019 U	0.0000043	0.000003	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-190	0.0000083	0.00007	0.000014	0.0001	0.0000087	0.000033	0.000037	0.000011	0.0000065		0.000038	0.0000063
PCB-191	0.0000019 U	0.0000069	0.0000018 U	0.000011	0.0000016 J	0.0000063	0.0000068	0.0000022	0.0000012 J		0.0000037	0.0000009 J
PCB-192	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-194	0.00002	0.00017	0.000059	0.00027	0.000033	0.000072	0.000078	0.000031	0.000017		0.0001	0.000012
PCB-195	0.0000077	0.000065	0.000016	0.000084	0.0000095	0.000033	0.000035	0.000011	0.0000071		0.00004	0.0000056
PCB-196	0.0000089	0.000056	0.000017	0.00016 J	0.000018	0.000037	0.000039	0.000018	0.000011		0.000035	0.0000057
PCB-197/200	0.0000038 U	0.0000039 U	0.0000062	0.000059	0.0000053	0.000014	0.000014	0.0000063	0.0000039 U		0.000013	0.0000038 U
PCB-198/199	0.000029	0.00033	0.000057	0.00084	0.00007	0.000093	0.0001	0.00006	0.000052		0.00021	0.000022
PCB-2	0.0000019 U	0.0000062	0.0000018 U	0.000023 J	0.0000034	0.000013 J	0.000012 J	0.0000041 J	0.000002 UJ		0.0000039	0.0000013 J
PCB-20/28	0.0000071	0.000076	0.0000071	0.00005	0.0000038 U	0.000083	0.000079	0.000026	0.0000039 U		0.0000091	0.0000038 U
PCB-201	0.0000024	0.000017	0.000004	0.000064	0.0000056	0.000011	0.000011	0.0000064	0.0000032		0.0000089	0.0000022
PCB-202	0.0000072	0.00012	0.000013	0.00028	0.00002	0.000022	0.000023	0.000018	0.000013		0.000067	0.0000073
PCB-203	0.000016	0.00015	0.00003	0.00034	0.000032	0.000052	0.000058	0.000029	0.000021		0.000095	0.00001
PCB-204	0.0000019 U	0.00000051 J	0.0000018 U	0.0000016 J	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-205	0.0000011 J	0.000011	0.0000024	0.000016	0.0000019 U	0.0000037	0.0000043	0.0000019	0.0000011 J		0.0000069	0.00000067 J
PCB-206	0.000028	0.00056	0.000038	0.0027	0.00024	0.000041	0.000047	0.00016	0.00027		0.00043	0.000024
PCB-207	0.0000019 U	0.000083	0.0000018 U	0.0002	0.000019	0.0000044	0.000005	0.000017	0.000013		0.000046	0.0000021
PCB-208	0.000014	0.0004	0.000017	0.0013	0.00012	0.000017	0.00002	0.000081	0.00012		0.00026	0.000013
PCB-209	0.000061	0.0027	0.000069	0.0046 J	0.00045	0.000051	0.000061	0.00028	0.00031		0.0013	0.000041
PCB-21/33	0.0000037 J	0.000032	0.0000032 J	0.000014	0.0000038 U	0.000048	0.000046	0.000014	0.0000039 U		0.0000037 J	0.0000017 J
PCB-22	0.0000027	0.00002	0.0000021	0.0000035	0.00000072 J	0.000021	0.000021	0.0000083	0.000001 J		0.0000026	0.00000093 J
PCB-23	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-24	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-25	0.0000005 J	0.0000043	0.0000018 U	0.0000018 J	0.0000019 U	0.0000057	0.0000053	0.0000018	0.000002 U		0.000002 U	0.0000019 U
PCB-26/29	0.0000012 J	0.0000093	0.0000011 J	0.0000064	0.0000006 J	0.000012	0.000012	0.0000037	0.0000039 U		0.0000014 J	0.00000052 J
PCB-27	0.0000019 U	0.000002	0.0000018 U	0.000002 U	0.0000019 U	0.0000029	0.000002 U	0.000001 J	0.000002 U		0.000002 U	0.0000019 U
PCB-3	0.0000016 J	0.000025	0.0000018	0.000028 J	0.0000047	0.000088 J	0.000087 J	0.000017 J	0.00000084 J		0.0000068	0.0000018 J
PCB-31	0.000006	0.000061	0.0000055	0.00005	0.0000036	0.000074	0.00007	0.000023	0.0000019 J		0.0000069	0.0000026
PCB-32	0.0000014 J	0.0000068	0.00000088 J	0.0000027 J	0.0000019 UJ	0.00001	0.0000097	0.0000034	0.000002 U		0.000002 U	0.0000019 U
PCB-34	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-35	0.0000019 U	0.000003	0.0000018 U	0.000009	0.0000019 U	0.000003	0.0000031	0.0000018 U	0.000002 U		0.00000099 J	0.0000019 U
PCB-36	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-37	0.0000037	0.000053	0.0000031	0.000041	0.0000033	0.000034	0.000034	0.000015	0.000002 U		0.0000062	0.0000011 J
PCB-38	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-39	0.0000019 U	0.0000018 J	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-4	0.0000019 U	0.000002 U	0.0000018 U	0.000002 UJ	0.0000019 UJ	0.000042 J	0.00003 J	0.0000066 J	0.000002 UJ		0.000002 U	0.0000019 U
PCB-40/71	0.0000025 J	0.000017	0.0000037 U	0.000019 J+	0.0000019 J	0.000018	0.000019	0.0000095	0.0000039 U		0.0000021 J	0.0000038 U
PCB-41	0.0000019 U	0.0000028	0.0000018 U	0.000002 UJ	0.0000019 U	0.000005	0.0000052	0.000003	0.000002 U		0.000002 U	0.0000019 U
PCB-42	0.0000015 J	0.000011	0.0000012 J	0.00002 J+	0.0000019 U	0.000011	0.000012	0.0000071	0.000002 U		0.0000013 J	0.0000019 U
PCB-43	0.0000019 U	0.0000015 J	0.0000018 U	0.000002 UJ	0.0000019 U	0.0000013 J	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-44/47/65	0.0000058 U	0.000045	0.0000055 U	0.000095 J+	0.0000083	0.000042	0.000045	0.000027	0.0000059 U		0.0000067	0.0000057 U
PCB-45/51	0.0000015 J	0.0000039 U	0.00000085 J	0.000004 UJ	0.0000038 U	0.0000059	0.0000052	0.0000025 J	0.0000039 U		0.0000039 U	0.00000044 J

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-303	SB-304	SB-304	SB-305	SB-305	SB-306	SB-306	SB-306	SB-306	SB-306	SB-307	SB-307
SAMPLE ID	SB303-20191125-0624	SB304-20191125-0006	SB304-20191125-0624	SB305-20191125-0006	SB305-20191125-0624	SB306-20191125-0006	SB306-20191125-0006-D	SB306-20191125-0624	SB306-20191125-2448		SB307-20191125-0006	SB307-20191125-0624
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125		20191125	20191125
DUPLICATE							SB306-20191125-0006					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL		NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO		SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019		Remedial Investigation 2019	Remedial Investigation 2019
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background		Background	Background
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SB		SS	SS
TOP DEPTH	0.5	0	0.5	0	0.5	0	0	0.5	2		0	0.5
BOTTOM DEPTH	2	0.5	2	0.5	2	0.5	0.5	2	4		0.5	2
PCB-46	0.00000053 J	0.0000019 J	0.0000018 U	0.000002 UJ	0.0000019 U	0.0000018 J	0.0000015 J	0.00000071 J	0.000002 U		0.000002 U	0.0000019 U
PCB-48	0.00000096 J	0.0000065	0.00000072 J	0.0000041 J	0.0000019 U	0.0000075	0.0000076	0.000004	0.000002 U		0.000002 U	0.0000019 U
PCB-49/69	0.0000034 J	0.000045	0.000004	0.000055 J	0.0000065	0.000023	0.000026	0.000017	0.0000015 J		0.0000043	0.0000011 J
PCB-5	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-50/53	0.00000094 J	0.0000037 J	0.0000037 U	0.0000021 J	0.0000038 U	0.0000037 J	0.0000035 J	0.0000015 J	0.0000039 U		0.00000072 J	0.00000027 J
PCB-52	0.0000073	0.000066	0.0000082	0.00015 J+	0.000014	0.000054	0.000055	0.00004	0.0000049		0.000011	0.0000056
PCB-54	0.0000019 U	0.000002 U	0.0000018 U	0.000002 UJ	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-55	0.0000019 U	0.000002 UJ	0.0000018 U	0.000002 UJ	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-56	0.0000038	0.000038 J	0.0000035	0.000052 J+	0.0000059	0.000029	0.000031	0.000016	0.0000012 J		0.0000052	0.0000019 U
PCB-57	0.0000019 U	0.000002 U	0.0000018 U	0.000002 UJ	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-58	0.0000019 U	0.000002 U	0.0000018 U	0.000002 UJ	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-59/62/75	0.00000083 J	0.0000054 J	0.0000055 U	0.0000049 J	0.0000057 U	0.0000044 J	0.0000044 J	0.000002 J	0.0000059 U		0.0000059 U	0.0000057 U
PCB-6	0.0000019 U	0.0000062	0.0000018 U	0.000002 U	0.0000019 U	0.000036	0.000032	0.0000054	0.000002 U		0.000002 U	0.00000067 J
PCB-60	0.0000021	0.00003	0.000002	0.000035 J	0.0000025	0.000015	0.000016	0.0000073	0.000002 U		0.000003	0.0000019 U
PCB-61/70/74/76	0.000013	0.00022	0.000015	0.00036 J+	0.00003	0.0001	0.00011	0.000058	0.0000057 J		0.000027	0.0000048 J
PCB-63	0.0000019 U	0.000002 U	0.0000018 U	0.000002 UJ	0.0000019 U	0.0000022	0.0000025	0.0000011 J	0.000002 U		0.000002 U	0.0000019 U
PCB-64	0.0000032	0.00004	0.0000033	0.000046 J+	0.0000042	0.000023	0.000025	0.000012	0.00000086 J		0.0000039	0.00000086 J
PCB-66	0.0000071	0.0001	0.0000072	0.0002 J+	0.000013	0.000061	0.000062	0.000032	0.0000021		0.000013	0.0000021
PCB-67	0.0000019 U	0.000002 U	0.0000018 U	0.000002 UJ	0.0000019 U	0.0000017 J	0.0000015 J	0.00000092 J	0.000002 U		0.000002 U	0.0000019 U
PCB-68	0.0000019 U	0.0000032	0.0000018 U	0.0000042 J+	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-7	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.000012	0.00001	0.0000016 J	0.000002 U		0.000002 U	0.0000019 U
PCB-72	0.0000019 U	0.0000021	0.0000018 U	0.0000052 J+	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-73	0.0000019 U	0.000002 U	0.0000018 U	0.000002 UJ	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-77	0.000002	0.00003	0.0000018 U	0.000065 J	0.0000056	0.0000088	0.0000094	0.0000054	0.000002 U		0.0000037	0.0000019 U
PCB-78	0.0000019 U	0.000002 U	0.0000018 U	0.000002 UJ	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-79	0.0000019 U	0.0000058	0.0000018 U	0.000021 J+	0.0000019 U	0.0000019 U	0.000002 U	0.00000076 J	0.000002 U		0.000002 U	0.0000019 U
PCB-8	0.000003	0.000025	0.0000018 U	0.0000062 J	0.0000019 U	0.000094 J	0.000085 J	0.000017 J	0.000002 U		0.000002 U	0.0000023
PCB-80	0.0000019 U	0.000002 U	0.0000018 U	0.000002 UJ	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-81	0.00000036 U	0.0000017 Z	0.00000059 U	0.0000013 UJ	0.00000046 U	0.00000064 U	0.00000067 U	0.00000054 U	0.00000045 U		0.00000072 U	0.00000041 U
PCB-82	0.0000019 U	0.000019	0.0000018	0.000062	0.000007	0.0000085	0.00001	0.0000096	0.000002 U		0.0000036	0.00000058 J
PCB-83	0.0000019 U	0.000007	0.00000077 J	0.000018	0.0000021	0.0000046	0.000002 U	0.0000032	0.000002 U		0.000002 U	0.00000063 J
PCB-84	0.0000028	0.000019	0.0000018 U	0.00003	0.0000054	0.000012	0.000013	0.0000086	0.0000014 J		0.0000046	0.0000016 J
PCB-85/116/117	0.0000045 J	0.0001	0.0000077	0.00014	0.000015	0.000014	0.000017	0.000019	0.0000021 J		0.000019	0.0000028 J
PCB-86/87/97/109/119/125	0.0000095 J	0.00015	0.000017	0.00039	0.000046	0.000057	0.000063	0.00006	0.000009 J		0.000028	0.0000079 J
PCB-88/91	0.000002 J	0.00002	0.0000019 J	0.000043	0.0000051	0.0000071	0.0000083	0.0000072	0.00000086 J		0.0000039 U	0.0000038 U
PCB-89	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-9	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.000012	0.00001	0.0000017 J	0.000002 U		0.000002 U	0.0000019 U
PCB-90/101/113	0.000023	0.00035	0.000056	0.00078	0.000072	0.0002	0.00019	0.0001	0.000032		0.000051	0.000043
PCB-92	0.0000034	0.000058	0.0000072	0.00011	0.000011	0.000024	0.000025	0.000015	0.0000037		0.0000081	0.0000045
PCB-93/100	0.0000038 U	0.0000039 U	0.0000037 U	0.0000012 J	0.0000038 U	0.0000038 U	0.0000039 U	0.0000037 U	0.0000039 U		0.0000039 U	0.0000038 U
PCB-94	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U	0.0000019 U	0.0000019 U	0.000002 U	0.0000018 U	0.000002 U		0.000002 U	0.0000019 U
PCB-95	0.000013	0.00013	0.000032	0.00022	0.000024	0.00013	0.00012	0.000048	0.00002		0.000022	0.000038
PCB-96	0.0000019 U	0.00000031 J	0.0000018 U	0.000002 U	0.00000012 J	0.00000038 J	0.00000042 J	0.0000002 J	0.000002 U		0.000002 U	0.0000019 U
PCB-98/102	0.0000038 U	0.0000039 U	0.0000037 U	0.0000012 J	0.0000038 U	0.0000014 J	0.0000039 U	0.0000037 U	0.0000039 U		0.0000039 U	0.0000038 U
PCB-99	0.0000086	0.00018	0.000016	0.00032	0.000033	0.000033	0.000038	0.000043	0.0000053		0.000033	0.000005
PENTACHLOROBIPHENYLS	0.00013 J	0.0023 J	0.00024 J	0.0045 J	0.00047 J	0.00076 J	0.00078 J	0.00057 J	0.00012 J		0.00042 J	0.00016 J
TEQ DIOXIN-LIKE PCBs (BIRD)	1.0235E-07	3.0127E-06	3.417E-09	5.6152E-06	5.4719E-07	4.4729E-07	4.787E-07	2.7671E-07	1.22E-09		1.9748E-07	1.617E-09
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.5076E-07	3.0131E-06	1.2701E-07	5.6809E-06	5.7046E-07	5.7471E-07	5.5368E-07	3.3656E-07	1.1275E-07		2.8848E-07	1.0098E-07
TEQ DIOXIN-LIKE PCBs (FISH)	4.33E-10	7.3238E-08	3.58E-10	1.2905E-07	1.4374E-08	1.692E-09	1.903E-09	1.301E-09	1.19E-10		1.538E-09	1.73E-10
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	2.046E-09	7.3261E-08	3.049E-09	1.2941E-07	1.4502E-08	6.623E-09	4.144E-09	3.078E-09	2.291E-09		4.468E-09	1.941E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.604E-09	1.3298E-06	2.151E-09	2.3518E-06	2.6545E-07	5.758E-09	6.721E-09	5.109E-09	7.17E-10		6.6784E-08	1.044E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	4.2943E-08	1.3436E-06	6.7341E-08	2.3715E-06	2.7362E-07	1.136E-07	6.2371E-08	4.834E-08	5.3564E-08		1.2189E-07	4.1986E-08
TETRACHLOROBIPHENYLS	0.000056 J	0.00068 J	0.000052 J	0.0011 J	0.000093 J	0.00042 J	0.00044 J	0.00025 J	0.000018 J		0.000081 J	0.000018 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.00004883	0.0009223	0.0000717	0.001598	0.0001711	0.0001714	0.0002021	0.0001577	0.0000239		0.0002195	0.0000348
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00103775	0.01396942	0.00203041	0.02507308	0.00237599	0.00613388	0.00615452	0.00290344	0.00156423		0.00557191	0.0011121
TOTAL PCB CONGENERS ZEROND	0.00108658	0.01489172	0.00210211	0.02667108	0.00254709	0.00630528	0.00635662	0.00306114	0.00158813		0.00579141	0.0011469
TOTAL PCB CONGENERS-NOAA	0.0005578	0.008596	0.0010829	0.0151819	0.00145164	0.002575	0.002689	0.0015	0.00094901		0.0036362	0.0005388
TOTAL PCB CONGENERS-NOAA HALFND	0.0011647	0.01494598	0.00218617	0.02673138	0.00262929	0.00635733	0.00641575	0.00311264	0.0017052		0.00587007	0.00123733
TOTAL PCB CONGENERS-NOAA X2	0.0011156	0.017192	0.0021658	0.0303638	0.00290328	0.00515	0.005378	0.003	0.00189802		0.0072724	0.0010776
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0011214	0.017192	0.0021731	0.0303638	0.00290898	0.00515	0.005378	0.003	0.00190982		0.0072744	0.0010871
TRICHLOROBIPHENYLS	0.000034 J	0.00031 J	0.000027 J	0.00019 J	0.000013 J	0.00036 J	0.00034 J	0.00011 J	0.0000059 J		0.000036 J	0.000014 J
DIOXINS/FURANS (NG/KG)												
1,2,3,4,6,7,8,9-OCDD	--	--	--	630	330	--	--	--	--		--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	14	2.2 J	--	--	--	--		--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	33	7.8	--	--	--	--		--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	17	2.8 J	--	--	--	--		--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	2.1 U	2.2 U	--	--	--	--		--	--
1,2,3,4,7,8-HXCDD	--	--	--	1.4 U	1.5 U	--	--	--	--		--	--
1,2,3,4,7,8-HXCDF	--	--	--	2.3 J	1.6 U	--	--	--	--		--	--
1,2,3,6,7,8-HXCDD	--	--	--	1.8 J	1.2 U	--	--	--	--		--	--
1,2,3,6,7,8-HXCDF	--	--	--	2.3 J	1.9 U	--	--	--	--		--	--
1,2,3,7,8,9-HXCDD	--	--	--	2.3 U	2.4 U	--	--	--	--		--	--
1,2,3,7,8,9-HXCDF	--	--	--	1.4 UJ	1.5 U	--	--	--	--		--	--
1,2,3,7,8-PECDD	--	--	--	1.8 U	1.9 U	--	--	--	--		--	--
1,2,3,7,8-PECDF	--	--	--	1.6 J	1.7 U	--	--	--	--		--	--
2,3,4,6,7,8-HXCDF	--	--	--	3.8 J	0.96 U	--	--	--	--		--	--
2,3,4,7,8-PECDF	--	--	--	6.9	0.98 J	--	--	--	--		--	--
2,3,7,8-TCDD	--	--	--	0.39 Z	0.2 U	--	--	--	--		--	--
2,3,7,8-TCDF	--	--	--	3.4	0.78 J	--	--	--	--		--	--
TEQ DIOXINS (BIRD)	--	--	--	11.9754	1.82902	--	--	--	--		--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	13.1059	3.43652	--	--	--	--		--	--

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-303	SB-304	SB-304	SB-305	SB-305	SB-306	SB-306	SB-306	SB-306	SB-306	SB-307	SB-307
SAMPLE ID	SB303-20191125-0624	SB304-20191125-0006	SB304-20191125-0624	SB305-20191125-0006	SB305-20191125-0624	SB306-20191125-0006	SB306-20191125-0006-D	SB306-20191125-0624	SB306-20191125-2448		SB307-20191125-0006	SB307-20191125-0624
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125		20191125	20191125
DUPLICATE							SB306-20191125-0006					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL		NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO		SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019		Remedial Investigation 2019	Remedial Investigation 2019
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background		Background	Background
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SB		SS	SS
TOP DEPTH	0.5	0	0.5	0	0.5	0	0	0.5	2		0	0.5
BOTTOM DEPTH	2	0.5	2	0.5	2	0.5	0.5	2	4		0.5	2
TEQ DIOXINS (FISH)	--	--	--	5.2154	0.59802	--	--	--	--		--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	6.5574	2.39252	--	--	--	--		--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	4.5612	0.57766	--	--	--	--		--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	5.7267	2.21716	--	--	--	--		--	--
TOTAL HPCDD	--	--	--	83 J	16 J	--	--	--	--		--	--
TOTAL HPCDF	--	--	--	33 J	2.8 J	--	--	--	--		--	--
TOTAL HXCDD	--	--	--	18 J	2.9 J	--	--	--	--		--	--
TOTAL HXCDF	--	--	--	54 J	4.1 J	--	--	--	--		--	--
TOTAL PECDD	--	--	--	9.2 J	1.9 UJ	--	--	--	--		--	--
TOTAL PECDF	--	--	--	89 J	11 J	--	--	--	--		--	--
TOTAL TCDD	--	--	--	17 J	0.9 J	--	--	--	--		--	--
TOTAL TCDF	--	--	--	66 J	8.3 J	--	--	--	--		--	--
METALS (MG/KG)												
ALUMINUM	10700	8890	4820	10200	11100	5860	5920	5580	5880		5760	4230
ANTIMONY	1.1 U	1.3 U	1.1 U	1.4 U	1.2 U	1.1 U	1.2 U	1.1 U	1 U		1.2 U	1.1 U
ARSENIC	8.5	9.2	3.3	15.6	16.1	13.6	14.4	6.8	3.9		14.8	5.2
BARIUM	61.7	121	47.3	144	153	63	74.7	62.3	33.7		59.9	40.2
BERYLLIUM	1.1	0.7	0.33 J	0.85	1.1	0.5 J	0.66	0.5 J	0.26 J		0.67	0.46 J
CADMIUM	0.085 J	0.38 J	0.54 U	0.67 J	0.19 J	0.092 J	0.068 J	0.55 U	0.52 U		0.2 J	0.2 J
CALCIUM	813	1650	295 J	1600	361 J	1520	1410	713	262 J		1300	513 J
CHROMIUM	23.9	9.8	8	13.3	12	9.6	32.7	7.1	8.4		11.7	12.9
COBALT	13.6	6.7	3.1	6.2	8.1	5.8	6.2	3.9	3.7		7.6	6.3
COPPER	13.8	15.5	3.5	43.7	26.1	15.5	17.8	46.5	27.3		28.8	24.8
CYANIDE	0.59 R	0.65 R	0.52 R	0.68 R	0.6 R	0.56 R	0.59 R	0.56 R	0.55 R		0.86 J-	0.58 R
IRON	27700	25600	6950	19600	12900	19300	15400	8780	9590		27100	22400
LEAD	18.2	180	13.6	299	77	17.1	19.7	36.7	8.5		93.5	97.4
MAGNESIUM	1170	642 J	314 J	1280	644	1350	1510	577	390 J		430 J	237 J
MANGANESE	619	471	227	278	464	232	255	123	176		329	311
MERCURY	0.11 U	0.079 J	0.11 U	0.17	0.12 UJ	0.032 J	0.032 J	0.02 J	0.022 J		0.086 J	0.038 J
NICKEL	17	8.2	3.8	10.5	9.9	12.1	14.4	8.2	4.9		10.6	7.3
POTASSIUM	1250	1240	553 UJ	1750	676	1480	1500	997	467		1370	940
SELENIUM	0.55 J	0.64 J	0.55 J	1.4 J	1 J	0.86 J	1.2 J	0.6 J	0.45 J		0.58 J	0.35 J
SILVER	0.56 U	0.069 J	0.54 U	0.092 J	0.11 J	0.57 U	0.58 U	0.55 U	0.52 U		0.098 J	0.55 U
SODIUM	563 UJ	667 UJ	553 UJ	666 UJ	565 UJ	506 UJ	561 UJ	541 UJ	540 UJ		578 UJ	543 UJ
THALLIUM	0.062 J	0.087 J	0.54 U	0.69 U	0.6 U	0.19 J	0.23 J	0.091 J	0.52 U		0.61 U	0.034 J
VANADIUM	20.5	12.5	9.1	13.1	23.5	7.9	5.4	10.5	10.4		11.7	8.3
ZINC	43.2	106	19.5	157	64.4	39.9	42.5	36.4	19.9		78.4	69
MISCELLANEOUS (%)												
TOTAL SOLIDS	88	--	89	--	--	82	82	--	--		81	--
MISCELLANEOUS (MG/KG)												
TOTAL ORGANIC CARBON	8890	--	6030	--	--	92500	98500	--	--		26900	--
MOBILE LAB MISCELLANEOUS (%)												
PERCENT SOLIDS	85	--	88	--	80	--	--	86	89		--	84

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-307	SB-308	SB-308	SB-308	SB-309	SB-309	SB-309	SB-309	SEC-SS-R5-01	SS-011	SS-012
SAMPLE ID	SB307-20191125-2448	SB308-20191125-0006	SB308-20191125-0624	SB308-20191125-2448	SB309-20191125-0006	SB309-20191125-0624	SB309-20191125-2448	SB309-20191125-2448-D	SEC-SS-R5-01	SS-011	SS-012
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20171213	20170615	20170615
DUPLICATE								SB309-20191125-2448			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background Area	Background	Background
SUBMATRIX	SB	SS	SS	SB	SS	SS	SB	SB	SS	SS	SS
TOP DEPTH	2	0	0.5	2	0	0.5	2	2	0	0	0
BOTTOM DEPTH	4	0.5	2	4	0.5	2	4	4	6	6	6
VOLATILES (MG/KG)											
1,1,1-TRICHLOROETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
1,1,2,2-TETRACHLOROETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
1,1,2-TRICHLOROETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
1,1-DICHLOROETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
1,1-DICHLOROETHENE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
1,2,3-TRICHLOROBENZENE	0.0046 U	0.0081 UJ	0.0074 UJ	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
1,2,4-TRICHLOROBENZENE	0.0046 U	0.0081 UJ	0.0074 UJ	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	0.0046 U	0.0081 UJ	0.0074 UJ	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
1,2-DIBROMOETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
1,2-DICHLOROBENZENE	0.0046 U	0.0081 UJ	0.0074 UJ	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
1,2-DICHLOROETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0 U	--	--	--
1,2-DICHLOROPROPANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
1,3-DICHLOROBENZENE	0.0046 U	0.0081 UJ	0.0074 UJ	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
1,4-DICHLOROBENZENE	0.0046 U	0.0081 UJ	0.0074 UJ	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
2-BUTANONE	0.0093 U	0.016 U	0.015 U	0.0053 J	0.023 UJ	0.019 UJ	0.0099 U	0.0098 U	--	--	--
2-HEXANONE	0.0093 U	0.016 U	0.015 U	0.012 U	0.023 R	0.019 R	0.0099 U	0.0098 U	--	--	--
4-METHYL-2-PENTANONE	0.0093 U	0.016 U	0.015 U	0.012 U	0.023 R	0.019 R	0.0099 U	0.0098 U	--	--	--
ACETONE	0.0093 U	0.016 U	0.017 U	0.012 U	0.056	0.072	0.0099 U	0.0098 U	--	--	--
BENZENE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
BROMOCHLOROMETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
BROMODICHLOROMETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
BROMOFORM	0.0046 U	0.0081 UJ	0.0074 UJ	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
BROMOMETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
CARBON DISULFIDE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
CARBON TETRACHLORIDE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
CHLOROBENZENE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
CHLORODIBROMOMETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
CHLOROETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
CHLOROFORM	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
CHLOROMETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
CIS-1,2-DICHLOROETHENE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
CIS-1,3-DICHLOROPROPENE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
CYCLOHEXANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
DICHLORODIFLUOROMETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
ETHYLBENZENE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
ISOPROPYLBENZENE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
M+P-XYLENES	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.004 J	0.0049 U	0.0049 U	--	--	--
METHYL ACETATE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
METHYL CYCLOHEXANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.0072 J	0.011 J+	0.0049 U	0.0049 U	--	--	--
METHYL TERT-BUTYL ETHER	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
METHYLENE CHLORIDE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0082 J	0.004 J	0.0032 J	--	--	--
O-XYLENE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0019 J	0.0049 U	0.0049 U	--	--	--
STYRENE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
TETRACHLOROETHENE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
TOLUENE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.0019 J	0.0057 J	0.0049 U	0.0049 U	--	--	--
TRANS-1,2-DICHLOROETHENE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
TRANS-1,3-DICHLOROPROPENE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
TRICHLOROETHENE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 R	0.0097 R	0.0049 U	0.0049 U	--	--	--
TRICHLOROFLUOROMETHANE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
VINYL CHLORIDE	0.0046 U	0.0081 U	0.0074 U	0.0062 U	0.012 UJ	0.0097 UJ	0.0049 U	0.0049 U	--	--	--
SEMIVOLATILES (MG/KG)											
1,1-BIPHENYL	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
1,2,4,5-TETRACHLOROBENZENE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
1,4-DIOXANE	0.079 U	0.097 U	0.087 U	0.081 U	0.092 U	0.077 UJ	0.08 UJ	0.079 U	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
2,3,4,6-TETRACHLOROPHENOL	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
2,4,5-TRICHLOROPHENOL	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
2,4,6-TRICHLOROPHENOL	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
2,4-DICHLOROPHENOL	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
2,4-DIMETHYLPHENOL	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
2,4-DINITROPHENOL	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
2,4-DINITROTOLUENE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
2,6-DINITROTOLUENE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
2-CHLORONAPHTHALENE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
2-CHLOROPHENOL	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
2-METHYLNAPHTHALENE	0.2 U	0.25 U	0.22 U	0.2 U	0.12 J	0.13 J	0.2 U	0.2 U	--	--	--
2-METHYLPHENOL	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
2-NITROANILINE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
2-NITROPHENOL	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
3&4-METHYLPHENOL	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
3,3'-DICHLOROBENZIDINE	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
3-NITROANILINE	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
4,6-DINITRO-2-METHYLPHENOL	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
4-BROMOPHENYL PHENYL ETHER	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
4-CHLORO-3-METHYLPHENOL	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
4-CHLOROANILINE	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
4-CHLOROPHENYL PHENYL ETHER	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
4-NITROANILINE	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
4-NITROPHENOL	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-307	SB-308	SB-308	SB-308	SB-309	SB-309	SB-309	SB-309	SEC-SS-R5-01	SS-011	SS-012
SAMPLE ID	SB307-20191125-2448	SB308-20191125-0006	SB308-20191125-0624	SB308-20191125-2448	SB309-20191125-0006	SB309-20191125-0624	SB309-20191125-2448	SB309-20191125-2448-D	SEC-SS-R5-01	SS-011	SS-012
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20171213	20170615	20170615
DUPLICATE								SB309-20191125-2448			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background Area	Background	Background
SUBMATRIX	SB	SS	SS	SB	SS	SS	SB	SB	SS	SS	SS
TOP DEPTH	2	0	0.5	2	0	0.5	2	2	0	0	0
BOTTOM DEPTH	4	0.5	2	4	0.5	2	4	4	6	6	6
ACENAPHTHENE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
ACENAPHTHYLENE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.066 J	0.2 U	0.2 U	--	--	--
ACETOPHENONE	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
ANTHRACENE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.041 J	0.2 U	0.2 U	--	--	--
ATRAZINE	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
BAP EQUIVALENT-HALFND	0.2 U	0.28128	0.27948	0.2 U	0.200326	0.39449	0.2 U	0.199387	--	--	--
BAP EQUIVALENT-POS	0.2 U	0.15503	0.16948	0.2 U	0.072676	0.39449	0.2 U	0.088387	--	--	--
BENZALDEHYDE	0.39 U	0.049 J	0.046 J	0.4 U	0.052 J	0.042 J	0.4 U	0.39 U	--	--	--
BENZO(A)ANTHRACENE	0.2 U	0.12 J	0.13 J	0.2 U	0.056 J	0.25	0.2 U	0.063 J	--	--	--
BENZO(A)PYRENE	0.2 U	0.12 J	0.13 J	0.2 U	0.057 J	0.26	0.2 U	0.071 J	--	--	--
BENZO(B)FLUORANTHENE	0.2 U	0.16 J	0.18 J	0.2 U	0.1 J	0.41	0.2 U	0.11 J	--	--	--
BENZO(G,H,I)PERYLENE	0.2 U	0.083 J	0.11 J	0.2 U	0.23 U	0.17 J	0.2 U	0.041 J	--	--	--
BENZO(K)FLUORANTHENE	0.2 U	0.25 U	0.053 J	0.2 U	0.23 U	0.12 J	0.2 U	0.2 U	--	--	--
BIS(2-CHLOROETHOXY)METHANE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
BIS(2-CHLOROETHYL)ETHER	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 U	0.21 J	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
BUTYL BENZYL PHTHALATE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
CAPROLACTAM	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
CARBAZOLE	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
CHRYSENE	0.2 U	0.13 J	0.15 J	0.2 U	0.076 J	0.29	0.2 U	0.087 J	--	--	--
DIBENZO(A,H)ANTHRACENE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.052 J	0.2 U	0.2 U	--	--	--
DIBENZOFURAN	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.042 J	0.2 U	0.2 U	--	--	--
DIETHYL PHTHALATE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
DIMETHYL PHTHALATE	0.11 J	0.2 J	0.16 J	0.17 J	0.16 J	0.099 J	0.11 J	0.12 J	--	--	--
DI-N-BUTYL PHTHALATE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
DI-N-OCTYL PHTHALATE	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
FLUORANTHENE	0.39 U	0.26 J	0.29 J	0.4 U	0.077 J	0.4	0.4 U	0.061 J	--	--	--
FLUORENE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
HEXACHLOROBENZENE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
HEXACHLOROBUTADIENE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
HEXACHLOROCYCLOPENTADIENE	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
HEXACHLOROETHANE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
HIGH MOLECULAR WEIGHT PAHS	0 U	0.922	1.111	0 U	0.365	2.042	0 U	0.429	--	--	--
INDENO(1,2,3-CD)PYRENE	0.2 U	0.069 J	0.078 J	0.2 U	0.23 U	0.15 J	0.2 U	0.2 U	--	--	--
ISOPHORONE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
LOW MOLECULAR WEIGHT PAHS	0 U	0.4	0.45	0 U	0.27	0.847	0 U	0.061	--	--	--
NAPHTHALENE	0.2 U	0.25 U	0.22 U	0.2 U	0.098 J	0.12 J	0.2 U	0.2 U	--	--	--
NITROBENZENE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
N-NITROSODIPHENYLAMINE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 U	0.2 U	0.2 U	0.2 U	--	--	--
PENTACHLOROPHENOL	0.39 U	0.48 U	0.43 U	0.4 U	0.46 U	0.38 U	0.4 U	0.39 U	--	--	--
PHENANTHRENE	0.2 U	0.14 J	0.16 J	0.2 U	0.095 J	0.22	0.2 U	0.2 U	--	--	--
PHENOL	0.39 U	0.19 J	0.17 J	0.13 J	0.2 J	0.1 J	0.11 J	0.13 J	--	--	--
PYRENE	0.2 U	0.24 J	0.28	0.2 U	0.076 J	0.34	0.2 U	0.057 J	--	--	--
TOTAL PAHS	0 U	1.322	1.561	0 U	0.635	2.889	0 U	0.49	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K											
2-METHYLNAPHTHALENE	0.0039 U	0.04	0.018	0.0024 J	0.1	0.13	0.0058	0.011	--	--	--
ACENAPHTHENE	0.0039 U	0.0035 J	0.0036 J	0.004 U	0.0016 J	0.0055	0.004 U	0.0039 U	--	--	--
ACENAPHTHYLENE	0.0011 J	0.017	0.019	0.00088 J	0.016	0.06	0.0037 J	0.017	--	--	--
ANTHRACENE	0.0015 J	0.02	0.023	0.00092 J	0.0086	0.033	0.003 J	0.0085	--	--	--
BAP EQUIVALENT-HALFND	0.007115	0.1634	0.18451	0.00662	0.082249	0.3698	0.023416	0.097333	--	--	--
BAP EQUIVALENT-POS	0.007115	0.1634	0.18451	0.00662	0.082249	0.3698	0.023416	0.097333	--	--	--
BENZO(A)ANTHRACENE	0.0055	0.12	0.14	0.0048	0.052	0.24	0.016	0.065	--	--	--
BENZO(A)PYRENE	0.0047	0.11	0.12	0.004	0.054	0.25	0.015	0.064	--	--	--
BENZO(B)FLUORANTHENE	0.0064	0.16	0.18	0.0079	0.086	0.39	0.026	0.11	--	--	--
BENZO(G,H,I)PERYLENE	0.0029 J	0.068	0.089	0.003 J	0.035	0.14	0.0088	0.034	--	--	--
BENZO(K)FLUORANTHENE	0.003 J	0.056	0.055	0.0017 J	0.028	0.15	0.0086	0.035	--	--	--
CHRYSENE	0.0052	0.14	0.16	0.013	0.069	0.3	0.02	0.083	--	--	--
DIBENZO(A,H)ANTHRACENE	0.00093 J	0.019	0.025	0.0011 J	0.011	0.042	0.0033 J	0.012	--	--	--
FLUORANTHENE	0.011	0.24	0.27	0.0086	0.065	0.33	0.02	0.051	--	--	--
FLUORENE	0.00083 J	0.0077	0.0094	0.004 U	0.0038 J	0.0089	0.0012 J	0.0014 J	--	--	--
HIGH MOLECULAR WEIGHT PAHS	0.04323	0.99	1.117	0.0477	0.432	2.012	0.1278	0.496	--	--	--
INDENO(1,2,3-CD)PYRENE	0.0026 J	0.057	0.068	0.0022 J	0.031	0.13	0.0081	0.034	--	--	--
LOW MOLECULAR WEIGHT PAHS	0.02023	0.4462	0.488	0.0201	0.258	0.7574	0.0457	0.1069	--	--	--
NAPHTHALENE	0.0039 U	0.028	0.013	0.0014 J	0.084	0.11	0.0048	0.01	--	--	--
PENTACHLOROPHENOL	0.0079 U	0.0097 U	0.0087 U	0.0081 U	0.0092 U	0.0077 U	0.008 U	0.0079 U	--	--	--
PHENANTHRENE	0.0058	0.13	0.15	0.0083	0.079	0.21	0.013	0.019	--	--	--
PYRENE	0.012	0.26	0.28	0.01	0.066	0.37	0.022	0.059	--	--	--
TOTAL PAHS	0.0052	0.14	0.16	0.013	0.069	0.3	0.02	0.083	--	--	--
PESTICIDES (MG/KG)											
4,4'-DDD	0.0039 U	0.0016 J	0.0029 J	0.00039 J	0.0024 J	0.005	0.0006 J	0.00047 J	--	--	--
4,4'-DDE	0.0039 U	0.0048 U	0.0013 J	0.004 U	0.0045 UJ	0.0038 U	0.004 U	0.0039 U	--	--	--
4,4'-DDT	0.0039 U	0.0048 U	0.0016 J	0.004 U	0.00024 J	0.0038 U	0.004 U	0.0039 U	--	--	--
ALDRIN	0.002 U	0.0025 U	0.0022 U	0.002 U	0.0023 UJ	0.002 U	0.002 U	0.002 U	--	--	--
ALPHA-BHC	0.002 U	0.0025 U	0.0022 U	0.002 U	0.0023 UJ	0.002 U	0.002 U	0.002 U	--	--	--
ALPHA-CHLORDANE	0.002 U	0.0025 U	0.0022 U	0.002 U	0.0023 UJ	0.002 U	0.002 U	0.002 U	--	--	--
BETA-BHC	0.002 U	0.0025 U	0.0022 U	0.002 U	0.0023 UJ	0.002 U	0.002 U	0.002 U	--	--	--
DELTA-BHC	0.002 U	0.0025 U	0.0022 U	0.002 U	0.0023 UJ	0.002 U	0.002 U	0.002 U	--	--	--
DIELDRIN	0.0039 U	0.0048 U	0.0043 U	0.004 U	0.0045 UJ	0.0038 U	0.004 U	0.0039 U	--	--	--
ENDOSULFAN I	0.002 U	0.0025 U	0.0022 U	0.002 U	0.0023 UJ	0.002 U	0.002 U	0.002 U	--	--	--
ENDOSULFAN II	0.0039 U	0.0048 U	0.0043 U	0.004 U	0.0045 UJ	0.0012 J	0.004 U	0.0039 U	--	--	--

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-307	SB-308	SB-308	SB-308	SB-309	SB-309	SB-309	SB-309	SEC-SS-R5-01	SS-011	SS-012
SAMPLE ID	SB307-20191125-2448	SB308-20191125-0006	SB308-20191125-0624	SB308-20191125-2448	SB309-20191125-0006	SB309-20191125-0624	SB309-20191125-2448	SB309-20191125-2448-D	SEC-SS-R5-01	SS-011	SS-012
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20171213	20170615	20170615
DUPLICATE								SB309-20191125-2448			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background Area	Background	Background
SUBMATRIX	SB	SS	SS	SB	SS	SS	SB	SB	SS	SS	SS
TOP DEPTH	2	0	0.5	2	0	0.5	2	2	0	0	0
BOTTOM DEPTH	4	0.5	2	4	0.5	2	4	4	6	6	6
ENDOSULFAN SULFATE	0.0039 U	0.0048 U	0.0043 U	0.004 U	0.0045 UJ	0.0038 U	0.004 U	0.0039 U	--	--	--
ENDRIN	0.0039 U	0.00045 J	0.00056 J	0.004 U	0.0045 UJ	0.0038 U	0.004 U	0.0039 U	--	--	--
ENDRIN ALDEHYDE	0.0039 U	0.0048 U	0.0043 U	0.004 U	0.0045 UJ	0.0038 U	0.004 U	0.0039 U	--	--	--
ENDRIN KETONE	0.0039 U	0.0048 U	0.0043 U	0.004 U	0.0045 UJ	0.0038 U	0.004 U	0.0039 U	--	--	--
GAMMA-BHC (LINDANE)	0.002 U	0.0014 J	0.0015 J	0.002 U	0.0015 J	0.0039	0.002 U	0.00045 J	--	--	--
GAMMA-CHLORDANE	0.002 U	0.0025 U	0.0022 U	0.002 U	0.0023 UJ	0.002 U	0.002 U	0.002 U	--	--	--
HEPTACHLOR	0.002 U	0.0025 U	0.0022 U	0.002 U	0.0023 UJ	0.002 U	0.002 U	0.002 U	--	--	--
HEPTACHLOR EPOXIDE	0.002 U	0.0025 U	0.0022 U	0.002 U	0.0023 UJ	0.002 U	0.002 U	0.002 U	--	--	--
METHOXYCHLOR	0.02 U	0.025 U	0.022 U	0.021 U	0.023 UJ	0.02 U	0.02 U	0.02 U	--	--	--
TOXAPHENE	0.2 U	0.25 U	0.22 U	0.2 U	0.23 UJ	0.2 U	0.2 U	0.2 U	--	--	--
PCBS (MG/KG)											
AROCLOR-1016	0.039 U	0.048 U	0.043 U	0.04 U	0.045 U	0.038 U	0.04 U	0.039 U	0.041 U	0.044 U	0.043 U
AROCLOR-1221	0.039 U	0.048 U	0.043 U	0.04 U	0.045 U	0.038 U	0.04 U	0.039 U	0.041 U	0.044 U	0.043 U
AROCLOR-1232	0.039 U	0.048 U	0.043 U	0.04 U	0.045 U	0.038 U	0.04 U	0.039 U	0.041 U	0.044 U	0.043 U
AROCLOR-1242	0.039 U	0.048 U	0.043 U	0.04 U	0.045 U	0.038 U	0.04 U	0.039 U	0.041 U	0.044 U	0.043 U
AROCLOR-1248	0.039 U	0.048 U	0.043 U	0.04 U	0.045 U	0.038 U	0.04 U	0.039 U	0.041 U	0.044 U	0.043 U
AROCLOR-1254	0.039 U	0.048 U	0.043 U	0.04 U	0.045 U	0.038 U	0.04 U	0.039 U	0.041 U	0.044 U	0.043 U
AROCLOR-1260	0.039 U	0.02 J	0.043 U	0.04 U	0.045 U	0.038 U	0.04 U	0.039 U	0.041 U	0.011 J	0.015 J
AROCLOR-1262	0.039 U	0.048 U	0.043 U	0.04 U	0.045 U	0.038 U	0.04 U	0.039 U	0.041 U	0.044 U	0.043 U
AROCLOR-1268	0.039 U	0.048 U	0.043 U	0.04 U	0.045 U	0.038 U	0.04 U	0.039 U	0.041 U	0.044 U	0.043 U
TOTAL AROCLOR	0 U	0.02	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0.011	0.015
TOTAL AROCLOR HALFND	0.1755	0.212	0.1935	0.18	0.2025	0.171	0.18	0.1755	0.1845	0.187	0.187
MOBILE LAB PESTICIDES/PCBS (MG/KG)											
AROCLOR-1016	0.301 U	--	0.316 U	0.313 U	--	0.294 U	0.298 U	--	--	--	--
AROCLOR-1221	0.602 U	--	0.633 U	0.625 U	--	0.588 U	0.595 U	--	--	--	--
AROCLOR-1232	0.301 U	--	0.316 U	0.313 U	--	0.294 U	0.298 U	--	--	--	--
AROCLOR-1242	0.301 U	--	0.316 U	0.313 U	--	0.294 U	0.298 U	--	--	--	--
AROCLOR-1248	0.301 U	--	0.316 U	0.313 U	--	0.294 U	0.298 U	--	--	--	--
AROCLOR-1254	0.301 U	--	0.316 U	0.313 U	--	0.294 U	0.298 U	--	--	--	--
AROCLOR-1260	0.301 U	--	0.316 U	0.313 U	--	0.294 U	0.298 U	--	--	--	--
AROCLOR-1262	0.301 U	--	0.316 U	0.313 U	--	0.294 U	0.298 U	--	--	--	--
AROCLOR-1268	0.301 U	--	0.316 U	0.313 U	--	0.294 U	0.298 U	--	--	--	--
TOTAL AROCLOR	0 U	--	0 U	0 U	--	0 U	0 U	--	--	--	--
TOTAL AROCLOR HALFND	1.505	--	1.5805	1.5645	--	1.47	1.4895	--	--	--	--
PCB CONGENERS (MG/KG)											
DICHLOROBIPHENYLS	0.000034 J	0.00089 J	0.00029 J	0.000019 J	0.00059 J	0 UJ	0.0000038 J	0.0000059 J	--	--	--
HEPTACHLOROBIPHENYLS	0.00089 J	0.035 J	0.0056 J	0.0035 J	0.0026 J	0.000093 J	0.000043 J	0.000038 J	--	--	--
HEXACHLOROBIPHENYLS	0.0011 J	0.046 J	0.01 J	0.0037 J	0.0042 J	0.000091 J	0.000052 J	0.000044 J	--	--	--
MONOCHLOROBIPHENYLS	0.000011 J	0.00021 J	0.00011 J	0.0000082 J	0.00016 J	0.0000065 J	0.0000097 J	0.000009 J	--	--	--
NONACHLOROBIPHENYLS	0.000024 J	0.0028 J	0.006 J	0.00042 J	0.00053 J	0.00097 J	0.0000081 J	0.0000091 J	--	--	--
OCTACHLOROBIPHENYLS	0.0002 J	0.0098 J	0.0028 J	0.001 J	0.00092 J	0.00022 J	0.000015 J	0.000013 J	--	--	--
PCB-1	0.0000049	0.000043 J	0.000025 J	0.0000021	0.000019 J	0.000019 UJ	0.0000019 U	0.0000019 U	--	--	--
PCB-10	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-103	0.000002 U	0.0000069	0.0000019 U	0.0000003 J	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-104	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-105	0.0000078	0.0012	0.0005	0.000024	0.00018 J	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-106	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-107	0.000002 U	0.00022	0.000083	0.0000034	0.000036	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-108/124	0.00000081 J	0.00014	0.000055	0.0000039 U	0.000023	0.000038 U	0.0000038 U	0.0000038 U	--	--	--
PCB-11	0.0000037	0.00042	0.0001	0.0000065	0.00054	0.000019 U	0.0000038	0.0000043	--	--	--
PCB-110/115	0.000052	0.0039	0.0015	0.00015	0.00054	0.00002 J	0.0000036 J	0.0000027 J	--	--	--
PCB-111	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 UJ	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-112	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-114	0.00000072 U	0.000052	0.000022	0.0000014 J	0.000008	0.0000012 U	0.00000033 U	0.00000031 U	--	--	--
PCB-118	0.000021	0.003	0.0011	0.000081	0.00042	0.000019 U	0.0000024	0.000002	--	--	--
PCB-12/13	0.0000029 J	0.000061	0.000029	0.0000039 U	0.000004 U	0.000038 U	0.0000038 U	0.0000015 J	--	--	--
PCB-120	0.000002 U	0.0000073	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-121	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-122	0.000002 U	0.000032	0.000014	0.00000093 J	0.000006	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-123	0.0000007 U	0.00004	0.00002	0.00000098 J	0.0000065	0.0000013 U	0.00000032 U	0.00000028 U	--	--	--
PCB-126	0.00000083 U	0.000069	0.000023	0.00000052 U	0.000011	0.0000021 U	0.00000039 U	0.00000033 U	--	--	--
PCB-127	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-128/166	0.000013	0.0011	0.00034	0.000039	0.00012	0.0000056 J	0.00000095 J	0.0000008 J	--	--	--
PCB-129/138/163	0.0002	0.01	0.0028	0.00077	0.0012	0.000058 U	0.000012	0.0000098	--	--	--
PCB-130	0.0000078	0.00049	0.00014	0.000021	0.000054	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-131	0.0000014 J	0.000063	0.000019	0.0000042	0.0000069	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-132	0.000065	0.0026	0.00063	0.00021	0.00022	0.0000094 J	0.0000034	0.0000028	--	--	--
PCB-133	0.0000027	0.00015	0.000034	0.0000076	0.000014	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-134	0.000011	0.00046	0.00011	0.000034	0.000035	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-135/151	0.00013	0.0036 J	0.00063	0.00038	0.00022	0.000038 UJ	0.0000051	0.0000039	--	--	--
PCB-136	0.000047	0.00071	0.00015	0.00013	0.000054	0.0000028 J	0.0000016 J	0.0000014 J	--	--	--
PCB-137	0.0000016 J	0.00018	0.000091	0.0000033	0.000032	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-139/140	0.0000039 U	0.000073	0.00003	0.0000014 J	0.0000084	0.000038 U	0.0000038 U	0.0000038 U	--	--	--
PCB-14	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-141	0.000054	0.0024	0.00047	0.00022	0.00017	0.000019 U	0.0000031	0.0000024	--	--	--
PCB-142	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-143	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-144	0.000017	0.00041	0.000074	0.000053	0.000033	0.000019 U	0.0000019 U	0.00000057 J	--	--	--
PCB-145	0.000002 U	0.00000063 J	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-146	0.000032	0.0011 J	0.00023 J	0.000091	0.000093	0.000019 U	0.0000019 U	0.00000087 J	--	--	--
PCB-147/149	0.00025	0.0076	0.0016	0.00075	0.0006	0.000038 U	0.000011	0.0000093	--	--	--

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-307	SB-308	SB-308	SB-308	SB-309	SB-309	SB-309	SB-309	SEC-SS-R5-01	SS-011	SS-012
SAMPLE ID	SB307-20191125-2448	SB308-20191125-0006	SB308-20191125-0624	SB308-20191125-2448	SB309-20191125-0006	SB309-20191125-0624	SB309-20191125-2448	SB309-20191125-2448-D	SEC-SS-R5-01	SS-011	SS-012
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20171213	20170615	20170615
DUPLICATE								SB309-20191125-2448			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background Area	Background	Background
SUBMATRIX	SB	SS	SS	SB	SS	SS	SB	SB	SS	SS	SS
TOP DEPTH	2	0	0.5	2	0	0.5	2	2	0	0	0
BOTTOM DEPTH	4	0.5	2	4	0.5	2	4	4	6	6	6
PCB-148	0.000002 U	0.0000051	0.0000016 J	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-15	0.000014	0.00028 J	0.0001 J	0.000004	0.000034 J	0.000019 UJ	0.0000019 U	0.0000019 U	--	--	--
PCB-150	0.000002 U	0.0000064	0.0000015 J	0.000002 U	0.00000057 J	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-152	0.000002 U	0.0000028	0.00000099 J	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-153/168	0.00021	0.0092	0.0021	0.00084	0.0011	0.000038 U	0.000012	0.0000096	--	--	--
PCB-154	0.00000053 J	0.000043	0.000012	0.0000012 J	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-155	0.000002 U	0.00000025 J	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-156/157	0.0000092	0.00086 J	0.00026	0.00005	0.00011	0.000038 U	0.0000038 U	0.0000038 U	--	--	--
PCB-158	0.000016	0.00097	0.00025	0.000061	0.0001	0.000019 U	0.0000011 J	0.00000091 J	--	--	--
PCB-159	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-16	0.0000025	0.000034	0.000012	0.0000024	0.0000084	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-160	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-161	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-162	0.000002 U	0.00014	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-164	0.000016	0.00076	0.00017	0.000053	0.000063	0.000019 U	0.00000084 J	0.00000074 J	--	--	--
PCB-165	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-167	0.0000047	0.00038	0.000094	0.000018	0.000041	0.00000094 U	0.00000047 U	0.00000036 U	--	--	--
PCB-169	0.00000079 U	0.000026 Z	0.00001 Z	0.00000045 U	0.0000024	0.0000011 U	0.00000049 U	0.0000011 J	--	--	--
PCB-17	0.0000031	0.000042	0.000014	0.0000028	0.0000093	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-170	0.000088	0.0043	0.00064	0.00039	0.00033	0.0000086 J	0.000005	0.0000042	--	--	--
PCB-171/173	0.000029	0.0012	0.00019	0.00011	0.000091	0.0000033 J	0.0000016 J	0.0000013 J	--	--	--
PCB-172	0.000018	0.00056 J	0.00011 J	0.000067	0.000035 J	0.000019 UJ	0.00000096 J	0.00000081 J	--	--	--
PCB-174	0.00012	0.0049	0.00073	0.00043	0.00031	0.00001 J	0.0000052	0.0000049	--	--	--
PCB-175	0.0000048	0.00015	0.000026	0.000017	0.00001	0.000019 U	0.0000019 U	0.00000034 J	--	--	--
PCB-176	0.000017	0.00042	0.000069	0.000056	0.000026	0.000019 U	0.00000074 J	0.00000068 J	--	--	--
PCB-177	0.000065	0.0027	0.00042	0.00024	0.00019	0.000019 U	0.0000033	0.0000028	--	--	--
PCB-178	0.000027	0.001	0.00017	0.000087	0.000078	0.000019 U	0.0000013 J	0.000001 J	--	--	--
PCB-179	0.000064	0.0019	0.0003	0.00019	0.00012	0.0000051 J	0.0000025	0.0000021	--	--	--
PCB-18/30	0.0000064	0.000066	0.000022	0.0000054	0.000016	0.000038 U	0.0000038 U	0.00000033 J	--	--	--
PCB-180/193	0.00022	0.01	0.0015	0.00094	0.00074	0.000038 U	0.000011	0.0000099	--	--	--
PCB-181	0.000002 U	0.000013	0.0000042	0.00000084 J	0.0000017 J	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-182	0.000002 U	0.000015 J	0.0000019 U	0.00000061 J	0.00002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-183/185	0.000076	0.0026	0.00043	0.00029	0.0002	0.00001 J	0.0000036 J	0.0000034 J	--	--	--
PCB-184	0.000002 U	0.0000013 J	0.0000019 U	0.000002 U	0.000002 U	0.000019 UJ	0.0000019 U	0.0000019 U	--	--	--
PCB-186	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-187	0.00015	0.0051	0.00084	0.00051	0.00037	0.000023	0.0000066	0.0000056	--	--	--
PCB-188	0.000002 U	0.0000052	0.0000019 U	0.00000023 J	0.00000067 J	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-189	0.0000028	0.00016	0.000029	0.000013	0.000014	0.0000011 U	0.0000006 U	0.00000047 U	--	--	--
PCB-19	0.00000099 J	0.000002 U	0.0000019 U	0.00000086 J	0.000002 UJ	0.000019 UJ	0.0000019 U	0.0000019 U	--	--	--
PCB-190	0.000017	0.00098	0.00015	0.00009	0.000091	0.0000035 J	0.0000011 J	0.00000087 J	--	--	--
PCB-191	0.0000033	0.00014	0.000023	0.000015	0.000012	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-192	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-194	0.000044	0.0021	0.00037	0.00022	0.00019	0.000019	0.0000032	0.0000028	--	--	--
PCB-195	0.00002	0.00092	0.00015	0.000094	0.000075	0.0000041 J	0.0000014 J	0.0000012 J	--	--	--
PCB-196	0.000024	0.001	0.00023	0.00014	0.000092	0.000017 J	0.000002	0.0000019 U	--	--	--
PCB-197/200	0.0000087	0.00036	0.000074	0.000036	0.000027	0.0000029 J	0.0000038 U	0.0000038 U	--	--	--
PCB-198/199	0.000055	0.003	0.0012	0.00029	0.00029	0.0001	0.0000052	0.0000045	--	--	--
PCB-2	0.000002 U	0.000046	0.000019 J	0.000002	0.000075	0.0000065 J	0.0000048 J	0.0000044	--	--	--
PCB-20/28	0.000019	0.00051	0.00015	0.000011	0.00011	0.000038 U	0.0000038 U	0.0000038 U	--	--	--
PCB-201	0.000007	0.00025	0.0000019 U	0.000029	0.00002	0.0000059 J	0.0000019 U	0.00000057 J	--	--	--
PCB-202	0.000012	0.00053	0.00032	0.000054	0.000059	0.000027	0.000001 J	0.0000011 J	--	--	--
PCB-203	0.00003	0.0015	0.00042	0.00016	0.00016	0.000038	0.0000022	0.0000027	--	--	--
PCB-204	0.000002 U	0.0000012 J	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-205	0.0000021	0.00012	0.000023	0.000011	0.00001	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-206	0.000016	0.0019	0.0039	0.00027	0.00033	0.00065	0.0000052	0.0000059	--	--	--
PCB-207	0.0000022	0.00017	0.00026	0.000021	0.000039	0.000033	0.00000061 J	0.00000063 J	--	--	--
PCB-208	0.0000058	0.00078	0.0018	0.00012	0.00016	0.00028	0.0000022	0.0000026	--	--	--
PCB-209	0.000014	0.003	0.0059	0.00036	0.001	0.00076	0.0000064	0.0000065	--	--	--
PCB-21/33	0.0000089	0.00021	0.00007	0.0000061	0.0000071	0.000038 U	0.0000038 U	0.0000038 U	--	--	--
PCB-22	0.0000057	0.00011 J	0.000033 J	0.0000036	0.0000059	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-23	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-24	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-25	0.0000013 J	0.000028	0.0000087	0.0000008 J	0.0000037	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-26/29	0.0000027 J	0.000071	0.000021	0.0000018 J	0.00001	0.000038 U	0.0000038 U	0.0000038 U	--	--	--
PCB-27	0.000002 U	0.0000075	0.0000024	0.00000047 J	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-3	0.0000064	0.00012	0.000066 J	0.0000042	0.000064 J	0.000019 U	0.000005 J	0.0000046	--	--	--
PCB-31	0.000014	0.00049	0.00014	0.0000095	0.000071	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-32	0.0000023	0.000032	0.000012	0.0000019 J	0.0000072	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-34	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-35	0.00000067 J	0.000029	0.0000096	0.00000071 J	0.000013	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-36	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-37	0.0000084	0.00032	0.00011	0.0000045	0.000041 J	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-38	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-39	0.000002 U	0.000002 U	0.0000021	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-4	0.000002 U	0.000002 UJ	0.0000019 UJ	0.0000027	0.000002 U	0.000019 UJ	0.0000019 U	0.0000019 U	--	--	--
PCB-40/71	0.0000034 J	0.00014	0.000049	0.000004	0.000026	0.000038 U	0.0000038 U	0.0000038 U	--	--	--
PCB-41	0.000002 U	0.000017	0.0000068	0.0000011 J	0.0000051	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-42	0.000002	0.0001	0.000034	0.0000027	0.000019	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-43	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-44/47/65	0.0000078	0.00039	0.00013	0.000011	0.000077	0.000058 U	0.0000056 U	0.0000058 U	--	--	--
PCB-45/51	0.0000017 J	0.000022	0.0000076	0.0000039 U	0.0000074	0.000038 U	0.0000038 U	0.0000038 U	--	--	--

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-307	SB-308	SB-308	SB-308	SB-309	SB-309	SB-309	SB-309	SEC-SS-R5-01	SS-011	SS-012
SAMPLE ID	SB307-20191125-2448	SB308-20191125-0006	SB308-20191125-0624	SB308-20191125-2448	SB309-20191125-0006	SB309-20191125-0624	SB309-20191125-2448	SB309-20191125-2448-D	SEC-SS-R5-01	SS-011	SS-012
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20171213	20170615	20170615
DUPLICATE								SB309-20191125-2448			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background Area	Background	Background
SUBMATRIX	SB	SS	SS	SB	SS	SS	SB	SB	SS	SS	SS
TOP DEPTH	2	0	0.5	2	0	0.5	2	2	0	0	0
BOTTOM DEPTH	4	0.5	2	4	0.5	2	4	4	6	6	6
PCB-46	0.000002 U	0.0000061	0.0000021	0.00000053 J	0.0000021	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-48	0.0000013 J	0.000026	0.00001	0.0000017 J	0.0000051	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-49/69	0.0000043	0.00025	0.000088	0.0000064	0.000048	0.000038 U	0.0000038 U	0.0000038 U	--	--	--
PCB-5	0.000002 U	0.0000071	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-50/53	0.0000011 J	0.000014	0.0000046	0.0000039 U	0.0000042	0.000038 U	0.0000038 U	0.0000038 U	--	--	--
PCB-52	0.000015	0.00078	0.00024	0.000027	0.00012	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-54	0.000002 U	0.000002 U	0.0000019 UJ	0.000002 U	0.000002 UJ	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-55	0.000002 U	0.000002 U	0.0000019	0.0000005 J	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-56	0.0000064	0.00028	0.0001	0.0000069	0.000047	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-57	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-58	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-59/62/75	0.00000077 J	0.000038	0.000012	0.000001 J	0.000008	0.000058 U	0.0000056 U	0.0000058 U	--	--	--
PCB-6	0.0000026	0.000029	0.000013	0.0000014 J	0.0000076	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-60	0.0000031	0.00021	0.000045	0.0000034	0.000019	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-61/70/74/76	0.00002	0.0016	0.00055	0.000028	0.00021	0.000077 U	0.0000075 U	0.0000077 U	--	--	--
PCB-63	0.000002 U	0.000016	0.00001	0.00000056 J	0.0000029	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-64	0.0000042	0.0003	0.00013	0.0000051	0.000037	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-66	0.000013	0.00086	0.00031	0.000013	0.00012	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-67	0.000002 U	0.000016	0.0000052	0.00000039 J	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-68	0.000002 U	0.0000075	0.0000029	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-7	0.000002 U	0.0000073	0.0000034	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-72	0.000002 U	0.0000083	0.0000028	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-73	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-77	0.0000028	0.00017	0.000053	0.0000026	0.000027 J	0.0000017 U	0.00000043 U	0.00000047 U	--	--	--
PCB-78	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-79	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-8	0.000011	0.00008 J	0.000035	0.0000048	0.000011 J	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-80	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-81	0.00000044 U	0.0000083	0.000003	0.00000039 U	0.0000013 U	0.0000013 U	0.00000036 U	0.00000037 U	--	--	--
PCB-82	0.0000018 J	0.00018	0.00008	0.000002 U	0.000035	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-83	0.0000016 J	0.000096	0.000033	0.000002 U	0.000014	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-84	0.0000043	0.00014	0.000068	0.0000098	0.000027	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-85/116/117	0.0000028 J	0.00045	0.00017	0.0000071	0.000075	0.000058 U	0.0000056 U	0.0000058 U	--	--	--
PCB-86/87/97/109/119/125	0.000015	0.0013	0.0005	0.000051	0.0002	0.00012 U	0.000011 U	0.000012 U	--	--	--
PCB-88/91	0.0000023 J	0.00018	0.000077	0.000004	0.000027	0.000038 U	0.0000038 U	0.0000038 U	--	--	--
PCB-89	0.000002 U	0.0000046	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-9	0.000002 U	0.0000059	0.0000026	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-90/101/113	0.000088	0.0033	0.0007	0.00027	0.00039	0.000058 U	0.0000056 U	0.0000058 U	--	--	--
PCB-92	0.0000094	0.00045	0.00012	0.000027	0.000058	0.000019 U	0.0000019 U	0.00000051 J	--	--	--
PCB-93/100	0.0000039 U	0.0000039 U	0.0000038 J	0.0000039 U	0.0000017 J	0.000038 U	0.0000038 U	0.0000038 U	--	--	--
PCB-94	0.000002 U	0.0000024	0.0000019 U	0.000002 U	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-95	0.000085	0.0013	0.00036	0.00019	0.00017	0.000019 U	0.0000028	0.0000024	--	--	--
PCB-96	0.000002 U	0.000002	0.00000091 J	0.00000019 J	0.000002 U	0.000019 U	0.0000019 U	0.0000019 U	--	--	--
PCB-98/102	0.0000039 U	0.000017	0.0000039 U	0.00000079 J	0.0000027 J	0.000038 U	0.0000038 U	0.0000038 U	--	--	--
PCB-99	0.0000056	0.00097	0.00038	0.000019	0.00016	0.000019 U	0.0000006 J	0.0000004 J	--	--	--
PENTACHLOROBIPHENYLS	0.0003 J	0.017 J	0.0058 J	0.00085 J	0.0024 J	0.000053 J	0.000016 J	0.000014 J	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	1.4199E-07	1.6503E-05	5.3506E-06	1.3867E-07	2.487E-06	0.000019 U	2.4E-11	1.12E-09	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	2.0592E-07	1.6503E-05	5.3506E-06	1.8439E-07	2.552E-06	0.000019 U	4.8826E-08	4.8174E-08	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	5.07E-10	3.9591E-07	1.3243E-07	1.201E-09	6.1717E-08	0.000019 U	1.2E-11	6.5E-11	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	2.713E-09	3.9591E-07	1.3243E-07	2.609E-09	6.2042E-08	0.000019 U	1.125E-09	1.019E-09	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.645E-09	7.8703E-06	2.667E-06	5.911E-09	1.1981E-06	0.000019 U	7.2E-11	3.306E-08	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	5.5081E-08	7.8703E-06	2.667E-06	3.8719E-08	1.1983E-06	0.000019 U	2.7106E-08	4.9743E-08	--	--	--
TETRACHLOROBIPHENYLS	0.000087 J	0.0052 J	0.0018 J	0.00012 J	0.00078 J	0.000011 J	0.0000029 J	0.0000033 J	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0000483	0.0059653	0.002114	0.00019098	0.0008199	0 U	0.0000024	0.0000031	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00268907	0.11450778	0.0370197	0.00983471	0.01275764	0.0020447	0.000144	0.00013063	--	--	--
TOTAL PCB CONGENERS ZEROND	0.00273737	0.12047308	0.0391337	0.01002569	0.01357754	0.0020447	0.0001464	0.00013373	--	--	--
TOTAL PCB CONGENERS-NOAA	0.00112	0.055706	0.021357	0.0046602	0.006709	0.0014513	0.00006295	0.00005583	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	0.00280596	0.12050803	0.039186	0.01008412	0.01364319	0.00368057	0.0002911	0.00027143	--	--	--
TOTAL PCB CONGENERS-NOAA X2	0.00224	0.111412	0.042714	0.0093204	0.013418	0.0029026	0.0001259	0.00011166	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.00224	0.111412	0.042714	0.0093204	0.013418	0.0033236	0.0001523	0.00013466	--	--	--
TRICHLOROBIPHENYLS	0.000075 J	0.0019 J	0.00061 J	0.000052 J	0.0003 J	0 UJ	0 UJ	0.00000033 J	--	--	--
DIOXINS/FURANS (NG/KG)											
1,2,3,4,6,7,8,9-OCDD	--	750	520	63	300	78	1900	1800	--	1000	--
1,2,3,4,6,7,8,9-OCDF	--	36	20	1.8 U	5.7 J	1.8 U	1.8 U	1.8 U	--	88	--
1,2,3,4,6,7,8-HPCDD	--	88	43	2.6 J	19	1.9 J	14	13	--	110	--
1,2,3,4,6,7,8-HPCDF	--	25	18	3.8 J	6.1	2.4 J	2.2 U	2.2 U	--	37	--
1,2,3,4,7,8,9-HPCDF	--	2.1 U	2.2 U	2.2 U	2.1 U	2.2 U	2.1 U	2.2 U	--	2 J	--
1,2,3,4,7,8-HXCDD	--	4.5 J	1.5 J	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	--	2 J	--
1,2,3,4,7,8-HXCDF	--	5.5	2.9 J	1.6 U	1.5 U	1.6 U	1.5 U	1.5 U	--	2.9 J	--
1,2,3,6,7,8-HXCDD	--	11	4 J	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	--	4.3 J	--
1,2,3,6,7,8-HXCDF	--	3.5 J	2.5 J	1.9 U	1.8 U	1.9 U	1.8 U	1.9 U	--	1.8 J	--
1,2,3,7,8,9-HXCDD	--	6.5	2.6 J	2.4 U	2.3 U	2.4 U	2.3 U	2.3 U	--	3.5 J	--
1,2,3,7,8,9-HXCDF	--	1.4 UJ	1.4 U	1.5 U	1.4 U	1.4 UJ	1.4 U	1.4 U	--	0.61 J	--
1,2,3,7,8-PECDD	--	4.7 J	1.9 U	1.9 U	1.8 U	1.9 U	1.8 U	1.9 U	--	1 J	--
1,2,3,7,8-PECDF	--	3.5 J	2.6 J	1.7 U	1.6 U	1.7 U	1.6 U	1.6 U	--	1.9 J	--
2,3,4,6,7,8-HXCDF	--	2.4 J	2.5 J	0.95 U	1.5 Z	0.94 U	0.92 U	0.93 U	--	2.5 J	--
2,3,4,7,8-PECDF	--	4.1 J	3.7 J	0.89 U	1.7 J	0.88 U	0.85 U	0.87 U	--	2.3 J	--
2,3,7,8-TCDD	--	0.71 J	0.48 J	0.2 U	0.21 U	0.22 U	0.19 U	0.2 U	--	0.54 J	--
2,3,7,8-TCDF	--	4.6	4.2	1.1	1.3	0.56 J	0.56 J	0.52 J	--	3	--
TEQ DIOXINS (BIRD)	--	17.0016	10.082	1.1469	3.26057	0.5937	0.764	0.713	--	8.9128	--
TEQ DIOXINS (BIRD) HALFND	--	17.0821	11.113	3.19899	4.74707	2.64279	2.72259	2.74259	--	8.9128	--

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-307	SB-308	SB-308	SB-308	SB-309	SB-309	SB-309	SB-309	SEC-SS-R5-01	SS-011	SS-012
SAMPLE ID	SB307-20191125-2448	SB308-20191125-0006	SB308-20191125-0624	SB308-20191125-2448	SB309-20191125-0006	SB309-20191125-0624	SB309-20191125-2448	SB309-20191125-2448-D	SEC-SS-R5-01	SS-011	SS-012
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20171213	20170615	20170615
DUPLICATE								SB309-20191125-2448			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Background	Background	Background	Background	Background	Background	Background	Background	Background Area	Background	Background
SUBMATRIX	SB	SS	SS	SB	SS	SS	SB	SB	SS	SS	SS
TOP DEPTH	2	0	0.5	2	0	0.5	2	2	0	0	0
BOTTOM DEPTH	4	0.5	2	4	0.5	2	4	4	6	6	6
TEQ DIOXINS (FISH)	--	11.8466	4.553	0.1019	1.17557	0.0617	0.232	0.219	--	5.4028	--
TEQ DIOXINS (FISH) HALFND	--	11.9271	5.584	2.11849	2.83357	2.05529	2.14959	2.20259	--	5.4028	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	11.9108	4.46	0.1929	1.13271	0.1224	0.766	0.722	--	6.1644	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	11.9913	5.491	1.96567	2.65221	1.89317	2.46027	2.48027	--	6.1644	--
TOTAL HPCDD	--	170 J	89 J	5.4 J	40 J	3.4 J	24 J	23 J	--	220 J	--
TOTAL HPCDF	--	45 J	32 J	3.8 J	11 J	2.4 J	2.1 UJ	2.2 UJ	--	92 J	--
TOTAL HXCDD	--	160 J	45 J	1.2 UJ	13 J	3 J	1.2 UJ	1.2 UJ	--	40 J	--
TOTAL HXCDF	--	40 J	28 J	3.2 J	10 J	1 J	0.92 UJ	0.93 UJ	--	43 J	--
TOTAL PECDD	--	130 J	38 J	1.9 UJ	10 J	2.3 J	1.8 UJ	1.9 UJ	--	11 J	--
TOTAL PECDF	--	52 J	44 J	6 J	18 J	1.1 J	0.85 UJ	0.87 UJ	--	28 J	--
TOTAL TCDD	--	110 J	37 J	1.6 J	13 J	4 J	0.23 J	0.8 J	--	8.1 J	--
TOTAL TCDF	--	70 J	66 J	13 J	26 J	3.3 J	2 J	2.8 J	--	21 J	--
METALS (MG/KG)											
ALUMINUM	9240	8360	6910	4480	6260	1770 J	10800	9480	--	--	--
ANTIMONY	1.1 U	1.4 U	1.3	1.1 U	1.6	2.4 J	1.2 U	1.2 U	--	--	--
ARSENIC	6.5	21	16.1	4.3	10.1	11.4 J	8.3	8.9	--	--	--
BARIUM	90.6	183	151	46.7	130	42.8 J	78.6	88.7	--	--	--
BERYLLIUM	0.89	1.3	1.2	0.39 J	0.95	0.42 J	0.67	0.84	--	--	--
CADMIUM	0.098 J	0.87	0.93	0.16 J	0.5 J	0.43 J	0.23 J	0.2 J	--	--	--
CALCIUM	718	4600	1900	440 J	3600	41000	10600	24400	--	--	--
CHROMIUM	13.3	31.9	17.4	4.8	14.5	21 J	15.3	17.5	--	--	--
COBALT	18.4	12.5	15.6	12.1	11.5	5.6 J	10	10.9	--	--	--
COPPER	65.2	66.6	78.2	20.1	49.5	93.4 J	27.8	25.5	--	--	--
CYANIDE	0.6 R	0.67 R	0.6 R	0.55 R	0.69 R	0.58 R	0.56 R	0.59 R	--	--	--
IRON	17400	16100	16000	6500	17800	89300 J	21400	28200	--	--	--
LEAD	36	194	358	56.4	112	60.5 J	74.7	66.2	--	--	--
MAGNESIUM	505 J	2120	655	245 J	1440	2290	1520	2160	--	--	--
MANGANESE	663	462	897	616	468	399 J	391	373	--	--	--
MERCURY	0.04 J	0.13 UJ	0.19	0.11 UJ	0.14 UJ	0.12 UJ	0.12 UJ	0.12 UJ	--	--	--
NICKEL	14.6	25.2	17.1	4.1	22.2	17.6	18.7	15.4	--	--	--
POTASSIUM	933	1750	987	551 UJ	1380	574 UJ	1220	1040	--	--	--
SELENIUM	0.65 J	1.5 J	1.3 J	0.78 J	0.86 J	0.8 J	0.57 J	0.67 J	--	--	--
SILVER	0.57 U	0.26 J	0.24 J	0.064 J	0.087 J	0.58 U	0.58 U	0.58 U	--	--	--
SODIUM	581 UJ	679 UJ	616 UJ	551 UJ	650 UJ	574 UJ	551 UJ	544 UJ	--	--	--
THALLIUM	0.081 J	0.7 U	0.62 U	0.57 U	0.63 U	0.58 UJ	0.58 U	0.58 U	--	--	--
VANADIUM	16.6	19.3	14.5	7	12.6	2.3 J	18.1	20.4	--	--	--
ZINC	60.8	153	180	34.8	121	77.5	72.6	61.7	--	--	--
MISCELLANEOUS (%)											
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)											
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)											
PERCENT SOLIDS	83	--	79	80	--	85	84	--	--	--	--

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-150	SS-151	SS-152	SS-153	SS-154	SS-155	SS-156	SS-256
SAMPLE ID	SS-150	SS-151	SS-152	SS-153	SS-154	SS-155	SS-156	SEC-SS-256
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180628
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation
AREA	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)								
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)								
1,1-BIPHENYL	--	--	--	--	--	--	--	0.2 U
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--	0.2 U
1,4-DIOXANE	--	--	--	--	--	--	--	0.08 U
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--	0.39 U
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--	0.2 U
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--	0.2 U
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--	0.2 U
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--	0.2 U
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	0.2 U
2,4-DINITROPHENOL	--	--	--	--	--	--	--	0.39 U
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	0.2 U
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	0.2 U
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--	0.2 U
2-CHLOROPHENOL	--	--	--	--	--	--	--	0.2 U
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	0.2 U
2-METHYLPHENOL	--	--	--	--	--	--	--	0.39 U
2-NITROANILINE	--	--	--	--	--	--	--	0.2 U
2-NITROPHENOL	--	--	--	--	--	--	--	0.2 U
3&4-METHYLPHENOL	--	--	--	--	--	--	--	0.39 U
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--	0.39 U
3-NITROANILINE	--	--	--	--	--	--	--	0.39 U
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--	0.39 U
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--	0.2 U
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--	0.2 U
4-CHLOROANILINE	--	--	--	--	--	--	--	0.39 U
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--	0.2 U
4-NITROANILINE	--	--	--	--	--	--	--	0.39 U
4-NITROPHENOL	--	--	--	--	--	--	--	0.39 U

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-150	SS-151	SS-152	SS-153	SS-154	SS-155	SS-156	SS-256
SAMPLE ID	SS-150	SS-151	SS-152	SS-153	SS-154	SS-155	SS-156	SEC-SS-256
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180628
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation
AREA	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6
ACENAPHTHENE	--	--	--	--	--	--	--	0.2 U
ACENAPHTHYLENE	--	--	--	--	--	--	--	0.2 U
ACETOPHENONE	--	--	--	--	--	--	--	0.39 U
ANTHRACENE	--	--	--	--	--	--	--	0.2 U
ATRAZINE	--	--	--	--	--	--	--	0.39 U
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	0.204693
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	0.093693
BENZALDEHYDE	--	--	--	--	--	--	--	0.39 U
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	0.076 J
BENZO(A)PYRENE	--	--	--	--	--	--	--	0.073 J
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	0.13 J
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	0.2 U
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	0.2 U
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--	0.2 U
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--	0.39 U
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	0.095 J
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	0.2 U
CAPROLACTAM	--	--	--	--	--	--	--	0.39 U
CARBAZOLE	--	--	--	--	--	--	--	0.39 UJ
CHRYSENE	--	--	--	--	--	--	--	0.093 J
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	0.2 U
DIBENZOFURAN	--	--	--	--	--	--	--	0.2 U
DIETHYL PHTHALATE	--	--	--	--	--	--	--	0.2 U
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	0.2 U
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	0.2 U
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	0.39 U
FLUORANTHENE	--	--	--	--	--	--	--	0.16 J
FLUORENE	--	--	--	--	--	--	--	0.2 U
HEXACHLOROBENZENE	--	--	--	--	--	--	--	0.2 U
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--	0.2 U
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--	0.39 UJ
HEXACHLOROETHANE	--	--	--	--	--	--	--	0.2 U
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	0.492
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	0.2 U
ISOPHORONE	--	--	--	--	--	--	--	0.2 U
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	0.238
NAPHTHALENE	--	--	--	--	--	--	--	0.2 U
NITROBENZENE	--	--	--	--	--	--	--	0.2 U
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--	0.2 U
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	0.2 U
PENTACHLOROPHENOL	--	--	--	--	--	--	--	0.39 U
PHENANTHRENE	--	--	--	--	--	--	--	0.078 J
PHENOL	--	--	--	--	--	--	--	0.39 U
PYRENE	--	--	--	--	--	--	--	0.12 J
TOTAL PAHS	--	--	--	--	--	--	--	0.73
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K								
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	0.0091
ACENAPHTHENE	--	--	--	--	--	--	--	0.0039 U
ACENAPHTHYLENE	--	--	--	--	--	--	--	0.01
ANTHRACENE	--	--	--	--	--	--	--	0.018
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	0.118736
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	0.118736
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	0.082
BENZO(A)PYRENE	--	--	--	--	--	--	--	0.08
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	0.11
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	0.043
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	0.034
CHRYSENE	--	--	--	--	--	--	--	0.096
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	0.014
FLUORANTHENE	--	--	--	--	--	--	--	0.15
FLUORENE	--	--	--	--	--	--	--	0.0039
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	0.607
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	0.051
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	0.2649
NAPHTHALENE	--	--	--	--	--	--	--	0.006
PENTACHLOROPHENOL	--	--	--	--	--	--	--	0.008 U
PHENANTHRENE	--	--	--	--	--	--	--	0.077
PYRENE	--	--	--	--	--	--	--	0.097
TOTAL PAHS	--	--	--	--	--	--	--	0.096
PESTICIDES (MG/KG)								
4,4'-DDD	--	--	--	--	--	--	--	0.0039 U
4,4'-DDE	--	--	--	--	--	--	--	0.0012 J
4,4'-DDT	--	--	--	--	--	--	--	0.0039 U
ALDRIN	--	--	--	--	--	--	--	0.002 U
ALPHA-BHC	--	--	--	--	--	--	--	0.002 U
ALPHA-CHLORDANE	--	--	--	--	--	--	--	0.002 U
BETA-BHC	--	--	--	--	--	--	--	0.002 U
DELTA-BHC	--	--	--	--	--	--	--	0.00035 J
DIELDRIN	--	--	--	--	--	--	--	0.0039 U
ENDOSULFAN I	--	--	--	--	--	--	--	0.002 U
ENDOSULFAN II	--	--	--	--	--	--	--	0.00049 R

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SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-150	SS-151	SS-152	SS-153	SS-154	SS-155	SS-156	SS-256
SAMPLE ID	SS-150	SS-151	SS-152	SS-153	SS-154	SS-155	SS-156	SEC-SS-256
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180628
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation
AREA	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6
ENDOSULFAN SULFATE	--	--	--	--	--	--	--	0.0029 J
ENDRIN	--	--	--	--	--	--	--	0.0011 R
ENDRIN ALDEHYDE	--	--	--	--	--	--	--	0.00038 R
ENDRIN KETONE	--	--	--	--	--	--	--	0.0014 J
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--	0.002 U
GAMMA-CHLORDANE	--	--	--	--	--	--	--	0.00075 J
HEPTACHLOR	--	--	--	--	--	--	--	0.00061 J
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--	0.00064 J
METHOXYCHLOR	--	--	--	--	--	--	--	0.02 U
TOXAPHENE	--	--	--	--	--	--	--	0.2 U
PCBS (MG/KG)								
AROCLOR-1016	0.048 U	0.047 UJ	0.048 U	0.046 U	0.046 U	0.046 U	0.052 UJ	0.039 U
AROCLOR-1221	0.048 U	0.047 UJ	0.048 U	0.046 U	0.046 U	0.046 U	0.052 UJ	0.039 U
AROCLOR-1232	0.048 U	0.047 UJ	0.048 U	0.046 U	0.046 U	0.046 U	0.052 UJ	0.039 U
AROCLOR-1242	0.048 U	0.047 UJ	0.048 U	0.046 U	0.046 U	0.046 U	0.052 UJ	0.039 U
AROCLOR-1248	0.048 U	0.047 UJ	0.048 U	0.046 U	0.046 U	0.046 U	0.052 UJ	0.039 U
AROCLOR-1254	0.048 U	0.047 UJ	0.048 U	0.046 U	0.046 U	0.046 U	0.052 UJ	0.039 U
AROCLOR-1260	0.048 U	0.047 UJ	0.048 U	0.046 U	0.046 U	0.046 U	0.052 UJ	0.039 U
AROCLOR-1262	0.048 U	0.047 UJ	0.048 U	0.046 U	0.046 U	0.046 U	0.052 UJ	0.039 U
AROCLOR-1268	0.048 U	0.047 UJ	0.048 U	0.046 U	0.046 U	0.046 U	0.052 UJ	0.039 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U
TOTAL AROCLOR HALFND	0.216	0.2115	0.216	0.207	0.207	0.207	0.234	0.1755
MOBILE LAB PESTICIDES/PCBS (MG/KG)								
AROCLOR-1016	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--
PCB CONGENERS (MG/KG)								
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-106	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--
PCB-14	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--

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SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-150	SS-151	SS-152	SS-153	SS-154	SS-155	SS-156	SS-256
SAMPLE ID	SS-150	SS-151	SS-152	SS-153	SS-154	SS-155	SS-156	SEC-SS-256
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180628
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation
AREA	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6
PCB-148	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--
PCB-156/157	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--
PCB-196	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--
PCB-201	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--
PCB-21/33	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	--	--	--	--	--

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-150	SS-151	SS-152	SS-153	SS-154	SS-155	SS-156	SS-256
SAMPLE ID	SS-150	SS-151	SS-152	SS-153	SS-154	SS-155	SS-156	SEC-SS-256
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180628
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation
AREA	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6
PCB-46	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--
PCB-80	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)								
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	--

TABLE 1

SOIL ANALYTICAL DATA - BACKGROUND
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-150	SS-151	SS-152	SS-153	SS-154	SS-155	SS-156	SS-256
SAMPLE ID	SS-150	SS-151	SS-152	SS-153	SS-154	SS-155	SS-156	SEC-SS-256
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180628
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation
AREA	Background	Background	Background	Background	Background	Background	Background	Background
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--	--	--
METALS (MG/KG)								
ALUMINUM	--	--	--	--	--	--	--	6280
ANTIMONY	--	--	--	--	--	--	--	6 U
ARSENIC	--	--	--	--	--	--	--	3.9
BARIUM	--	--	--	--	--	--	--	59
BERYLLIUM	--	--	--	--	--	--	--	0.38 J
CADMIUM	--	--	--	--	--	--	--	0.3 J
CALCIUM	--	--	--	--	--	--	--	5980
CHROMIUM	--	--	--	--	--	--	--	13
COBALT	--	--	--	--	--	--	--	3.6 J
COPPER	--	--	--	--	--	--	--	12.6
CYANIDE	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	10400
LEAD	--	--	--	--	--	--	--	63.1
MAGNESIUM	--	--	--	--	--	--	--	938
MANGANESE	--	--	--	--	--	--	--	127
MERCURY	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	10.9
POTASSIUM	--	--	--	--	--	--	--	371 J
SELENIUM	--	--	--	--	--	--	--	3.5 U
SILVER	--	--	--	--	--	--	--	1 U
SODIUM	--	--	--	--	--	--	--	500 U
THALLIUM	--	--	--	--	--	--	--	2.5 U
VANADIUM	--	--	--	--	--	--	--	10.6
ZINC	--	--	--	--	--	--	--	65.8
MISCELLANEOUS (%)								
TOTAL SOLIDS	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)								
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)								
PERCENT SOLIDS	--	--	--	--	--	--	--	--

APPENDIX G.2

SHAFFER EQUIPMENT COMPANY PROPERTY ANALYTICAL DATA

TABLE 2

GROUNDWATER ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	GW-001	GW-002	GW-003	GW-004
SAMPLE ID	GW-001	GW-002	GW-003	GW-004
SAMPLE DATE	20170612	20170613	20170612	20170612
DUPLICATE				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	SEC	SEC	SEC	SEC
PCB CONGENERS (UG/L)				
DICHLOROBIPHENYLS	0.0077 J	0.011 J	0.0012 J	0.00039 J
HEPTACHLOROBIPHENYLS	1.6 J	0.018 J	0.015 J	0.07 J
HEXACHLOROBIPHENYLS	1.7 J	0.027 J	0.014 J	0.091 J
MONOCHLOROBIPHENYLS	0.00082 J	0.00008 J	0.000055 J	0.00004 J
NONACHLOROBIPHENYLS	0.018 J	0.00061 J	0.00068 J	0.0012 J
OCTACHLOROBIPHENYLS	0.34 J	0.0037 J	0.0048 J	0.016 J
PCB-1	0.00053	0.000016 J	0.000013 J	0.000018 J
PCB-10	0.000088	0.0000086 J	0.000021 U	0.00002 U
PCB-103	0.00053	0.0000082 J	0.0000098 J	0.00002 U
PCB-104	0.0000021 J	0.000019 U	0.000021 U	0.0000014 J
PCB-105	0.0051	0.00034	0.000054	0.00029
PCB-106	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-107	0.00087	0.000045	0.000013 J	0.00002 U
PCB-108/124	0.000042 U	0.000038 U	0.000043 U	0.000041 U
PCB-11	0.00061	0.0099	0.0011	0.000042
PCB-110/115	0.055	0.0017	0.00045	0.0036
PCB-111	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-112	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-114	0.00035 U	0.000012 J	0.0000045 U	0.000064 U
PCB-118	0.027	0.00098	0.00022	0.0017
PCB-12/13	0.00022	0.000093	0.000019 J	0.00002 J
PCB-120	0.000043	0.000019 U	0.000021 U	0.00002 U
PCB-121	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-122	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-123	0.00034 U	0.000014 J	0.0000044 U	0.000063 U
PCB-126	0.00038 U	0.0000089 U	0.0000047 U	0.000075 U
PCB-127	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-128/166	0.016	0.00035	0.00015	0.00098
PCB-129/138/163	0.33	0.0059	0.0028	0.019
PCB-130	0.0088	0.00017	0.000093	0.0005
PCB-131	0.0019	0.000032	0.000013 J	0.00011
PCB-132	0.1	0.0016	0.00085	0.0058
PCB-133	0.0035	0.000054	0.000048	0.00017
PCB-134	0.012	0.00018	0.0001	0.00061
PCB-135/151	0.19	0.0025	0.0015	0.009
PCB-136	0.06	0.00073	0.00041	0.0031
PCB-137	0.0028	0.000066	0.000036	0.00016
PCB-139/140	0.00055	0.000019 J	0.000017 J	0.000027 J
PCB-14	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-141	0.098	0.0016	0.00074	0.0055
PCB-142	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-143	0.000053	0.000019 U	0.000021 U	0.00002 U
PCB-144	0.021	0.0003	0.00013	0.0012
PCB-145	0.0000049 J	0.000019 U	0.000021 U	0.00002 U
PCB-146	0.04	0.00066	0.00041	0.0021
PCB-147/149	0.35	0.0053	0.0029	0.019
PCB-148	0.000089	0.000019 U	0.0000056 J	0.0000026 J
PCB-15	0.0018	0.00044	0.000024	0.00014
PCB-150	0.000029	0.0000014 J	0.000021 U	0.0000058 J
PCB-152	0.0000088 J	0.000019 U	0.000021 U	0.0000029 J
PCB-153/168	0.36	0.0059	0.003	0.02
PCB-154	0.0006	0.000016 J	0.000032	0.000018 J
PCB-155	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-156/157	0.017	0.00031	0.00013	0.0011
PCB-158	0.026	0.00044	0.0002	0.0015
PCB-159	0.0061	0.000019 U	0.000063	0.00002 U
PCB-16	0.0012	0.000096	0.000019 J	0.00006
PCB-160	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-161	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-162	0.0008	0.000019 U	0.000021 U	0.000034
PCB-164	0.023	0.00039	0.00022	0.0013
PCB-165	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-167	0.0066	0.00014	0.000075	0.00046
PCB-169	0.000093	0.000019 U	0.000021 U	0.00002 U
PCB-17	0.0013	0.0002	0.000021 J	0.000059
PCB-170	0.17	0.0019	0.0016	0.0072
PCB-171/173	0.046	0.00061	0.00048	0.0025
PCB-172	0.025	0.00034	0.0003	0.0013
PCB-174	0.22	0.0024	0.0021	0.0092
PCB-175	0.0068	0.000076	0.000068	0.00034
PCB-176	0.024	0.00025	0.00021	0.0012
PCB-177	0.12	0.0013	0.0011	0.0048
PCB-178	0.035	0.00041	0.00035	0.0016
PCB-179	0.088	0.00093	0.00075	0.0039
PCB-18/30	0.0024	0.00015	0.000043 U	0.000097
PCB-180/193	0.44	0.005	0.0042	0.019
PCB-181	0.000021 U	0.0000056 J	0.0000036 J	0.00002 U
PCB-182	0.000087	0.000004 J	0.0000043 J	0.0000064 J
PCB-183/185	0.15	0.0016	0.0013	0.0067
PCB-184	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-186	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-187	0.25	0.0026	0.0023	0.01
PCB-188	0.000012 J	0.000019 U	0.0000012 J	0.0000021 J

TABLE 2

GROUNDWATER ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	GW-001	GW-002	GW-003	GW-004
SAMPLE ID	GW-001	GW-002	GW-003	GW-004
SAMPLE DATE	20170612	20170613	20170612	20170612
DUPLICATE				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	SEC	SEC	SEC	SEC
PCB CONGENERS (UG/L)				
DICHLOROBIPHENYLS	0.0077 J	0.011 J	0.0012 J	0.00039 J
HEPTACHLOROBIPHENYLS	1.6 J	0.018 J	0.015 J	0.07 J
PCB-189	0.0046	0.000068	0.000054	0.00026
PCB-19	0.00045	0.000084	0.00001 J	0.000022
PCB-190	0.029	0.00041	0.00031	0.0015
PCB-191	0.0053	0.000075	0.000063	0.00028
PCB-192	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-194	0.068	0.00085	0.0011	0.0035
PCB-195	0.033	0.00038	0.00041	0.0016
PCB-196	0.04	0.00045	0.00056	0.002
PCB-197/200	0.014	0.00015	0.00018	0.00069
PCB-198/199	0.079	0.00099	0.0013	0.0038
PCB-2	0.000042	0.000026	0.000022	0.0000054 J
PCB-20/28	0.0044	0.0011	0.000067	0.00037
PCB-201	0.01	0.00011	0.00014	0.00049
PCB-202	0.015	0.00017	0.00024	0.00069
PCB-203	0.055	0.0006	0.00085	0.0025
PCB-204	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-205	0.0034	0.000043	0.000046	0.00017
PCB-206	0.013	0.00042	0.0005	0.00088
PCB-207	0.002	0.000042	0.00006	0.00012
PCB-208	0.0026	0.00015	0.00012	0.00017
PCB-209	0.00031	0.00054	0.000077	0.000046
PCB-21/33	0.0018	0.00013	0.000043 U	0.00012
PCB-22	0.0017	0.00046	0.000023	0.00012
PCB-23	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-24	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-25	0.00024	0.000052	0.000021 U	0.00002 J
PCB-26/29	0.00055	0.000097	0.0000082 J	0.000043
PCB-27	0.00017	0.000061	0.000021 U	0.000015 J
PCB-3	0.00025	0.000038	0.00002 J	0.000016 J
PCB-31	0.0032	0.00054	0.000044	0.00023
PCB-32	0.00087	0.00024	0.000015 J	0.000058
PCB-34	0.0000089 J	0.000019 U	0.000021 U	0.00002 U
PCB-35	0.000069	0.00016	0.000014 J	0.0000088 J
PCB-36	0.000021 U	0.00019	0.000029	0.00002 U
PCB-37	0.0016	0.0004	0.000029	0.00016
PCB-38	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-39	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-4	0.0014	0.000046	0.000012 J	0.000036
PCB-40/71	0.0013	0.00029	0.000029 J	0.00012
PCB-41	0.0004	0.000088	0.0000083 J	0.000032
PCB-42	0.00075	0.0002	0.000018 J	0.000076
PCB-43	0.00017	0.000035	0.000021 U	0.000014 J
PCB-44/47/65	0.0035	0.00063	0.00008	0.00031
PCB-45/51	0.00043	0.00013	0.000043 U	0.000073
PCB-46	0.00013	0.000038	0.0000038 J	0.000016 J
PCB-48	0.00046	0.00012	0.0000093 J	0.00004
PCB-49/69	0.002	0.00042	0.000042 J	0.00016
PCB-5	0.000038	0.000019 U	0.000021 U	0.000004 J
PCB-50/53	0.00033	0.000075	0.000011 J	0.00005
PCB-52	0.01	0.00073	0.0001	0.00059
PCB-54	0.000015 J	0.000019 U	0.000021 U	0.000011 J
PCB-55	0.000073	0.0000081 J	0.000021 U	0.0000058 J
PCB-56	0.002	0.00036	0.000032	0.00016
PCB-57	0.00026	0.0000064 J	0.000021 U	0.0000092 J
PCB-58	0.000044	0.000019 U	0.000021 U	0.00002 U
PCB-59/62/75	0.00018	0.00007	0.0000044 J	0.000022 J
PCB-6	0.00057	0.00003	0.000021 U	0.000024
PCB-60	0.00097	0.00018	0.000016 J	0.000074
PCB-61/70/74/76	0.0085	0.0012	0.00012	0.00059
PCB-63	0.00011	0.000024	0.000021 U	0.0000085 J
PCB-64	0.0013	0.00034	0.000023	0.00011
PCB-66	0.0034	0.00066	0.000058	0.0003
PCB-67	0.000095	0.000021	0.000021 U	0.0000081 J
PCB-68	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-7	0.00011	0.000019 U	0.000021 U	0.0000042 J
PCB-72	0.000021 U	0.0000059 J	0.000021 U	0.00002 U
PCB-73	0.000084	0.00001 J	0.000021 U	0.0000054 J
PCB-77	0.00043	0.000081	0.000021 U	0.000041
PCB-78	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-79	0.00013	0.000015 J	0.000021 U	0.00002 U
PCB-8	0.0027	0.000095	0.000022	0.00011
PCB-80	0.000021 U	0.000019 U	0.000021 U	0.00002 U
PCB-81	0.000037 U	0.000019 U	0.000003 U	0.0000034 U
PCB-82	0.00086	0.000067	0.000013 J	0.000057
PCB-83	0.0019	0.000034	0.000024	0.000078
PCB-84	0.0044	0.00014	0.000046	0.00027
PCB-85/116/117	0.0045	0.00015	0.000064 U	0.00014
PCB-86/87/97/109/119/125	0.018	0.00059	0.00015	0.0011
PCB-88/91	0.0012	0.000097	0.000032 J	0.000099
PCB-89	0.000095	0.0000054 J	0.000021 U	0.00002 U
PCB-9	0.00017	0.000019 U	0.000021 U	0.0000087 J

TABLE 2

GROUNDWATER ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	GW-001	GW-002	GW-003	GW-004
SAMPLE ID	GW-001	GW-002	GW-003	GW-004
SAMPLE DATE	20170612	20170613	20170612	20170612
DUPLICATE				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	SEC	SEC	SEC	SEC
PCB CONGENERS (UG/L)				
DICHLOROBIPHENYLS	0.0077 J	0.011 J	0.0012 J	0.00039 J
HEPTACHLOROBIPHENYLS	1.6 J	0.018 J	0.015 J	0.07 J
PCB-90/101/113	0.12	0.0021	0.00077	0.0066
PCB-92	0.014	0.00024	0.00013	0.00068
PCB-93/100	0.000042 U	0.0000063 J	0.000043 U	0.000041 U
PCB-94	0.000043	0.000019 U	0.000021 U	0.00002 U
PCB-95	0.1	0.0015	0.00057	0.0051
PCB-96	0.000044	0.000005 J	0.0000023 J	0.000012 J
PCB-98/102	0.00043	0.00002 J	0.000043 U	0.000041 U
PCB-99	0.0048	0.00038	0.00012	0.00026
PENTACHLOROBIPHENYLS	0.38 J	0.0084 J	0.0027 J	0.02 J
TEQ DIOXIN-LIKE PCBs (BIRD)	0.000024185	4.12822E-06	2.189E-08	2.2132E-06
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	4.50542E-05	5.53272E-06	9.42637E-07	6.14672E-06
TEQ DIOXIN-LIKE PCBs (FISH)	3.4915E-07	1.742E-08	2.665E-09	2.315E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	1.31013E-06	4.4895E-08	1.6762E-08	2.12317E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	0.000004642	6.402E-08	1.599E-08	1.184E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	2.36579E-05	7.9687E-07	5.67623E-07	4.17082E-06
TETRACHLOROBIPHENYLS	0.037 J	0.0057 J	0.00058 J	0.0028 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.060823	0.001945	0.000533	0.003851
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	3.9875777	0.0764109	0.0388368	0.1988983
TOTAL PCB CONGENERS ZEROND	4.0484007	0.0783559	0.0393698	0.2027493
TOTAL PCB CONGENERS-NOAA	1.79081	0.029775	0.016408	0.089073
TOTAL PCB CONGENERS-NOAA HALFND	4.0492692	0.07876885	0.0400851	0.2033035
TOTAL PCB CONGENERS-NOAA X2	3.58162	0.05955	0.032816	0.178146
TOTAL PCB CONGENERS-NOAA X2 HALFND	3.58162	0.05955	0.032859	0.178146
TRICHLOROBIPHENYLS	0.02 J	0.0039 J	0.00034 J	0.0014 J
DIOXINS/FURANS (PG/L)				
1,2,3,4,6,7,8,9-OCDD	--	--	100 U	--
1,2,3,4,6,7,8,9-OCDF	--	--	100 U	--
1,2,3,4,6,7,8-HPCDD	--	--	51 U	--
1,2,3,4,6,7,8-HPCDF	--	--	51 U	--
1,2,3,4,7,8,9-HPCDF	--	--	1.5 UJ	--
1,2,3,4,7,8-HXCDD	--	--	51 U	--
1,2,3,4,7,8-HXCDF	--	--	51 U	--
1,2,3,6,7,8-HXCDD	--	--	51 U	--
1,2,3,6,7,8-HXCDF	--	--	51 U	--
1,2,3,7,8,9-HXCDD	--	--	51 U	--
1,2,3,7,8,9-HXCDF	--	--	51 U	--
1,2,3,7,8-PECDD	--	--	51 U	--
1,2,3,7,8-PECDF	--	--	51 U	--
2,3,4,6,7,8-HXCDF	--	--	2 Z	--
2,3,4,7,8-PECDF	--	--	51 U	--
2,3,7,8-TCDD	--	--	0.98 UJ	--
2,3,7,8-TCDF	--	--	1.2 UJ	--
TEQ DIOXINS (BIRD)	--	--	0.2	--
TEQ DIOXINS (BIRD) HALFND	--	--	66.868	--
TEQ DIOXINS (FISH)	--	--	0.2	--
TEQ DIOXINS (FISH) HALFND	--	--	61.453	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	0.2	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	50.5125	--
TOTAL HPCDD	--	--	12 J	--
TOTAL HPCDF	--	--	56 J	--
TOTAL HXCDD	--	--	3.4 J	--
TOTAL HXCDF	--	--	22 J	--
TOTAL PECDD	--	--	1.6 J	--
TOTAL PECDF	--	--	8.3 J	--
TOTAL TCDD	--	--	0.98 UJ	--
TOTAL TCDF	--	--	1.2 UJ	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-310	SB-310	SB-310	SB-310	SB-310	SB-311	SB-311	SB-311	SB-311
SAMPLE ID	SB310-20191107-0006	SB310-20191107-0624	SB310-20191107-2448	SB310-20191107-2448-D	SB310-20191107-4872	SB311-20191107-0006	SB311-20191107-0624	SB311-20191107-2448	SB311-20191107-4872
SAMPLE DATE	20191107	20191107	20191107	20191107	20191107	20191107	20191107	20191107	20191107
DUPLICATE				SB310-20191107-2448					
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SB	SS	SS	SB	SB
TOP DEPTH	0	0.5	2	2	4	0	0.5	2	4
BOTTOM DEPTH	0.5	2	4	4	6	0.5	2	4	6
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	1100	170	62	80	--	260	1000	770	--
1,2,3,4,6,7,8,9-OCDF	17	5.6 J	8.3 J	6 J	--	95	0.88 J	0.32 U	--
1,2,3,4,6,7,8-HPCDD	66	19	2.6 J	3.5 J	--	52	7.2	5.7	--
1,2,3,4,6,7,8-HPCDF	12	4 J	3.2 J	3 J	--	99	0.96 J	0.17 U	--
1,2,3,4,7,8,9-HPCDF	0.74 J	0.43 J	1.6 J	1.1 J	--	11	0.16 U	0.15 U	--
1,2,3,4,7,8-HXCDD	1.3 J	0.46 J	0.21 U	0.23 U	--	3.6 J	0.27 U	0.19 U	--
1,2,3,4,7,8-HXCDF	5.1	2 J	2.3 J	1.7 J	--	26	0.28 J	0.21 U	--
1,2,3,6,7,8-HXCDD	3.4 J	2.8 J	0.25 J	0.18 U	--	5.7	0.28 U	0.21 U	--
1,2,3,6,7,8-HXCDF	2 J	0.92 J	0.55 J	0.57 J	--	19	0.21 J	0.2 U	--
1,2,3,7,8,9-HXCDD	3.1 J	1.2 J	0.19 U	0.38 U	--	4.2 J	0.25 U	0.18 U	--
1,2,3,7,8,9-HXCDF	0.33 J	0.21 J	0.3 J	0.43 J	--	6.3	0.16 U	0.16 U	--
1,2,3,7,8-PECDD	1.1 J	0.54 J	0.19 U	0.22 U	--	3 J	0.18 U	0.18 U	--
1,2,3,7,8-PECDF	1.6 J	1.1 J	0.31 J	0.39 J	--	9.8	0.15 U	0.15 U	--
2,3,4,6,7,8-HXCDF	1.4 J	0.67 J	0.5 J	0.73 J	--	21	0.21 J	0.14 U	--
2,3,4,7,8-PECDF	3 J	1.4 J	0.73 J	0.84 J	--	17	0.24 J	0.14 U	--
2,3,7,8-TCDD	0.32 J	0.24 J	0.061 U	0.097 U	--	1	0.21 J	0.064 U	--
2,3,7,8-TCDF	2.4	1.2	0.42 J	0.48 J	--	7.3	0.21 J	0.061 U	--
TEQ DIOXINS (BIRD)	8.5771	4.12186	1.60613	1.7551	--	38.3545	0.846888	0.0827	--
TEQ DIOXINS (BIRD) HALFND	8.5771	4.12186	1.74638	1.93925	--	38.3545	0.973838	0.364616	--
TEQ DIOXINS (FISH)	5.0231	2.32586	0.82663	0.8596	--	23.6715	0.527388	0.0827	--
TEQ DIOXINS (FISH) HALFND	5.0231	2.32586	1.00558	1.0784	--	23.6715	0.700088	0.331541	--
TEQ DIOXINS (HUMANS/MAMMALS)	5.3935	2.46598	0.75539	0.7565	--	20.4305	0.754864	0.288	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	5.3935	2.46598	0.90089	0.9545	--	20.4305	0.895914	0.502448	--
TOTAL HPCDD	140 J	35 J	5.8 J	8 J	--	98 J	14 J	11 J	--
TOTAL HPCDF	21 J	7 J	7.9 J	6.5 J	--	140 J	1.3 J	0 UJ	--
TOTAL HXCDD	47 J	35 J	3 J	4.1 J	--	70 J	3.7 J	2.2 J	--
TOTAL HXCDF	24 J	10 J	7.9 J	8.1 J	--	190 J	2 J	0 UJ	--
TOTAL PECDD	28 J	21 J	2.7 J	3.7 J	--	47 J	2 J	0.34 J	--
TOTAL PECDF	38 J	15 J	7.3 J	8.3 J	--	180 J	1.9 J	0 UJ	--
TOTAL TCDD	24 J	17 J	2.3 J	3 J	--	31 J	1.5 J	0 UJ	--
TOTAL TCDF	37 J	18 J	8.2 J	11 J	--	180 J	3.5 J	0 UJ	--
METALS (MG/KG)									
ALUMINUM	8640	10900	2280	1530	--	10200	7960	4910	--
ANTIMONY	0.27 J	0.32 J	1.3	1.9	--	0.32 J	0.29 J	1.1 U	--
ARSENIC	11.1	14.5	8.2	10.9	--	9.8	6.8	4.8	--
BARIUM	186	275	41.6 J	59.3 J	--	222	149	59.4	--
BERYLLIUM	0.98	1.5	0.27 J	0.36 J	--	0.84	0.88	0.44 J	--
CADMIUM	0.24 J	0.26 J	0.16 J	0.16 J	--	0.32 J	0.14 J	0.53 U	--
CALCIUM	3260	1730	2240 J	1070 J	--	1380	782	97 J	--
CHROMIUM	11.4	19.7	9.6 J	12.3 J	--	10.8	14.6	7.3	--
COBALT	9.7	14.6	3.3	5.2	--	10.4	11.2	7.9	--
COPPER	24.8	40.7	19.5	58.1	--	32.4	24.6	5.7	--
CYANIDE	0.17 J	0.27 J	0.26 J	0.32 J	--	0.22 J	0.43 J	0.42 J	--
IRON	13700	17700	22900	12800	--	14900	15700	9290	--
LEAD	30.1	35.3	58.5	84.4	--	34.9	21.4	8.4	--
MAGNESIUM	1620	2810	729 J	278 J	--	2280	1460	394 J	--
MANGANESE	361	608	236	273	--	315	371	366	--
MERCURY	0.068 J	0.043 J	0.041 J	0.057 J	--	0.04 J	0.022 J	0.025 J	--
NICKEL	18.8	26.8	6	10.2	--	17.5	15.2	5.4	--
POTASSIUM	1550	2170	543 UJ	570 UJ	--	1720	1180	572 U	--
SELENIUM	1 J	1.5 J	0.52 J	0.87 J	--	0.89 J	0.73 J	0.46 J	--
SILVER	0.58 U	0.052 J	0.56 U	0.56 U	--	0.58 U	0.57 U	0.53 U	--
SODIUM	132 J	229 J	33.8 J	32.6 J	--	170 J	90.2 J	8.8 J	--
THALLIUM	0.58 U	0.55 U	0.56 UJ	0.56 UJ	--	0.58 U	0.57 U	0.53 U	--
VANADIUM	14.2	22.1	5.8	6.9	--	14	20	13.7	--
ZINC	68.1	81.3	31.2 J	44.4 J	--	68.6	38.5	19.2	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	87	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	92700	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	88	--	--	91	--	75	--	83

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-312	SB-312	SB-312	SB-312	SB-313	SB-313	SB-313	SB-313	SB-314
SAMPLE ID	SB312-20191107-0006	SB312-20191107-0624	SB312-20191107-2448	SB312-20191107-4872	SB313-20191107-0006	SB313-20191107-0624	SB313-20191107-2448	SB313-20191107-4872	SB314-20191107-0006
SAMPLE DATE	20191107	20191107	20191107	20191107	20191107	20191107	20191107	20191107	20191107
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS
TOP DEPTH	0	0.5	2	4	0	0.5	2	4	0
BOTTOM DEPTH	0.5	2	4	6	0.5	2	4	6	0.5
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	200	290	85	--	230	330	--	1100	380
1,2,3,4,6,7,8,9-OCDF	9.8 J	8.6 J	9.3 J	--	9.6 J	4.8 J	--	1.5 U	50
1,2,3,4,6,7,8-HPCDD	12	9.9	3.4 J	--	16	7.7	--	13	36
1,2,3,4,6,7,8-HPCDF	4.6 J	4.8 J	5.1	--	7.2	3.5 J	--	0.58 U	17
1,2,3,4,7,8,9-HPCDF	0.55 J	0.96 J	0.7 J	--	0.76 J	0.75 J	--	0.9 U	2.3 J
1,2,3,4,7,8-HXCDD	0.45 J	0.37 J	0.35 U	--	0.67 J	0.43 J	--	0.53 U	0.94 J
1,2,3,4,7,8-HXCDF	1.6 J	3.1 J	0.69 J	--	1.7 J	2 J	--	0.48 U	4.2 J
1,2,3,6,7,8-HXCDD	0.74 J	0.72 J	0.34 U	--	1.3 J	0.91 J	--	0.54 U	2.1 J
1,2,3,6,7,8-HXCDF	0.66 J	0.96 J	0.59 J	--	1.2 J	0.87 J	--	0.5 U	2.1 J
1,2,3,7,8,9-HXCDD	0.62 J	0.48 J	0.38 U	--	0.92 J	0.5 J	--	0.49 U	1.9 J
1,2,3,7,8,9-HXCDF	0.21 U	0.39 J	0.21 U	--	0.4 J	0.34 J	--	0.79 U	0.61 J
1,2,3,7,8-PECDD	0.34 J	0.3 J	0.17 U	--	0.54 J	0.16 U	--	0.44 U	0.76 J
1,2,3,7,8-PECDF	0.25 U	0.77 J	0.37 J	--	0.72 J	0.63 J	--	0.38 U	1 J
2,3,4,6,7,8-HXCDF	0.68 J	0.9 J	0.58 J	--	1.4 J	0.91 J	--	0.87 U	2.2 J
2,3,4,7,8-PECDF	0.82 J	1.8 J	0.62 J	--	2.1 J	1.5 J	--	0.46 U	2.3 J
2,3,7,8-TCDD	0.097 U	0.097 U	0.096 U	--	0.31 J	0.099 U	--	0.11 U	0.29 J
2,3,7,8-TCDF	0.42 J	1.4 J	0.44 J	--	0.89 J	0.68 J	--	0.28 U	0.96 J
TEQ DIOXINS (BIRD)	2.05038	4.28306	1.35383	--	4.64006	2.81928	--	0.123	5.851
TEQ DIOXINS (BIRD) HALFND	2.12188	4.33156	1.52678	--	4.64006	2.94878	--	0.966925	5.851
TEQ DIOXINS (FISH)	1.38808	2.13786	0.60733	--	2.92726	1.54028	--	0.123	3.991
TEQ DIOXINS (FISH) HALFND	1.45333	2.18636	0.84193	--	2.92726	1.66978	--	0.806625	3.991
TEQ DIOXINS (HUMANS/MAMMALS)	1.33744	1.94128	0.54739	--	2.66108	1.35284	--	0.46	3.953
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	1.40019	1.98978	0.74439	--	2.66108	1.48234	--	1.041325	3.953
TOTAL HPCDD	23 J	19 J	6.7 J	--	33 J	16 J	--	30 J	71 J
TOTAL HPCDF	10 J	10 J	7.6 J	--	14 J	6.9 J	--	0 UJ	44 J
TOTAL HXCDD	8.6 J	8.2 J	3.9 J	--	14 J	11 J	--	6 J	22 J
TOTAL HXCDF	8 J	12 J	5.3 J	--	16 J	10 J	--	0 UJ	29 J
TOTAL PECDD	4.2 J	4.9 J	3.4 J	--	10 J	6.7 J	--	0 UJ	9.8 J
TOTAL PECDF	10 J	21 J	6.3 J	--	21 J	14 J	--	0 UJ	31 J
TOTAL TCDD	3.2 J	4 J	2.7 J	--	9 J	6.9 J	--	1 J	8 J
TOTAL TCDF	9.1 J	20 J	8.8 J	--	21 J	16 J	--	0 UJ	28 J
METALS (MG/KG)									
ALUMINUM	2260	4260	1940	--	2980	5850	--	6120	5470
ANTIMONY	0.24 J	2.1	1 J	--	1 J	0.4 J	--	1.1 U	1.3 U
ARSENIC	5.5	16.6	9	--	8.3	12.7	--	5.6	7.6
BARIUM	40.7	158	77.1	--	74.6	125	--	50	39.7
BERYLLIUM	0.45 J	1	0.49 J	--	0.66	0.95	--	0.41 J	0.52 J
CADMIUM	0.12 J	0.53 J	0.72	--	0.32 J	0.19 J	--	0.074 J	0.63 U
CALCIUM	1440	3090	1320	--	3460	5760	--	3320	2740
CHROMIUM	9.4	18.3	8.2	--	13.7	15.3	--	9.6	11.6
COBALT	7.3	14	3.4	--	11	12.4	--	5.3	13.2
COPPER	16.6	140	37.3	--	28.5	32.7	--	16.7	9.3
CYANIDE	0.31 J	1.5 J-	0.16 J	--	0.32 J	0.14 J	--	0.18 J	0.27 J
IRON	7900	30300	14200	--	10900	11200	--	15600	14800
LEAD	20.2	90.8	56.9	--	60.5	33.8	--	11.4	15.6
MAGNESIUM	549 J	1320	222 J	--	611	1410	--	859	1490
MANGANESE	254	713	161	--	384	670	--	194	572
MERCURY	0.033 J	0.056 J	0.041 J	--	0.12	0.034 J	--	0.038 J	0.043 J
NICKEL	14.6	28.5	7.4	--	19.5	23.4	--	5.7	22.9
POTASSIUM	664 U	746	623 U	--	606 U	1080	--	682	1640
SELENIUM	0.47 J	1.4 J	1.3 J	--	0.83 J	0.67 J	--	0.33 J	0.18 J
SILVER	0.61 U	0.078 J	0.59 U	--	0.06 J	0.047 J	--	0.57 U	0.63 U
SODIUM	8.5 J	83.7 J	37.1 J	--	30.7 J	89 J	--	50.2 J	172 J
THALLIUM	0.61 U	0.54 U	0.59 U	--	0.6 U	0.51 U	--	0.57 U	0.63 U
VANADIUM	6.4	13.1	7.8	--	10.7	14.5	--	10.8	7.9
ZINC	40.6	116	134	--	105	72.1	--	17.2	28.8
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	84	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	26900	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	87	--	83	--	90	89	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-314	SB-314	SB-314	SB-315	SB-315	SB-315	SB-315	SB-316	SB-316
SAMPLE ID	SB314-20191107-0624	SB314-20191107-2448	SB314-20191107-4872	SB315-20191107-0006	SB315-20191107-0624	SB315-20191107-2448	SB315-20191107-7296	SB316-20191108-0006	SB316-20191108-0624
SAMPLE DATE	20191107	20191107	20191107	20191107	20191107	20191107	20191107	20191108	20191108
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0.5	2	4	0	0.5	2	6	0	0.5
BOTTOM DEPTH	2	4	6	0.5	2	4	8	0.5	2
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	48	--	71	77	110	--	110	400	150
1,2,3,4,6,7,8,9-OCDF	2.4 J	--	4.8 J	4.6 J	11	--	0.46 U	21	20
1,2,3,4,6,7,8-HPCDD	1.8 J	--	2.6 J	6.2	11	--	2.8 J	32	11
1,2,3,4,6,7,8-HPCDF	1.2 J	--	3.8 J	3.2 J	7.6	--	0.18 U	11	6.6
1,2,3,4,7,8,9-HPCDF	0.26 U	--	0.56 J	0.2 U	1.3 J	--	0.2 U	1.3 J	1.3 J
1,2,3,4,7,8-HXCDD	0.37 U	--	0.39 U	0.31 U	0.41 J	--	0.23 U	0.93 J	0.25 J
1,2,3,4,7,8-HXCDF	0.44 U	--	0.91 J	1.1 J	3.5 J	--	0.16 U	4 J	3.3 J
1,2,3,6,7,8-HXCDD	0.39 U	--	0.43 U	0.59 J	1 J	--	0.25 U	2 J	0.71 J
1,2,3,6,7,8-HXCDF	0.45 U	--	0.68 J	0.55 J	1.8 J	--	0.3 U	1.3 J	1.1 J
1,2,3,7,8,9-HXCDD	0.38 U	--	0.38 U	0.38 U	0.57 J	--	0.38 U	1.3 J	0.42 J
1,2,3,7,8,9-HXCDF	0.56 U	--	0.35 J	0.21 U	0.68 J	--	0.21 U	0.43 U	0.4 J
1,2,3,7,8-PECDD	0.33 U	--	0.24 U	0.33 U	0.42 J	--	0.23 U	0.56 J	0.29 J
1,2,3,7,8-PECDF	0.27 U	--	0.42 J	0.25 U	0.69 J	--	0.25 U	0.8 J	0.87 J
2,3,4,6,7,8-HXCDF	0.55 U	--	0.78 J	0.68 J	3.3 J	--	0.15 U	1.3 J	1.1 J
2,3,4,7,8-PECDF	0.29 U	--	0.82 J	0.82 J	5	--	0.15 U	1.8 J	2.6 J
2,3,7,8-TCDD	0.2 U	--	0.13 U	0.13 U	0.28 J	--	0.12 U	0.33 J	0.18 J
2,3,7,8-TCDF	0.16 U	--	0.48 J	0.39 J	0.97 J	--	0.091 U	1.2	3
TEQ DIOXINS (BIRD)	0.01884	--	1.66778	1.49526	7.8666	--	0.0138	5.0236	6.9156
TEQ DIOXINS (BIRD) HALFND	0.65384	--	1.88368	1.77601	7.8666	--	0.390723	5.0451	6.9156
TEQ DIOXINS (FISH)	0.01884	--	0.78078	0.71476	4.5438	--	0.0138	3.2451	2.7968
TEQ DIOXINS (FISH) HALFND	0.56474	--	1.06733	1.04191	4.5438	--	0.338398	3.2666	2.7968
TEQ DIOXINS (HUMANS/MAMMALS)	0.04512	--	0.67094	0.69548	3.679	--	0.061	3.2263	2.5441
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	0.52397	--	0.91594	0.97523	3.679	--	0.352769	3.2478	2.5441
TOTAL HPCDD	3.6 J	--	5.2 J	13 J	22 J	--	5.9 J	70 J	27 J
TOTAL HPCDF	1.8 J	--	6.2 J	5.7 J	17 J	--	0 UJ	26 J	18 J
TOTAL HXCDD	0 UJ	--	3.8 J	5.3 J	10 J	--	0.63 J	24 J	8 J
TOTAL HXCDF	0 UJ	--	5.9 J	7.1 J	35 J	--	0 UJ	20 J	18 J
TOTAL PECDD	0 UJ	--	3.6 J	2.9 J	6.3 J	--	0 UJ	14 J	4.6 J
TOTAL PECDF	0 UJ	--	7.5 J	8.4 J	46 J	--	0 UJ	28 J	22 J
TOTAL TCDD	0 UJ	--	4.1 J	3.5 J	4.9 J	--	0 UJ	13 J	4.9 J
TOTAL TCDF	0 UJ	--	11 J	8.6 J	29 J	--	0 UJ	22 J	19 J
METALS (MG/KG)									
ALUMINUM	4220	--	1790	2300	3370	--	5700	6550	12200
ANTIMONY	1.1 U	--	0.48 J	0.21 J	0.82 U	--	0.88 J	0.38 J	0.43 J
ARSENIC	2.3	--	10.6	5.5	6.3	--	6.4	11.7	19.5
BARIUM	54.2	--	93.1	37.1	109	--	116	72.1	189
BERYLLIUM	0.43 J	--	0.79	0.33 J	0.72	--	0.7	0.63	1.2
CADMIUM	0.55 U	--	0.39 J	0.15 J	0.31 J	--	0.31 J	0.5 J	0.27 J
CALCIUM	1580	--	7080	858	1040	--	341 J	4140	3080
CHROMIUM	5.2	--	12	7.6	8.8	--	8.9	12.7	15.2
COBALT	3.9	--	10	7.6	8.1	--	8.6	8.8	10.5
COPPER	3	--	30	9.2	54.4	--	57.1	22.4	44.5
CYANIDE	0.14 J	--	0.25 J	0.15 J	0.64 J-	--	0.069 J	0.028 J	0.54 R
IRON	13800	--	20200	12700	19000	--	8730	17900	21700
LEAD	5.2	--	36.4	21.2	53.8	--	57.7	35.1	28.8
MAGNESIUM	1010	--	741	755	564 J	--	325 J	1550	2880
MANGANESE	106	--	408	332	430	--	444	434	320
MERCURY	0.11 U	--	0.044 J	0.11 U	0.027 J	--	0.022 J	0.039 J	0.09 J
NICKEL	3.4	--	18	11.8	15	--	16.1	19.1	22.7
POTASSIUM	1250	--	587 U	579 U	937	--	556 U	1550	3210
SELENIUM	0.3 J	--	0.64 J	0.41 J	0.72 J	--	0.64 J	3 UJ	2.7 UJ
SILVER	0.55 U	--	0.15 J	0.55 U	0.59 U	--	0.57 U	0.065 J	0.075 J
SODIUM	22.3 J	--	44.6 J	12.7 J	40.4 J	--	36.5 J	108 J	256 J
THALLIUM	0.55 U	--	0.6 U	0.55 U	0.59 U	--	0.57 U	0.6 U	0.54 U
VANADIUM	7.4	--	12.2	5	12.4	--	12.9	9.4	16.9
ZINC	11.1	--	70.8	42	58.4	--	62.4	75.7	64.4
MISCELLANEOUS (%)									
TOTAL SOLIDS	89	--	--	--	--	--	--	85	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	18500	--	--	--	--	--	--	51900	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	92	85	--	--	80	82	--	--	93

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-316	SB-316	SB-316	SB-317	SB-317	SB-317	SB-318	SB-318	SB-318
SAMPLE ID	SB316-20191108-0624-D	SB316-20191108-2448	SB316-20191108-6084	SB317-20191108-0006	SB317-20191108-0624	SB317-20191108-6084	SB318-20191108-0006	SB318-20191108-0624	SB318-20191108-2448
SAMPLE DATE	20191108	20191108	20191108	20191108	20191108	20191108	20191108	20191108	20191108
DUPLICATE	SB316-20191108-0624								
SAMPLE CODE	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SB	SB	SS	SS	SB	SS	SS	SB
TOP DEPTH	0.5	2	5	0	0.5	5	0	0.5	2
BOTTOM DEPTH	2	4	7	0.5	2	7	0.5	2	4
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	200	3700	--	1200 J-	100	130	230	260	--
1,2,3,4,6,7,8,9-OCDF	16	350	--	6.5 J	3.8 J	1.1 J	17	23	--
1,2,3,4,6,7,8-HPCDD	14	280	--	11	7.7	5	14	18	--
1,2,3,4,6,7,8-HPCDF	4.5 J	100	--	2.4 J	3 J	0.6 J	6.1	14	--
1,2,3,4,7,8,9-HPCDF	0.58 J	11	--	1.3 U	0.44 J	0.24 U	1.3 J	3.5 J	--
1,2,3,4,7,8-HXCDD	0.18 U	0.84 J	--	1.1 U	0.35 J	0.18 U	0.48 J	0.73 J	--
1,2,3,4,7,8-HXCDF	1.6 J	17	--	4.1 J	1.2 J	0.21 U	5.7	6.7	--
1,2,3,6,7,8-HXCDD	0.52 J	6.9	--	1.1 U	0.71 J	0.19 U	0.93 J	1.9 J	--
1,2,3,6,7,8-HXCDF	0.61 J	4.3 J	--	1 J	0.51 J	0.2 U	1.4 J	2.6 J	--
1,2,3,7,8,9-HXCDD	0.23 J	1.6 J	--	1 U	0.46 J	0.17 U	0.32 U	1.1 J	--
1,2,3,7,8,9-HXCDF	0.22 U	1.3 J	--	1.2 U	0.23 J	0.16 U	0.48 U	1.7 J	--
1,2,3,7,8-PECDD	0.2 U	0.51 J	--	0.3 U	0.2 U	0.18 U	0.46 J	0.66 J	--
1,2,3,7,8-PECDF	0.6 J	2.1 J	--	0.56 U	0.6 J	0.17 U	0.67 J	1.3 J	--
2,3,4,6,7,8-HXCDF	0.63 J	4.3 J	--	0.99 U	0.49 J	0.13 U	1.3 J	3.8 J	--
2,3,4,7,8-PECDF	1.5 J	5.6	--	0.67 U	0.78 J	0.19 U	2.2 J	5.1 J	--
2,3,7,8-TCDD	0.17 J	0.26 J	--	0.11 U	0.14 J	0.11 U	0.14 U	0.41 J	--
2,3,7,8-TCDF	1.8	4.1	--	0.45 J	0.66 J	0.15 U	1.5	2.1	--
TEQ DIOXINS (BIRD)	3.9286	15.436	--	1.11565	2.00608	0.02411	5.213	10.2668	--
TEQ DIOXINS (BIRD) HALFND	4.0441	15.436	--	1.88265	2.10608	0.39776	5.323	10.2668	--
TEQ DIOXINS (FISH)	1.4179	8.87	--	0.68815	1.07518	0.02411	2.8705	5.8863	--
TEQ DIOXINS (FISH) HALFND	1.5739	8.87	--	1.47615	1.17518	0.30761	2.9661	5.8863	--
TEQ DIOXINS (HUMANS/MAMMALS)	1.4326	11.672	--	1.05095	0.99554	0.09533	2.5592	5.1419	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	1.5526	11.672	--	1.64085	1.09554	0.34208	2.6692	5.1419	--
TOTAL HPCDD	34 J	1100 J	--	22 J	18 J	12 J	30 J	37 J	--
TOTAL HPCDF	14 J	350 J	--	5.1 J	6.2 J	1.8 J	16 J	30 J	--
TOTAL HXCDD	5.2 J	56 J	--	4 J	9.7 J	1.1 J	10 J	29 J	--
TOTAL HXCDF	9.1 J	110 J	--	11 J	6.4 J	0.36 J	25 J	42 J	--
TOTAL PECDD	2.9 J	9.3 J	--	1.5 J	5.9 J	0 UJ	9.3 J	26 J	--
TOTAL PECDF	12 J	54 J	--	21 J	7.1 J	0 UJ	48 J	43 J	--
TOTAL TCDD	3.8 J	6.9 J	--	1.3 J	6.8 J	0 UJ	9.7 J	36 J	--
TOTAL TCDF	11 J	41 J	--	9.9 J	9.7 J	0 UJ	28 J	27 J	--
METALS (MG/KG)									
ALUMINUM	2220	7190 J	--	10100	9630	6100	7260	4020	--
ANTIMONY	0.56 J	0.88 J	--	0.23 J	2	0.25 J	0.27 J	3.5	--
ARSENIC	42.4	25.3 J	--	14.6	82.8	27.2	7.5	13.3	--
BARIUM	263	84.4 J	--	86.6	101	274	74.9	163	--
BERYLLIUM	1.6	0.32 J	--	1.4	0.55 J	1.1	0.84	0.91	--
CADMIUM	0.26 J	0.39 J	--	0.12 J	0.077 J	0.12 J	0.19 J	0.49 J	--
CALCIUM	2180	890	--	5550	1320	2680	1950	2030	--
CHROMIUM	20.8	19.9 J	--	17.3	20.5	14.1	14	16.7	--
COBALT	15.5	2.9 J	--	23.6	9.2	22.3	10.2	10	--
COPPER	56.2	107 J	--	29.9	86.9	42.5	22.4	191	--
CYANIDE	0.13 J	0.068 J	--	0.57 R	0.29 J	0.18 J	0.58 R	0.024 J	--
IRON	22200	28800 J	--	16200	42800	13700	14300	15300	--
LEAD	33.3	39.8 J	--	26	54.8	13.2	26.3	124	--
MAGNESIUM	708	1260	--	1620	1470	908	1520	522 J	--
MANGANESE	380	203 J	--	463	714	481	371	379	--
MERCURY	0.13	0.21 J	--	0.022 J	0.11	0.12 U	0.03 J	0.042 J	--
NICKEL	30.9	13.7 J	--	22.7	17.4	14.9	28.1	30	--
POTASSIUM	528 U	2100	--	2290	2450	902	1820	838	--
SELENIUM	3.1	2.8 UJ	--	2.9 UJ	2.8 UJ	2.8 UJ	2.8 UJ	3.1 UJ	--
SILVER	0.078 J	0.57 U	--	0.59 U	0.075 J	0.56 U	0.053 J	0.087 J	--
SODIUM	32.8 J	190 J	--	73.8 J	255 J	43.8 J	102 J	84.3 J	--
THALLIUM	0.53 U	0.57 UJ	--	0.59 U	0.56 U	0.56 U	0.56 U	0.62 U	--
VANADIUM	22.8	5.1 J	--	19.2	11.2	11.9	10.8	20.5	--
ZINC	82.4	44.9 J	--	69.3	28.9	62.4	66.3	143	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	--	88	--	89	88	--	79	85

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-318	SB-319	SB-319	SB-319	SB-320	SB-320	SB-320	SB-320	SB-321
SAMPLE ID	SB318-20191108-4872	SB319-20191107-0006	SB319-20191107-0624	SB319-20191107-6084	SB320-20191125-0006	SB320-20191125-0624	SB320-20191125-2448	SB320-20191125-6084	SB321-20191125-0006
SAMPLE DATE	20191108	20191107	20191107	20191107	20191125	20191125	20191125	20191125	20191125
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SB	SS	SS	SB	SB	SS
TOP DEPTH	4	0	0.5	5	0	0.5	2	5	0
BOTTOM DEPTH	6	0.5	2	7	0.5	2	4	7	0.5
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	330	1400	1800	1100	59	470	3500	--	280
1,2,3,4,6,7,8,9-OCDF	0.4 U	1.7 J	22	17	3.1 J	310	390	--	30
1,2,3,4,6,7,8-HPCDD	5.4	14	140	100	3 J	33	340	--	15
1,2,3,4,6,7,8-HPCDF	0.4 J	0.85 J	30	12	2.3 U	110	120	--	12
1,2,3,4,7,8,9-HPCDF	0.16 U	0.2 U	2.5 J	0.92 J	2.3 U	34	21	--	3.2 J
1,2,3,4,7,8-HXCDD	0.36 U	0.47 J	2.2 J	0.57 J	1.5 U	1.5 U	2.5 J	--	1.4 U
1,2,3,4,7,8-HXCDF	0.21 U	0.24 U	7.9	2.7 J	2.8 J	110	71	--	90
1,2,3,6,7,8-HXCDD	0.36 U	0.34 J	5.8	2.2 J	1.3 U	1.4 J	15	--	1.2 U
1,2,3,6,7,8-HXCDF	0.2 U	0.3 U	6.7	1.7 J	1.9 U	14	10	--	1.9 U
1,2,3,7,8,9-HXCDD	0.33 U	0.38 U	3.6 J	1 J	2.4 U	2.4 U	6.3	--	2.4 U
1,2,3,7,8,9-HXCDF	0.27 U	0.3 U	2.2 J	0.7 J	1.5 U	7.4	5 J	--	1.4 U
1,2,3,7,8-PECDD	0.24 U	0.2 U	1.8 J	0.48 J	1.9 U	1.9 U	2.3 J	--	1.9 U
1,2,3,7,8-PECDF	0.24 U	0.25 U	4.8 J	1.4 J	1.7 U	5.2	5.4	--	210
2,3,4,6,7,8-HXCDF	0.24 U	0.29 U	9.5	2 J	0.98 U	8.2	8.3	--	1.4 J
2,3,4,7,8-PECDF	0.26 U	0.24 U	8.8	2.7 J	0.91 U	20	15	--	5
2,3,7,8-TCDD	0.13 U	0.11 U	0.45 J	0.12 U	0.35 J	0.26 Z	0.32 Z	--	0.24 J
2,3,7,8-TCDF	0.16 U	0.2 J	4.7	1.7	0.58 J	8.2	7.8	--	2.7
TEQ DIOXINS (BIRD)	0.0424	0.38957	20.0352	6.2214	1.21921	44.505	38.434	--	38.278
TEQ DIOXINS (BIRD) HALFND	0.52352	0.75357	20.0352	6.2814	3.11521	45.6125	38.434	--	39.554
TEQ DIOXINS (FISH)	0.0424	0.41107	11.5962	3.3529	0.66821	26.455	23.812	--	22.713
TEQ DIOXINS (FISH) HALFND	0.44267	0.69172	11.5962	3.4129	2.52371	27.792	23.812	--	24.196
TEQ DIOXINS (HUMANS/MAMMALS)	0.157	0.67001	11.5656	4.0533	0.73663	23.34	25.849	--	17.845
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	0.49196	0.94126	11.5656	4.1133	2.35063	24.485	25.849	--	19.21
TOTAL HPCDD	11 J	25 J	280 J	210 J	5.7 J	160 J	1800 J	--	31 J
TOTAL HPCDF	0.4 J	1.8 J	53 J	27 J	2.3 UJ	260 J	370 J	--	27 J
TOTAL HXCDD	3.4 J	5.5 J	77 J	21 J	2.7 J	30 J	310 J	--	8.2 J
TOTAL HXCDF	0.28 J	0.64 J	78 J	23 J	2.8 J	240 J	200 J	--	130 J
TOTAL PECDD	2.4 J	1.1 J	44 J	6.6 J	1.9 UJ	18 J	160 J	--	1.9 UJ
TOTAL PECDF	0 UJ	0.35 J	99 J	30 J	10 J	130 J	110 J	--	610 J
TOTAL TCDD	1.8 J	1.3 J	29 J	4.4 J	3 J	18 J	80 J	--	4.5 J
TOTAL TCDF	1.9 J	1.8 J	110 J	34 J	4.6 J	49 J	65 J	--	160 J
METALS (MG/KG)									
ALUMINUM	13900	15700	9800	7710	11100	8850	6120	--	12000
ANTIMONY	0.21 J	1.2	1.6	0.45 J	1.1 U	1.1 U	1.1 U	--	1.4 U
ARSENIC	7	9.2	15.2	9.7	2.7	6.5	12.8	--	4.5
BARIUM	84.5	79	249	92	92.1	129	102	--	63
BERYLLIUM	0.68	0.46 J	1.4	1.2	0.39 J	0.73	0.72	--	0.5 J
CADMIUM	0.067 J	0.44 J	2.2	0.34 J	0.55 U	0.11 J	0.086 J	--	0.1 J
CALCIUM	680	776	4750	1630	4490	767	503 J	--	2420
CHROMIUM	12.4	9.3	43.9	23.6	6.7	9.6	10.8	--	7.9
COBALT	9.5	6.6	23.7	17.6	3.8	8.4	6.3	--	6.4
COPPER	12.8	86	69	24	3.7	21	23.9	--	10
CYANIDE	0.13 J	0.47 J	0.82	0.76	0.53 R	0.55 R	0.55 R	--	0.7 R
IRON	17800	24800	44400	30500	77700	16400	43800	--	16700
LEAD	52.5	99.9	170	56.6	8.5	15.2	14.2	--	17.2
MAGNESIUM	1120	1020	912	879	4780	1340	849	--	1240
MANGANESE	280	276	2630	815	299	197	296	--	275
MERCURY	0.032 J	0.03 J	0.091 J	0.036 J	0.11 UJ	0.1 UJ	0.11 UJ	--	0.027 J
NICKEL	10.4	11.4	40.7	25.4	4.5	17.6	13.1	--	11.5
POTASSIUM	1230	3400	1380	1620	1970	2120	1330	--	1350
SELENIUM	2.7 UJ	1.3 J	2.9 UJ	2.9 UJ	0.25 J	0.8 J	0.95 J	--	0.62 J
SILVER	0.55 U	0.067 J	0.13 J	0.58 U	0.55 U	0.55 U	0.57 U	--	0.68 U
SODIUM	54.8 J	63.6 J	121 J	66.1 J	566 UJ	515 UJ	591 UJ	--	701 UJ
THALLIUM	0.55 U	0.56 U	0.57 U	0.58 U	0.55 U	0.066 J	0.15 J	--	0.046 J
VANADIUM	22.6	5.5	27.7	18.1	12.2	12.7	9.7	--	9.6
ZINC	39.6	98.4	401	166	9.1	43.5	30.2	--	49.9
MISCELLANEOUS (%)									
TOTAL SOLIDS	86	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	19000	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	--	71	89	--	90	--	83	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-321	SB-321	SB-321	SB-322	SB-322	SB-322	SB-322	SB-323	SB-323
SAMPLE ID	SB321-20191125-0624	SB321-20191125-2448	SB321-20191125-6084	SB322-20191122-0006	SB322-20191122-0624	SB322-20191122-2448	SB322-20191122-4872	SB323-20191122-0006	SB323-20191122-0624
SAMPLE DATE	20191125	20191125	20191125	20191122	20191122	20191122	20191122	20191122	20191122
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0.5	2	5	0	0.5	2	4	0	0.5
BOTTOM DEPTH	2	4	7	0.5	2	4	6	0.5	2
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	660	--	500	610	290	180	--	370	370
1,2,3,4,6,7,8,9-OCDF	83	--	3.7 J	40	1.7 U	1.7 U	--	35	19
1,2,3,4,6,7,8-HPCDD	16	--	17	31	5.5	7.7	--	22	15
1,2,3,4,6,7,8-HPCDF	61	--	2.2 U	14	2 U	2 U	--	24	13
1,2,3,4,7,8,9-HPCDF	9.1	--	2.2 U	3.9 J	2 U	2 U	--	3.1 J	2.1 U
1,2,3,4,7,8-HXCDD	1.4 U	--	1.4 U	1.4 U	1.3 U	1.3 U	--	1 J	1.4 U
1,2,3,4,7,8-HXCDF	9.9	--	5.7	44	1.4 J	1.4 U	--	5.2	36
1,2,3,6,7,8-HXCDD	1.2 U	--	1.2 U	1.5 Z	1.1 U	1.1 U	--	2.1 J	1.2 U
1,2,3,6,7,8-HXCDF	7.6	--	1.9 U	2.2 J	1.7 U	1.7 U	--	3.5 J	1.8 U
1,2,3,7,8,9-HXCDD	2.4 U	--	2.4 U	2.3 U	2.2 U	2.2 U	--	1.4 J	2.3 U
1,2,3,7,8,9-HXCDF	2.8 J	--	1.4 U	1.4 U	1.3 U	1.3 U	--	0.9 U	1.4 U
1,2,3,7,8-PECDD	1.9 U	--	1.9 U	4.1 Z	1.7 U	1.7 U	--	1.4 J	1.8 U
1,2,3,7,8-PECDF	47	--	17	98	2.5 J	1.5 U	--	110	62
2,3,4,6,7,8-HXCDF	6.9	--	0.94 U	1.8 J	0.87 U	0.87 U	--	3.1 J	1.6 J
2,3,4,7,8-PECDF	4 J	--	0.88 U	2.6 J	0.81 U	0.81 U	--	4.8 J	2.1 J
2,3,7,8-TCDD	0.2 U	--	0.2 U	0.32 U	0.23 Z	0.29 U	--	0.54 J	0.26 U
2,3,7,8-TCDF	1	--	0.38 J	4.6	0.56 J	0.47 J	--	4.5	2.6
TEQ DIOXINS (BIRD)	13.2113	--	2.71737	26.19	1.2145	0.4957	--	23.9645	14.8439
TEQ DIOXINS (BIRD) HALFND	14.4223	--	4.60237	26.57	2.831085	2.402285	--	24.0095	16.2004
TEQ DIOXINS (FISH)	7.9113	--	1.50637	15.62	0.5575	0.0492	--	12.1135	8.2239
TEQ DIOXINS (FISH) HALFND	9.3293	--	3.37837	16.2115	2.165085	1.909285	--	12.1585	9.7919
TEQ DIOXINS (HUMANS/MAMMALS)	6.5139	--	1.43911	13.914	0.643	0.178	--	9.3725	6.9067
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	7.8139	--	3.10511	14.329	2.058255	1.830755	--	9.4175	8.3522
TOTAL HPCDD	29 J	--	26 J	51 J	11 J	19 J	--	43 J	30 J
TOTAL HPCDF	93 J	--	2.2 UJ	36 J	2 UJ	2 UJ	--	40 J	24 J
TOTAL HXCDD	5.4 J	--	1.2 UJ	2.3 J	1.1 UJ	2.2 J	--	22 J	5.2 J
TOTAL HXCDF	83 J	--	7.1 J	92 J	1.4 J	0.87 UJ	--	130 J	62 J
TOTAL PECDD	1.9 UJ	--	1.9 UJ	1.8 UJ	1.7 UJ	1.7 UJ	--	9.7 J	1.8 UJ
TOTAL PECDF	140 J	--	44 J	320 J	3.5 J	0.81 UJ	--	360 J	200 J
TOTAL TCDD	0.84 J	--	0.2 UJ	1.2 J	0.2 UJ	0.29 UJ	--	11 J	1.4 J
TOTAL TCDF	41 J	--	14 J	89 J	0.33 J	0.23 UJ	--	110 J	43 J
METALS (MG/KG)									
ALUMINUM	9970	--	9880	9690	7030	7950	--	6090	7270
ANTIMONY	1.2 U	--	1.1 U	1.2 U	1.1 U	1.1 U	--	1.1 U	1.1 U
ARSENIC	17.1	--	4.1	8.3	6.8	2.3	--	4.5	11.5
BARIUM	109	--	84.6	143	68.3	39.6	--	37.1	72.1
BERYLLIUM	0.82	--	0.35 J	1.3	0.69	0.25 J	--	0.51 J	0.59
CADMIUM	0.23 J	--	0.57 U	0.17 J	0.2 J	0.53 U	--	0.56 U	0.31 J
CALCIUM	953	--	319 J	1540	546 J	321 J	--	1060	1200
CHROMIUM	19.3	--	11.5	11.5	10.5	4	--	9.4	8.6
COBALT	9.9	--	1.6	20.7	8.4	3.6	--	3.9	6.5
COPPER	28.9	--	4.7	62.6	38.7	3.6	--	7.4	76.1
CYANIDE	0.55 R	--	0.58 R	0.6 R	0.56 R	0.56 R	--	0.58 R	0.55 R
IRON	15700	--	9230	20500	13900	9010	--	22300	20800
LEAD	139	--	13.1	26.9	33.8	5.4	--	9.3	52.7
MAGNESIUM	897	--	612	1190	815	583	--	789	786
MANGANESE	449	--	32.3	1140	323	149	--	147	332
MERCURY	0.053 J	--	0.065 J	0.12 UJ	0.11 UJ	0.11 UJ	--	0.12 UJ	0.11 UJ
NICKEL	15.8	--	3.8	19.1	11.3	3.9	--	10.4	11
POTASSIUM	1170	--	782	1530	992	739	--	1290	1140
SELENIUM	1.3 J	--	0.56 J	1.1 J	0.51 J	0.17 J	--	0.34 J	0.87 J
SILVER	0.37 J	--	0.57 U	0.61 U	0.55 U	0.53 U	--	0.56 U	0.062 J
SODIUM	586 UJ	--	572 UJ	603 UJ	556 UJ	517 UJ	--	598 UJ	542 UJ
THALLIUM	0.2 J	--	0.069 J	0.13 J	0.038 J	0.53 U	--	0.057 J	0.12 J
VANADIUM	33.2	--	14.7	14.9	14.3	6.4	--	13.5	10.4
ZINC	78	--	13.2	65.2	57.3	9.9	--	26	61
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	80	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	33400	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	84	84	--	--	90	--	90	--	86

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-323	SB-323	SB-323	SB-324	SB-324	SB-324	SB-324	SB-325	SB-325
SAMPLE ID	SB323-20191122-0624-RE	SB323-20191122-4872	SB323-20191122-7296	SB324-20191122-0006	SB324-20191122-0624	SB324-20191122-2448	SB324-20191122-6084	SB325-20191122-0006	SB325-20191122-0006-D
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122
DUPLICATE									SB325-20191122-0006
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0.5	4	6	0	0.5	2	5	0	0
BOTTOM DEPTH	2	6	8	0.5	2	4	7	0.5	0.5
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	430	--	1100	200	--	130	520	850
1,2,3,4,6,7,8,9-OCDF	--	1.8 U	--	59	5.6 J	--	1.8 U	32	12
1,2,3,4,6,7,8-HPCDD	--	5.5	--	31	7.6	--	1.8 J	9.8	11
1,2,3,4,6,7,8-HPCDF	--	2.2 U	--	19	6.2	--	2.1 U	10	5.2
1,2,3,4,7,8,9-HPCDF	--	2.2 U	--	3.3 J	2.2 U	--	2.1 U	4.5 J	2.2 U
1,2,3,4,7,8-HXCDD	--	1.5 U	--	1.4 U	1.4 U	--	1.4 U	1.4 U	1.4 U
1,2,3,4,7,8-HXCDF	--	1.6 U	--	46	9.3	--	1.5 U	61	17
1,2,3,6,7,8-HXCDD	--	1.2 U	--	1.3 J	1.2 U	--	1.2 U	1.2 U	1.2 U
1,2,3,6,7,8-HXCDF	--	1.9 U	--	2.4 J	1.8 U	--	1.8 U	1.9 J	1.8 U
1,2,3,7,8,9-HXCDD	--	2.4 U	--	2.3 U	2.3 U	--	2.3 U	2.3 U	2.3 U
1,2,3,7,8,9-HXCDF	--	1.5 U	--	1.4 U	1.4 U	--	1.4 U	1.4 U	1.4 U
1,2,3,7,8-PECDD	--	1.9 U	--	4.2 Z	1.8 U	--	1.8 U	2.4 Z	1.8 U
1,2,3,7,8-PECDF	--	2.8 J	--	88	19	--	1.6 U	150	38
2,3,4,6,7,8-HXCDF	--	0.95 U	--	2.3 J	0.93 U	--	0.91 U	1.7 J	0.93 U
2,3,4,7,8-PECDF	--	0.89 U	--	3.1 J	0.87 U	--	0.85 U	2.1 J	0.99 U
2,3,7,8-TCDD	--	0.2 U	--	0.27 U	0.3 U	--	0.19 U	0.24 U	0.23 U
2,3,7,8-TCDF	--	0.5 Z	--	5	1.6	--	0.45 Z	3.3	1.8
TEQ DIOXINS (BIRD)	--	0.8285	--	26.5529	4.52016	--	0.4648	29.47	7.4492
TEQ DIOXINS (BIRD) HALFND	--	2.80659	--	26.9079	6.37866	--	2.42239	29.816	9.3327
TEQ DIOXINS (FISH)	--	0.2135	--	15.8529	2.05016	--	0.0373	17.785	3.8392
TEQ DIOXINS (FISH) HALFND	--	2.19859	--	16.4194	3.90266	--	1.95389	18.3425	5.6867
TEQ DIOXINS (HUMANS/MAMMALS)	--	0.318	--	14.3507	1.85968	--	0.102	14.7286	3.4406
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	2.07627	--	14.7407	3.50268	--	1.79527	15.1636	5.0666
TOTAL HPCDD	--	11 J	--	60 J	16 J	--	1.8 J	19 J	20 J
TOTAL HPCDF	--	2.2 UJ	--	51 J	10 J	--	2.1 UJ	26 J	11 J
TOTAL HXCDD	--	1.2 UJ	--	11 J	3.1 J	--	1.2 UJ	4.4 J	1.4 J
TOTAL HXCDF	--	0.95 UJ	--	96 J	15 J	--	0.91 UJ	130 J	32 J
TOTAL PECDD	--	1.9 UJ	--	1.8 UJ	1.8 UJ	--	1.8 UJ	1.8 UJ	1.8 UJ
TOTAL PECDF	--	4.8 J	--	280 J	48 J	--	0.85 UJ	470 J	110 J
TOTAL TCDD	--	0.54 J	--	2.7 J	2.3 J	--	0.19 UJ	2.3 J	1.2 J
TOTAL TCDF	--	0.33 J	--	97 J	21 J	--	0.26 J	140 J	32 J
METALS (MG/KG)									
ALUMINUM	--	10000	--	9190	9230	--	13300	8540	8480
ANTIMONY	--	1.2 U	--	1.3 U	1.7	--	1.2 U	1.2 U	1.1 U
ARSENIC	--	9.2	--	10.3	17.3	--	6.7	9.2	11.3
BARIUM	--	119	--	80.1	139	--	59.5	78.3	108
BERYLLIUM	--	0.95	--	0.88	1.4	--	0.95	0.72	0.87
CADMIUM	--	0.25 J	--	0.24 J	0.41 J	--	0.59 U	0.17 J	0.33 J
CALCIUM	--	1030	--	951	1410	--	330 J	1390	1270
CHROMIUM	--	13.1	--	14.3	25.2	--	14.5	12.1	14.2
COBALT	--	10.8	--	10.9	18.8	--	6.2	9.2	12.6
COPPER	--	36.8	--	48.4	62.6	--	11.8	43.4	61.4
CYANIDE	--	0.59 R	--	0.67 R	0.58 R	--	0.59 R	0.61 R	0.6 R
IRON	--	20900	--	31500	31300	--	29500	31400	36600
LEAD	--	46.7	--	44.5	89.3	--	14.8	36.9	42.7
MAGNESIUM	--	1330	--	871	1110	--	1390	984	1100
MANGANESE	--	503	--	380	848	--	226	401	586
MERCURY	--	0.11 UJ	--	0.13 UJ	0.11 UJ	--	0.12 UJ	0.12 UJ	0.11 UJ
NICKEL	--	15.3	--	15.3	30.3	--	16.3	15.2	20.2
POTASSIUM	--	1350	--	1740	1570	--	1290	1720	1700
SELENIUM	--	0.93 J	--	0.79 J	0.86 J	--	0.62 J	0.61 J	0.64 J
SILVER	--	0.061 J	--	0.09 J	0.07 J	--	0.59 U	0.61 U	0.57 U
SODIUM	--	599 UJ	--	670 UJ	555 UJ	--	607 UJ	586 UJ	580 UJ
THALLIUM	--	0.091 J	--	0.082 J	0.14 J	--	0.13 J	0.1 J	0.14 J
VANADIUM	--	16.2	--	15.1	24.7	--	20.3	15.5	16
ZINC	--	58.2	--	79.7	131	--	41	61.2	74
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	84	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	64600	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	--	81	--	85	86	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-325	SB-325	SB-325	SB-326	SB-326	SB-326	SB-326	SB-327	SB-327
SAMPLE ID	SB325-20191122-0624	SB325-20191122-6084	SB325-20191122-84106	SB326-20191115-0006	SB326-20191115-0624	SB326-20191115-2448	SB326-20191115-4872	SB327-20191115-0006	SB327-20191115-0624
SAMPLE DATE	20191122	20191122	20191122	20191115	20191115	20191115	20191115	20191115	20191115
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0.5	5	7	0	0.5	2	4	0	0.5
BOTTOM DEPTH	2	7	8.8	0.5	2	4	6	0.5	2
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	33	--	2.6 J	480	430	--	310	7100 J	170
1,2,3,4,6,7,8,9-OCDF	7.8 J	--	1.7 U	10	0.54 JZ	--	0.31 U	770	54
1,2,3,4,6,7,8-HPCDD	2.4 J	--	1.1 U	16	3.6 J	--	2.8 J	640	36
1,2,3,4,6,7,8-HPCDF	3.2 J	--	2.1 U	5.3	0.32 JZ	--	0.18 U	120	21
1,2,3,4,7,8,9-HPCDF	2.1 U	--	2.1 U	0.47 J	0.18 U	--	0.18 U	12	4 J
1,2,3,4,7,8-HXCDD	1.4 U	--	1.4 U	0.29 JZ	0.14 U	--	0.14 U	5.5	0.61 JZ
1,2,3,4,7,8-HXCDF	25	--	1.5 U	1.2 J	0.13 U	--	0.13 U	11	5.8
1,2,3,6,7,8-HXCDD	1.2 U	--	1.2 U	0.74 J	0.14 U	--	0.14 U	16	20
1,2,3,6,7,8-HXCDF	1.8 U	--	1.8 U	0.78 JZ	0.093 U	--	0.093 U	6.3	3.3 J
1,2,3,7,8,9-HXCDD	2.2 U	--	2.2 U	0.55 JZ	0.15 U	--	0.21 JZ	11	7
1,2,3,7,8,9-HXCDF	1.4 U	--	1.4 U	0.21 U	0.21 U	--	0.21 U	12	1.2 J
1,2,3,7,8-PECDD	1.8 U	--	1.8 U	0.18 U	0.18 U	--	0.18 U	3.5 J	1.7 JZ
1,2,3,7,8-PECDF	62	--	1.6 U	0.37 U	0.2 U	--	0.17 U	0.98 J	1.4 J
2,3,4,6,7,8-HXCDF	0.89 U	--	0.9 U	0.9 J	0.093 U	--	0.091 U	6.7	2.5 J
2,3,4,7,8-PECDF	0.83 U	--	0.84 U	10	0.25 JZ	--	0.16 U	76	3 JZ
2,3,7,8-TCDD	0.22 U	--	0.19 U	0.14 U	0.14 U	--	0.14 U	0.64 J	0.29 U
2,3,7,8-TCDF	1.8	--	0.23 U	1.8	0.2 U	--	0.15 U	11	2.4
TEQ DIOXINS (BIRD)	10.53848	--	0.00026	12.2876	0.299854	--	0.0548	99.12	9.7589
TEQ DIOXINS (BIRD) HALFND	12.32948	--	2.062895	12.4766	0.608754	--	0.4105155	99.12	9.9039
TEQ DIOXINS (FISH)	5.72848	--	0.00026	5.6586	0.174854	--	0.0359	52.106	5.5534
TEQ DIOXINS (FISH) HALFND	7.52798	--	1.919645	5.83835	0.408504	--	0.3076155	52.106	5.6984
TEQ DIOXINS (HUMANS/MAMMALS)	4.60824	--	0.00078	3.9907	0.243362	--	0.142	45.0004	7.6002
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	6.19774	--	1.704035	4.16675	0.465062	--	0.3780965	45.0004	7.7452
TOTAL HPCDD	4.7 J	--	1.1 UJ	32 J	6.4 J	--	5.2 J	910 J	70 J
TOTAL HPCDF	6.1 J	--	2.1 UJ	11 J	0 UJ	--	0 UJ	490 J	51 J
TOTAL HXCDD	1.2 UJ	--	1.2 UJ	5.5 J	0.56 J	--	0 UJ	80 J	140 J
TOTAL HXCDF	44 J	--	0.9 UJ	36 J	0.2 J	--	0 UJ	420 J	85 J
TOTAL PECDD	1.8 UJ	--	1.8 UJ	2 J	0 UJ	--	0 UJ	9.5 J	6.5 J
TOTAL PECDF	160 J	--	0.84 UJ	150 J	3.8 J	--	0 UJ	1600 J	150 J
TOTAL TCDD	0.55 J	--	0.19 UJ	1.9 J	0 UJ	--	0 UJ	14 J	6.1 J
TOTAL TCDF	33 J	--	0.23 UJ	60 J	3 J	--	0 UJ	730 J	180 J
METALS (MG/KG)									
ALUMINUM	8810	--	9490	6530	7720	--	11600	7540	4620 J
ANTIMONY	1.1 U	--	1 U	1.2	0.72 J	--	1 U	0.58 J	4.4 J
ARSENIC	6	--	15.8 J	12.5	16.2	--	2.3	13.1	15.9 J
BARIUM	84.9	--	145 J	77	110	--	49.7	68.4	35.4 J
BERYLLIUM	0.69	--	2.4 J	0.91	1.5	--	0.82	0.62 J	0.29 J
CADMIUM	0.16 J	--	0.27 J	0.41 J	0.19 J	--	0.51 U	0.26 J	0.28 J
CALCIUM	1090	--	344 J	1710	1640	--	912	4290	894
CHROMIUM	10.7	--	25.8 J	16.3	18.3	--	8.4	11.8	10.2 J
COBALT	12.2	--	28.9 J	14	28.1	--	10.6	8.8	4.2 J
COPPER	40.7	--	65.3 J	129	113	--	7.8	40.3	40.1 J
CYANIDE	0.52 R	--	0.53 R	0.049 J	0.58 R	--	0.14 J	0.099 J	0.15 J
IRON	18500	--	12900	49500	60100	--	26900	14600	115000 R
LEAD	22.9	--	32.7 J	78.1	36	--	12.4	48.6	57.4 J
MAGNESIUM	2980	--	2440	822	1450	--	1390	1040	1020 J
MANGANESE	339	--	285 J	732	896	--	418	279	92.4 J
MERCURY	0.1 UJ	--	0.11 UJ	0.12 UJ	0.11 UJ	--	0.04 UJ	0.13 UJ	0.12 UJ
NICKEL	22.3	--	56.7 J	20.1	46.7	--	10.7	15.8	10 J
POTASSIUM	1940	--	2070	1290	1620	--	1530	1810	1230
SELENIUM	1.1 J	--	2.4 J	0.81 J	0.63 J	--	0.28 J	0.85 J	1.2 J
SILVER	0.051 J	--	0.12 J	0.056 J	0.064 J	--	0.51 U	0.088 J	0.61 U
SODIUM	552 UJ	--	515 UJ	27.9 J	36.9 J	--	22.8 J	56.3 J	46.6 J
THALLIUM	0.065 J	--	0.42 J	0.16 J	0.18 J	--	0.06 J	0.25 J	0.26 J
VANADIUM	9.5	--	18.6 J	14.9	21.1	--	9.1	11	4.2
ZINC	70.7	--	144 J	95.2	85.2	--	22.2	82.7	45.9 J
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	72	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	103000	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	91	95	--	--	87	89	--	--	80

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-327	SB-327	SB-328	SB-328	SB-328	SB-328	SB-366	SB-366	SB-366
SAMPLE ID	SB327-20191115-2448	SB327-20191115-7296	SB328-20191115-0006	SB328-20191115-0624	SB328-20191115-2448	SB328-20191115-4872	SB366-20191115-0006	SB366-20191115-0624	SB366-20191115-2448
SAMPLE DATE	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	6	0	0.5	2	4	0	0.5	2
BOTTOM DEPTH	4	8	0.5	2	4	6	0.5	2	4
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	98	1400	230	120	--	820	64	--
1,2,3,4,6,7,8,9-OCDF	--	0.91 J	120	21	9.6 J	--	120	4.3 J	--
1,2,3,4,6,7,8-HPCDD	--	2.5 J	84	13	11	--	57	5.8	--
1,2,3,4,6,7,8-HPCDF	--	0.18 U	23	13	5.5 J	--	35	3.5 JZ	--
1,2,3,4,7,8,9-HPCDF	--	0.18 U	4.5 J	2.1 J	0.79 JZ	--	15	0.39 JZ	--
1,2,3,4,7,8-HXCDD	--	0.14 U	0.88 J	0.47 JZ	0.28 U	--	1.1 J	0.3 U	--
1,2,3,4,7,8-HXCDF	--	0.13 U	6.5	5.6	2 J	--	22	1.5 J	--
1,2,3,6,7,8-HXCDD	--	0.14 U	2.6 J	1.2 J	1 J	--	4.7 JZ	0.55 J	--
1,2,3,6,7,8-HXCDF	--	0.093 U	2.2 J	2.3 J	0.88 JZ	--	5	0.9 JZ	--
1,2,3,7,8,9-HXCDD	--	0.15 U	1.8 JZ	0.84 J	0.75 J	--	2.2 J	0.48 J	--
1,2,3,7,8,9-HXCDF	--	0.21 U	0.84 J	0.89 J	0.42 U	--	3.3 J	0.21 U	--
1,2,3,7,8-PECDD	--	0.18 U	0.81 J	0.87 J	0.51 JZ	--	2 J	0.2 U	--
1,2,3,7,8-PECDF	--	0.18 U	0.21 U	2.9 J	1.8 JZ	--	50	1.6 JZ	--
2,3,4,6,7,8-HXCDF	--	0.091 U	2.6 J	2.6 J	0.87 JZ	--	4.9 J	0.76 JZ	--
2,3,4,7,8-PECDF	--	0.16 U	62	5.2	1.6 JZ	--	260	2.5 JZ	--
2,3,7,8-TCDD	--	0.14 U	0.32 JZ	0.14 U	0.28 U	--	0.34 U	0.39 U	--
2,3,7,8-TCDF	--	0.13 U	6.5 JZ	6.1	2.2	--	27	3.9	--
TEQ DIOXINS (BIRD)	--	0.012391	71.605	13.9076	5.03686	--	298.493	6.98103	--
TEQ DIOXINS (BIRD) HALFND	--	0.366091	71.6155	13.9776	5.20486	--	298.663	7.29403	--
TEQ DIOXINS (FISH)	--	0.012391	34.664	5.5035	1.98936	--	140.64	1.90283	--
TEQ DIOXINS (FISH) HALFND	--	0.284591	34.66925	5.5735	2.22036	--	140.81	2.28333	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	0.054673	23.693	4.8733	2.02578	--	89.872	1.72439	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	0.297373	23.69615	4.9433	2.20078	--	90.042	2.04489	--
TOTAL HPCDD	--	2.5 J	130 J	25 J	27 J	--	110 J	10 J	--
TOTAL HPCDF	--	0 UJ	78 J	24 J	11 J	--	100 J	1.5 J	--
TOTAL HXCDD	--	0 UJ	12 J	13 J	12 J	--	21 J	5.9 J	--
TOTAL HXCDF	--	0 UJ	200 J	66 J	7 J	--	650 J	6.9 J	--
TOTAL PECDD	--	0 UJ	4 J	4.8 J	4.1 J	--	4.9 J	1.1 J	--
TOTAL PECDF	--	0 UJ	1200 J	330 J	4.9 J	--	6200 J	14 J	--
TOTAL TCDD	--	0 UJ	7.8 J	16 J	5.8 J	--	11 J	0.91 J	--
TOTAL TCDF	--	0 UJ	620 J	240 J	17 J	--	2700 J	20 J	--
METALS (MG/KG)									
ALUMINUM	--	10300	7580	12200	8390	--	6790	4060	--
ANTIMONY	--	1.2 U	0.23 J	0.32 J	1.2	--	0.6 J	0.36 J	--
ARSENIC	--	5.8	4.7	13.4	9.1	--	6.4	27.7	--
BARIUM	--	48.5	46.8	171	176	--	61.2	32.2	--
BERYLLIUM	--	0.66	0.43 J	0.92	1.5	--	0.57 J	0.36 J	--
CADMIUM	--	0.6 U	0.13 J	0.24 J	0.17 J	--	0.31 J	1.4	--
CALCIUM	--	696	13300	2920	21000	--	1410	167000	--
CHROMIUM	--	15.1	6.6	12.6	7.7	--	11.2	6.8	--
COBALT	--	3.9	6.5	6.6	5	--	10.4	3.9	--
COPPER	--	12.7	16.9	95.9	31	--	24.7	15.9	--
CYANIDE	--	0.14 J	0.013 J	0.062 J	0.053 J	--	0.19 J	0.058 J	--
IRON	--	16300	21200	18400	20900	--	15100	34800	--
LEAD	--	17.3	19.1	40	63.1	--	52.1	9.1	--
MAGNESIUM	--	899	1310	2580	1420	--	732	5650	--
MANGANESE	--	154	214	202	267	--	537	314	--
MERCURY	--	0.11 U	0.12 UJ	0.11 UJ	0.11 UJ	--	0.13 UJ	0.1 UJ	--
NICKEL	--	9.6	13.5	16.9	13.2	--	12.7	13.6	--
POTASSIUM	--	1410	1610	3040	1660	--	1200	1040	--
SELENIUM	--	0.53 J	0.25 J	0.94 J	1.5 J	--	0.55 J	1.9 J	--
SILVER	--	0.6 U	0.63 U	0.068 J	0.55 U	--	0.16 J	0.55 U	--
SODIUM	--	24.1 J	50.5 J	210 J	120 J	--	36.5 J	107 J	--
THALLIUM	--	0.1 J	0.093 J	0.17 J	0.12 J	--	0.09 J	0.34 J	--
VANADIUM	--	20.6	6.6	17.1	6.8	--	11.5	4.5	--
ZINC	--	29.7	52.4	65.2	71.9	--	71.2	75.6	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	81	--	--	90	--	77	--	84	76

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-366	SB-369	SB-369	SB-369	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206
SAMPLE ID	SB366-20191115-4872	SB369-20191121-0006	SB369-20191121-0624	SB369-20191121-6084	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206
SAMPLE DATE	20191115	20191121	20191121	20191121	20171213	20171213	20180320	20180320
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SB	SS	SS	SS	SS
TOP DEPTH	4	0	0.5	5	0	0	0	0
BOTTOM DEPTH	6	0.5	2	7	6	6	6	6
DIOXINS/FURANS (NG/KG)								
1,2,3,4,6,7,8,9-OCDD	220	690 J	140 J	100 J	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	0.31 U	59 J	6.9 J	6.5 J	--	--	--	--
1,2,3,4,6,7,8-HPCDD	3.8 J	64 J	10 J	6.8 J	--	--	--	--
1,2,3,4,6,7,8-HPCDF	0.18 U	31 J	4.5 J	4.9 J	--	--	--	--
1,2,3,4,7,8,9-HPCDF	0.18 U	2.2 UJ	2.1 UJ	2.1 UJ	--	--	--	--
1,2,3,4,7,8-HXCDD	0.14 U	1.5 UJ	1.4 UJ	1.4 UJ	--	--	--	--
1,2,3,4,7,8-HXCDF	0.13 U	3.1 J	1.5 UJ	1.5 UJ	--	--	--	--
1,2,3,6,7,8-HXCDD	0.14 U	2.8 J	1.2 UJ	1.2 UJ	--	--	--	--
1,2,3,6,7,8-HXCDF	0.093 U	1.9 UJ	1.8 UJ	1.8 UJ	--	--	--	--
1,2,3,7,8,9-HXCDD	0.15 U	2.6 J	2.2 UJ	2.3 UJ	--	--	--	--
1,2,3,7,8,9-HXCDF	0.21 U	1.5 UJ	1.4 UJ	1.4 UJ	--	--	--	--
1,2,3,7,8-PECDD	0.18 U	1.9 UJ	1.8 UJ	1.8 UJ	--	--	--	--
1,2,3,7,8-PECDF	0.2 U	2 J	1.6 UJ	1.6 UJ	--	--	--	--
2,3,4,6,7,8-HXCDF	0.091 U	1.8 J	0.89 UJ	0.92 UJ	--	--	--	--
2,3,4,7,8-PECDF	0.2 JZ	1.9 J	0.83 UJ	0.86 UJ	--	--	--	--
2,3,7,8-TCDD	0.18 U	0.45 Z	0.19 UJ	0.2 Z	--	--	--	--
2,3,7,8-TCDF	0.2 U	4.1 J	0.59 J	0.58 J	--	--	--	--
TEQ DIOXINS (BIRD)	0.2258	7.8769	0.65969	0.84645	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	0.5555155	9.0454	2.59069	2.70395	--	--	--	--
TEQ DIOXINS (FISH)	0.1258	2.6979	0.09919	0.29545	--	--	--	--
TEQ DIOXINS (FISH) HALFND	0.3802655	4.2039	1.99869	2.10945	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	0.164	3.6947	0.24807	0.40695	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	0.4065465	4.9007	1.92157	1.99645	--	--	--	--
TOTAL HPCDD	7.5 J	120 J	22 J	14 J	--	--	--	--
TOTAL HPCDF	0 UJ	67 J	8.4 J	7.9 J	--	--	--	--
TOTAL HXCDD	0.48 J	45 J	11 J	4.2 J	--	--	--	--
TOTAL HXCDF	0.34 J	33 J	3.8 J	3.1 J	--	--	--	--
TOTAL PECDD	0 UJ	8.4 J	1.8 UJ	1.8 UJ	--	--	--	--
TOTAL PECDF	0.68 J	25 J	5.1 J	5.3 J	--	--	--	--
TOTAL TCDD	1.2 J	4.7 J	1.3 J	1 J	--	--	--	--
TOTAL TCDF	0.55 J	15 J	4.6 J	5.9 J	--	--	--	--
METALS (MG/KG)								
ALUMINUM	6370	3830	3620	3710	--	--	--	--
ANTIMONY	1.2 U	1.2 U	1.1 U	1 U	--	--	--	--
ARSENIC	6.8	5.6	4.1	3.5	--	--	--	--
BARIUM	53.3	81.9	38.5	42	--	--	--	--
BERYLLIUM	0.6	0.56 J	0.3 J	0.33 J	--	--	--	--
CADMIUM	0.59 U	0.39 J	0.1 J	0.11 J	--	--	--	--
CALCIUM	1010	2650	4650	1470	--	--	--	--
CHROMIUM	12.2	10.6	41.1	10.3	--	--	--	--
COBALT	7.9	9.8	6	4.4	--	--	--	--
COPPER	15.7	23.7	17.5	31.9	--	--	--	--
CYANIDE	0.089 J	0.58 R	0.54 R	0.54 R	--	--	--	--
IRON	10100	10000	15200	18300	--	--	--	--
LEAD	12.7	86.3	14.9	15.1	--	--	--	--
MAGNESIUM	565 J	731	918	1200	--	--	--	--
MANGANESE	234	821	306	148	--	--	--	--
MERCURY	0.11 UJ	0.12 UJ	0.1 UJ	0.11 UJ	--	--	--	--
NICKEL	9.1	15.3	12.3	9.6	--	--	--	--
POTASSIUM	692	624	815	900	--	--	--	--
SELENIUM	0.65 J	0.77 J	2.7 U	0.2 J	--	--	--	--
SILVER	0.59 U	0.19 J	0.16 J	0.16 J	--	--	--	--
SODIUM	42.2 J	591 UJ	551 UJ	563 UJ	--	--	--	--
THALLIUM	0.11 J	0.055 J	0.54 U	0.52 U	--	--	--	--
VANADIUM	13.6	10.2	2.7 U	5.6	--	--	--	--
ZINC	21.9	161	76.1	54.1	--	--	--	--
MISCELLANEOUS (%)								
TOTAL SOLIDS	--	84	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)								
TOTAL ORGANIC CARBON	--	24900	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)								
PERCENT SOLIDS	--	--	89	85	--	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-206	SS-207	SS-208	SS-209	SS-210	SS-211
SAMPLE ID	SS-206-B	SS-207	SS-208	SS-209	SS-210	SS-211
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE						
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6
DIOXINS/FURANS (NG/KG)						
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--
METALS (MG/KG)						
ALUMINUM	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--
COBALT	--	--	--	--	--	--
COPPER	--	--	--	--	--	--
CYANIDE	--	--	--	--	--	--
IRON	--	--	--	--	--	--
LEAD	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--
SILVER	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--
ZINC	--	--	--	--	--	--
MISCELLANEOUS (%)						
TOTAL SOLIDS	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)						
TOTAL ORGANIC CARBON	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)						
PERCENT SOLIDS	--	--	--	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-312	SB-312	SB-312	SB-313	SB-313	SB-313	SB-313	SB-314	SB-314	SB-314
SAMPLE ID	SB312-20191107-0624	SB312-20191107-2448	SB312-20191107-4872	SB313-20191107-0006	SB313-20191107-0624	SB313-20191107-2448	SB313-20191107-4872	SB314-20191107-0006	SB314-20191107-0624	SB314-20191107-2448
SAMPLE DATE	20191107	20191107	20191107	20191107	20191107	20191107	20191107	20191107	20191107	20191107
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	0.5	2	4	0	0.5	2	4	0	0.5	2
BOTTOM DEPTH	2	4	6	0.5	2	4	6	0.5	2	4
PCB-194	0.0097	0.0000055	--	0.0013	0.0064	--	0.00051	0.0085	0.001	--
PCB-195	0.0053	0.000002	--	0.0006	0.003	--	0.00023	0.004	0.00044	--
PCB-196	--	--	--	--	--	--	--	--	--	--
PCB-196/203	0.014	0.000011	--	0.0014	0.0074	--	0.00057	0.011	0.0012	--
PCB-197	0.00047	0.000002 U	--	0.000033	0.00025	--	0.000019	0.00033	0.000041	--
PCB-197/200	--	--	--	--	--	--	--	--	--	--
PCB-198	0.00039	0.000002 U	--	0.000091	0.00035	--	0.000035	0.00057	0.000069	--
PCB-198/199	--	--	--	--	--	--	--	--	--	--
PCB-199	0.011	0.000014	--	0.0015	0.0061	--	0.00048	0.0091	0.001	--
PCB-2	0.0000075	0.0000034	--	0.0000056	0.000014	--	0.0000019 J	0.0000052	0.000002 U	--
PCB-20/21/33	0.00022	0.000006 U	--	0.000049	0.00018	--	0.000016	0.00017	0.000023	--
PCB-20/28	--	--	--	--	--	--	--	--	--	--
PCB-200	0.0013	0.0000016 J	--	0.00017	0.00086	--	0.000074	0.0012	0.00015	--
PCB-201	0.0014	0.0000017 J	--	0.00012	0.00085	--	0.000068	0.001	0.00014	--
PCB-202	0.0021	0.0000047	--	0.0003	0.0011	--	0.000092	0.0016	0.00018	--
PCB-203	--	--	--	--	--	--	--	--	--	--
PCB-204	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-205	0.00061	0.000002 U	--	0.000078	0.00033	--	0.000028	0.00052	0.000058	--
PCB-206	0.003	0.000042	--	0.0007	0.0013	--	0.0001	0.0018	0.00021	--
PCB-207	0.00043	0.0000032	--	0.000059	0.00019	--	0.000013	0.00023	0.000028	--
PCB-208	0.00058	0.000017	--	0.00021	0.00022	--	0.00002	0.00034	0.000034	--
PCB-209	0.00028	0.000053	--	0.00041	0.000083	--	0.000011	0.00025	0.000012	--
PCB-21/33	--	--	--	--	--	--	--	--	--	--
PCB-22	0.00035	0.000002 U	--	0.00005	0.00025	--	0.000024	0.00027	0.000029	--
PCB-23	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-24	0.000032	0.000002 U	--	0.0000037	0.000021	--	0.0000024	0.000022	0.0000024	--
PCB-25	0.000071	0.000002 U	--	0.00001	0.000052	--	0.0000051	0.000041	0.0000059	--
PCB-26	0.00014	0.000002 U	--	0.000018	0.000086	--	0.0000077	0.000083	0.000011	--
PCB-26/29	--	--	--	--	--	--	--	--	--	--
PCB-27	0.000034	0.000002 U	--	0.000004	0.000022	--	0.0000022	0.00002	0.0000023	--
PCB-28	0.0007	0.000002 U	--	0.00013	0.0006	--	0.000056	0.00063	0.000071	--
PCB-29	0.0000029	0.000002 U	--	0.000002 U	0.0000032	--	0.000002 U	0.000002	0.000002 U	--
PCB-3	0.000019	0.0000041	--	0.0000085	0.000029	--	0.0000028	0.000016	0.0000016 J	--
PCB-30	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-31	0.0012	0.000002 U	--	0.00012	0.00047	--	0.000042	0.00049	0.000064	--
PCB-32	0.0002	0.000002 U	--	0.000027	0.00013	--	0.000015	0.00015	0.000021	--
PCB-34	0.0000031	0.000002 U	--	0.000002 U	0.0000014 J	--	0.000002 U	0.0000021	0.000002 U	--
PCB-35	0.000032	0.000002 U	--	0.0000046	0.000016	--	0.000002 U	0.000012	0.000002	--
PCB-36	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-37	0.00059	0.000002 U	--	0.0001	0.00031	--	0.000027	0.00031	0.000042	--
PCB-38	0.0000056	0.000002 U	--	0.000002 U	0.000003	--	0.000002 U	0.0000039	0.000002 U	--
PCB-39	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-4	0.000041	0.000002 U	--	0.0000091	0.000039	--	0.0000039	0.000039	0.000006	--
PCB-40	0.00018	0.000002 U	--	0.000019	0.00011	--	0.000009	0.00012	0.000012	--
PCB-40/71	--	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	0.0014	0.000008 U	--	0.00015	0.0007	--	0.000052	0.00082	0.000078	--
PCB-42	--	--	--	--	--	--	--	--	--	--
PCB-42/59	0.00048	0.000004 U	--	0.000048	0.00024	--	0.00002	0.0003	0.000025	--
PCB-43	--	--	--	--	--	--	--	--	--	--
PCB-43/49	0.0017	0.0000013 J	--	0.00015	0.00053	--	0.000041	0.00077	0.000062	--
PCB-44	0.0017	0.0000016 J	--	0.00011	0.00063	--	0.00005	0.00081	0.00007	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--	--
PCB-45	0.00016	0.000002 U	--	0.000011	0.00011	--	0.0000095	0.00011	0.0000089	--
PCB-45/51	--	--	--	--	--	--	--	--	--	--
PCB-46	0.000052	0.000002 U	--	0.0000038	0.000045	--	0.0000042	0.000026	0.0000045	--
PCB-47	0.00043	0.000002 U	--	0.000059	0.00023	--	0.000015	0.00029	0.000021	--
PCB-48	--	--	--	--	--	--	--	--	--	--
PCB-48/75	0.00012	0.000004 U	--	0.000021	0.000081	--	0.0000097	0.00012	0.000011	--
PCB-49/69	--	--	--	--	--	--	--	--	--	--
PCB-5	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-50	0.0000029	0.000002 U	--	0.000002 U	0.0000017 J	--	0.000002 U	0.000002	0.000002 U	--
PCB-50/53	--	--	--	--	--	--	--	--	--	--
PCB-51	0.00004	0.000002 U	--	0.0000026	0.000029	--	0.0000032	0.000026	0.0000034	--
PCB-52	--	--	--	--	--	--	--	--	--	--
PCB-52/69	0.0041	0.0000031 J	--	0.00019	0.0012	--	0.000097	0.0018	0.00016	--
PCB-53	0.00016	0.000002 U	--	0.0000082	0.0001	--	0.0000089	0.000074	0.0000098	--
PCB-54	0.000002	0.000002 U	--	0.000002 U	0.0000013 J	--	0.000002 U	0.0000022	0.000002 U	--
PCB-55	0.000058	0.000002 U	--	0.0000071	0.000023	--	0.0000022	0.000033	0.0000034	--
PCB-56	--	--	--	--	--	--	--	--	--	--
PCB-56/60	0.0013	0.000004 U	--	0.00015	0.00065	--	0.000053	0.00077	0.000072	--
PCB-57	0.0000088	0.000002 U	--	0.0000014 J	0.0000053	--	0.000002 U	0.0000076	0.000002 U	--
PCB-58	0.000002 U	0.000002 U	--	0.00000071 J	0.000002	--	0.000002 U	0.0000025	0.000002 U	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--	--
PCB-6	0.000036	0.000002 U	--	0.0000073	0.000026	--	0.0000029	0.000029	0.0000038	--
PCB-60	--	--	--	--	--	--	--	--	--	--
PCB-61/70	0.0051	0.0000047	--	0.00036	0.0015	--	0.000094	0.0016	0.00017	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--	--
PCB-62	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-63	0.000085	0.000002 U	--	0.000011	0.000037	--	0.0000027	0.000049	0.0000038	--
PCB-64	--	--	--	--	--	--	--	--	--	--

LOCATION	SB-312	SB-312	SB-312	SB-313	SB-313	SB-313	SB-313	SB-314	SB-314	SB-314
SAMPLE ID	SB312-20191107-0624	SB312-20191107-2448	SB312-20191107-4872	SB313-20191107-0006	SB313-20191107-0624	SB313-20191107-2448	SB313-20191107-4872	SB314-20191107-0006	SB314-20191107-0624	SB314-20191107-2448
SAMPLE DATE	20191107	20191107	20191107	20191107	20191107	20191107	20191107	20191107	20191107	20191107
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	0.5	2	4	0	0.5	2	4	0	0.5	2
BOTTOM DEPTH	2	4	6	0.5	2	4	6	0.5	2	4
PCB-65	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-66	--	--	--	--	--	--	--	--	--	--
PCB-66/76	0.0029	0.0000021 J	--	0.00026	0.0011	--	0.000091	0.0014	0.00014	--
PCB-67	0.000066	0.000002 U	--	0.0000072	0.000031	--	0.0000025	0.000035	0.0000032	--
PCB-68	0.0000059	0.0000015 J	--	0.0000027	0.000004	--	0.000002 U	0.0000091	0.000002 U	--
PCB-7	0.0000079	0.000002 U	--	0.0000018 J	0.000004	--	0.000002 U	0.0000061	0.000002 U	--
PCB-72	--	--	--	--	--	--	--	--	--	--
PCB-73	0.000002 U	0.000002 U	--	0.0000014 J	0.0000085	--	0.000002 U	0.000016	0.00000098 J	--
PCB-74	0.0013	0.0000015 J	--	0.00011	0.00049	--	0.000035	0.00059	0.000054	--
PCB-77	0.00081	0.0000009 U	--	0.000048	0.00017	--	0.000012	0.00018	0.000021	--
PCB-78	0.000011	0.000002 U	--	0.000002 U	0.0000035	--	0.000002 U	0.0000043	0.000002 U	--
PCB-79	0.000057	0.000002 U	--	0.000004	0.000011	--	0.0000011 J	0.000019	0.0000017 J	--
PCB-8	0.00015	0.000002 U	--	0.00003	0.000099	--	0.0000092	0.00012	0.000014	--
PCB-80	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-81	0.00014	0.00000081 U	--	0.0000092	0.000042	--	0.0000036	0.00007	0.0000069	--
PCB-82	0.00081	0.000002 U	--	0.00004	0.0002	--	0.000013	0.00025	0.000026	--
PCB-83	--	--	--	--	--	--	--	--	--	--
PCB-83/112	0.00031	0.000004 U	--	0.000016	0.00007	--	0.0000048	0.000093	0.0000095	--
PCB-84	--	--	--	--	--	--	--	--	--	--
PCB-84/92	0.0046	0.0000033 J	--	0.00025	0.0015	--	0.00011	0.0023	0.00023	--
PCB-85/116	0.0017	0.0000012 J	--	0.000086	0.00028	--	0.000018	0.00039	0.000038	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--	--
PCB-86	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--	--
PCB-87/117/125	0.0049	0.000003 J	--	0.00025	0.0012	--	0.000089	0.002	0.00019	--
PCB-88/91	0.00085	0.0000017 J	--	0.00004	0.00015	--	0.000012	0.00026	0.000028	--
PCB-89	0.000002 U	0.000002 U	--	0.000002 U	0.00002	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-9	0.0000071	0.000002 U	--	0.0000018 J	0.0000073	--	0.000002 U	0.0000061	0.000002 U	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--	--
PCB-93	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-93/100	--	--	--	--	--	--	--	--	--	--
PCB-94	0.000022	0.000002 U	--	0.000002 U	0.000007	--	0.000002 U	0.000008	0.000002 U	--
PCB-95	0.014	0.00001	--	0.00082	0.0072	--	0.00059	0.0093	0.0012	--
PCB-96	0.000017	0.000002 U	--	0.000002 U	0.0000087	--	0.000002 U	0.0000082	0.0000011 J	--
PCB-97	0.003	0.0000018 J	--	0.00012	0.00062	--	0.000041	0.00093	0.000089	--
PCB-98/102	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--
PCB-99	0.0036	0.0000025	--	0.00019	0.00063	--	0.000046	0.0011	0.000091	--
PENTACHLOROBIPHENYLS	0.098 J	0.000065 J	--	0.0055 J	0.032 J	--	0.0023 J	0.046 J	0.0048 J	--
TEQ DIOXIN-LIKE PCBs (BIRD)	7.54497E-05	7.96E-10	--	4.5859E-06	1.64011E-05	--	1.2503E-06	2.10233E-05	2.28394E-06	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	7.54497E-05	9.7566E-08	--	4.58634E-06	1.64015E-05	--	1.251E-06	2.10233E-05	2.28444E-06	--
TEQ DIOXIN-LIKE PCBs (FISH)	1.21005E-06	4.6E-11	--	7.391E-08	2.2786E-07	--	1.7907E-08	3.12065E-07	3.353E-08	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	1.21005E-06	1.983E-09	--	7.3931E-08	2.27882E-07	--	1.7942E-08	3.12065E-07	3.3555E-08	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	2.08931E-05	2.82E-10	--	1.23462E-06	3.54876E-06	--	2.80725E-07	4.98268E-06	5.2205E-07	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	2.08931E-05	4.0724E-08	--	1.24767E-06	3.56211E-06	--	3.01725E-07	4.98268E-06	5.3705E-07	--
TETRACHLOROBIPHENYLS	0.022 J	0.000016 J	--	0.0017 J	0.0081 J	--	0.00062 J	0.01 J	0.00094 J	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.012834	0.0000094	--	0.0009712	0.004218	--	0.0002998	0.0060577	0.0006289	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.6181244	0.00045278	--	0.06714651	0.316806	--	0.0244447	0.4778611	0.04934778	--
TOTAL PCB CONGENERS ZEROND	0.6309584	0.00046218	--	0.06811771	0.321024	--	0.0247445	0.4839188	0.04997668	--
TOTAL PCB CONGENERS-NOAA	0.29249	0.0002333	--	0.033826	0.144712	--	0.0111982	0.2248	0.022393	--
TOTAL PCB CONGENERS-NOAA HALFND	0.6309884	0.000582505	--	0.068160145	0.321052445	--	0.0247992	0.4839508	0.05002518	--
TOTAL PCB CONGENERS-NOAA X2	0.58498	0.0004666	--	0.067652	0.289424	--	0.0223964	0.4496	0.044786	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.58498	0.0004726	--	0.067652	0.289424	--	0.0223964	0.4496	0.044786	--
TRICHLOROBIPHENYLS	0.0041 J	0 UJ	--	0.00062 J	0.0027 J	--	0.00025 J	0.0026 J	0.00033 J	--
DIOXINS/FURANS (NG/KG)										
1,2,3,4,6,7,8,9-OCDD	290	85	--	230	330	--	1100	380	48	--
1,2,3,4,6,7,8,9-OCDF	8.6 J	9.3 J	--	9.6 J	4.8 J	--	1.5 U	50	2.4 J	--
1,2,3,4,6,7,8-HPCDD	9.9	3.4 J	--	16	7.7	--	13	36	1.8 J	--
1,2,3,4,6,7,8-HPCDF	4.8 J	5.1	--	7.2	3.5 J	--	0.58 U	17	1.2 J	--
1,2,3,4,7,8,9-HPCDF	0.96 J	0.7 J	--	0.76 J	0.75 J	--	0.9 U	2.3 J	0.26 U	--
1,2,3,4,7,8-HXCDD	0.37 J	0.35 U	--	0.67 J	0.43 J	--	0.53 U	0.94 J	0.37 U	--
1,2,3,4,7,8-HXCDF	3.1 J	0.69 J	--	1.7 J	2 J	--	0.48 U	4.2 J	0.44 U	--
1,2,3,6,7,8-HXCDD	0.72 J	0.34 U	--	1.3 J	0.91 J	--	0.54 U	2.1 J	0.39 U	--
1,2,3,6,7,8-HXCDF	0.96 J	0.59 J	--	1.2 J	0.87 J	--	0.5 U	2.1 J	0.45 U	--
1,2,3,7,8,9-HXCDD	0.48 J	0.38 U	--	0.92 J	0.5 J	--	0.49 U	1.9 J	0.38 U	--
1,2,3,7,8,9-HXCDF	0.39 J	0.21 U	--	0.4 J	0.34 J	--	0.79 U	0.61 J	0.56 U	--
1,2,3,7,8-PECDD	0.3 J	0.17 U	--	0.54 J	0.16 U	--	0.44 U	0.76 J	0.33 U	--
1,2,3,7,8-PECDF	0.77 J	0.37 J	--	0.72 J	0.63 J	--	0.38 U	1 J	0.27 U	--
2,3,4,6,7,8-HXCDF	0.9 J	0.58 J	--	1.4 J	0.91 J	--	0.87 U	2.2 J	0.55 U	--
2,3,4,7,8-PECDF	1.8 J	0.62 J	--	2.1 J	1.5 J	--	0.46 U	2.3 J	0.29 U	--
2,3,7,8-TCDD	0.097 U	0.096 U	--	0.31 J	0.099 U	--	0.11 U	0.29 J	0.2 U	--
2,3,7,8-TCDF	1.4 J	0.44 J	--	0.89 J	0.68 J	--	0.28 U	0.96 J	0.16 U	--
TEQ DIOXINS (BIRD)	4.28306	1.35383	--	4.64006	2.81928	--	0.123	5.851	0.01884	--
TEQ DIOXINS (BIRD) HALFND	4.33156	1.52678	--	4.64006	2.94878	--	0.966925	5.851	0.65384	--
TEQ DIOXINS (FISH)	2.13786	0.60733	--	2.92726	1.54028	--	0.123	3.991	0.01884	--
TEQ DIOXINS (FISH) HALFND	2.18636	0.84193	--	2.92726	1.66978	--	0.806625	3.991	0.56474	--
TEQ DIOXINS (HUMANS/MAMMALS)	1.94128	0.54739	--	2.66108	1.35284	--	0.46	3.953	0.04512	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	1.98978	0.74439	--	2.66108	1.48234	--	1.041325	3.953	0.52397	--
TOTAL HPCDD	19 J	6.7 J	--	33 J	16 J	--	30 J	71 J	3.6 J	--
TOTAL HPCDF	10 J	7.6 J	--	14 J	6.9 J	--	0 UJ	44 J	1.8 J	--
TOTAL HXCDD	8.2 J	3.9 J	--	14 J	11 J	--	6 J	22 J	0 UJ	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-312	SB-312	SB-312	SB-313	SB-313	SB-313	SB-313	SB-314	SB-314	SB-314
SAMPLE ID	SB312-20191107-0624	SB312-20191107-2448	SB312-20191107-4872	SB313-20191107-0006	SB313-20191107-0624	SB313-20191107-2448	SB313-20191107-4872	SB314-20191107-0006	SB314-20191107-0624	SB314-20191107-2448
SAMPLE DATE	20191107	20191107	20191107	20191107	20191107	20191107	20191107	20191107	20191107	20191107
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	0.5	2	4	0	0.5	2	4	0	0.5	2
BOTTOM DEPTH	2	4	6	0.5	2	4	6	0.5	2	4
TOTAL HXCDF	12 J	5.3 J	--	16 J	10 J	--	0 UJ	29 J	0 UJ	--
TOTAL PECDD	4.9 J	3.4 J	--	10 J	6.7 J	--	0 UJ	9.8 J	0 UJ	--
TOTAL PECDF	21 J	6.3 J	--	21 J	14 J	--	0 UJ	31 J	0 UJ	--
TOTAL TCDD	4 J	2.7 J	--	9 J	6.9 J	--	1 J	8 J	0 UJ	--
TOTAL TCDF	20 J	8.8 J	--	21 J	16 J	--	0 UJ	28 J	0 UJ	--
METALS (MG/KG)										
ALUMINUM	4260	1940	--	2980	5850	--	6120	5470	4220	--
ANTIMONY	2.1	1 J	--	1 J	0.4 J	--	1.1 U	1.3 U	1.1 U	--
ARSENIC	16.6	9	--	8.3	12.7	--	5.6	7.6	2.3	--
BARIUM	158	77.1	--	74.6	125	--	50	39.7	54.2	--
BERYLLIUM	1	0.49 J	--	0.66	0.95	--	0.41 J	0.52 J	0.43 J	--
CADMIUM	0.53 J	0.72	--	0.32 J	0.19 J	--	0.074 J	0.63 U	0.55 U	--
CALCIUM	3090	1320	--	3460	5760	--	3320	2740	1580	--
CHROMIUM	18.3	8.2	--	13.7	15.3	--	9.6	11.6	5.2	--
COBALT	14	3.4	--	11	12.4	--	5.3	13.2	3.9	--
COPPER	140	37.3	--	28.5	32.7	--	16.7	9.3	3	--
CYANIDE	1.5 J-	0.16 J	--	0.32 J	0.14 J	--	0.18 J	0.27 J	0.14 J	--
IRON	30300	14200	--	10900	11200	--	15600	14800	13800	--
LEAD	90.8	56.9	--	60.5	33.8	--	11.4	15.6	5.2	--
MAGNESIUM	1320	222 J	--	611	1410	--	859	1490	1010	--
MANGANESE	713	161	--	384	670	--	194	572	106	--
MERCURY	0.056 J	0.041 J	--	0.12	0.034 J	--	0.038 J	0.043 J	0.11 U	--
NICKEL	28.5	7.4	--	19.5	23.4	--	5.7	22.9	3.4	--
POTASSIUM	746	623 U	--	606 U	1080	--	682	1640	1250	--
SELENIUM	1.4 J	1.3 J	--	0.83 J	0.67 J	--	0.33 J	0.18 J	0.3 J	--
SILVER	0.078 J	0.59 U	--	0.06 J	0.047 J	--	0.57 U	0.63 U	0.55 U	--
SODIUM	83.7 J	37.1 J	--	30.7 J	89 J	--	50.2 J	172 J	22.3 J	--
THALLIUM	0.54 U	0.59 U	--	0.6 U	0.51 U	--	0.57 U	0.63 U	0.55 U	--
VANADIUM	13.1	7.8	--	10.7	14.5	--	10.8	7.9	7.4	--
ZINC	116	134	--	105	72.1	--	17.2	28.8	11.1	--
MISCELLANEOUS (%)										
TOTAL SOLIDS	--	--	--	--	--	--	84	--	89	--
MISCELLANEOUS (MG/KG)										
TOTAL ORGANIC CARBON	--	--	--	--	--	--	26900	--	18500	--
MOBILE LAB MISCELLANEOUS (%)										
PERCENT SOLIDS	87	--	83	--	90	89	--	--	92	85

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-314	SB-315	SB-315	SB-315	SB-315	SB-316	SB-316	SB-316	SB-316	SB-316
SAMPLE ID	SB314-20191107-4872	SB315-20191107-0006	SB315-20191107-0624	SB315-20191107-2448	SB315-20191107-7296	SB316-20191108-0006	SB316-20191108-0624	SB316-20191108-0624-D	SB316-20191108-2448	SB316-20191108-6084
SAMPLE DATE	20191107	20191107	20191107	20191107	20191107	20191108	20191108	20191108	20191108	20191108
DUPLICATE								SB316-20191108-0624		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SB	SB	SS	SS	SS	SB	SB
TOP DEPTH	4	0	0.5	2	6	0	0.5	0.5	2	5
BOTTOM DEPTH	6	0.5	2	4	8	0.5	2	2	4	7
VOLATILES (MG/KG)										
1,1,1-TRICHLOROETHANE	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 UJ	--
1,1,2,2-TETRACHLOROETHANE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 U	--
1,1,2-TRICHLOROETHANE	0.01 UJ	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 UJ	--
1,1,2-TRICHLOROTRIFLUOROETHANE	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 UJ	--
1,1-DICHLOROETHANE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 U	--
1,1-DICHLOROETHENE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 UJ	0.0054 UJ	0.0055 UJ	0.0057 UJ	--
1,2,3-TRICHLOROBENZENE	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 UJ	0.0054 R	0.0055 R	0.0057 UJ	--
1,2,4-TRICHLOROBENZENE	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 UJ	0.0054 R	0.0055 R	0.0057 UJ	--
1,2-DIBROMO-3-CHLOROPROPANE	0.01 UJ	0.0059 U	0.0076 UJ	--	0.0049 U	0.0051 U	0.0054 R	0.0055 R	0.0057 UJ	--
1,2-DIBROMOETHANE	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 UJ	--
1,2-DICHLOROBENZENE	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 UJ	0.0054 R	0.0055 R	0.0057 UJ	--
1,2-DICHLOROETHANE	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 UJ	--
1,2-DICHLOROPROPANE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 U	--
1,3-DICHLOROBENZENE	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 UJ	0.0054 R	0.0055 R	0.0057 UJ	--
1,4-DICHLOROBENZENE	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 UJ	0.0054 R	0.0055 R	0.0057 UJ	--
2-BUTANONE	0.02 U	0.012 U	0.015 U	--	0.0098 U	0.01 U	0.011 U	0.011 U	0.011 U	--
2-HEXANONE	0.02 U	0.012 U	0.015 U	--	0.0098 U	0.01 U	0.011 UJ	0.011 U	0.011 U	--
4-METHYL-2-PENTANONE	0.02 U	0.012 U	0.015 U	--	0.0098 U	0.01 U	0.011 UJ	0.011 U	0.011 U	--
ACETONE	0.02 U	0.012 U	0.015 U	--	0.0098 U	0.01 U	0.011 U	0.011 U	0.016	--
BENZENE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0038 J	0.0055 U	0.0057 U	--
BROMOCHLOROMETHANE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 U	--
BROMODICHLOROMETHANE	0.01 R	0.0059 R	0.0076 R	--	0.0049 R	0.0051 U	0.0054 U	0.0055 U	0.0057 U	--
BROMOFORM	0.01 UJ	0.0059 U	0.0076 UJ	--	0.0049 U	0.0051 U	0.0054 R	0.0055 R	0.0057 UJ	--
BROMOMETHANE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 U	--
CARBON DISULFIDE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 U	--
CARBON TETRACHLORIDE	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 UJ	--
CHLOROBENZENE	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 UJ	0.0054 UJ	0.0055 UJ	0.0057 UJ	--
CHLORODIBROMOMETHANE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 U	--
CHLOROETHANE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 U	--
CHLOROFORM	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 U	--
CHLOROMETHANE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 U	--
CIS-1,2-DICHLOROETHENE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 UJ	--
CIS-1,3-DICHLOROPROPENE	0.01 UJ	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 UJ	--
CYCLOHEXANE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 U	--
DICHLORODIFLUOROMETHANE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 U	--
ETHYLBENZENE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 U	--
ISOPROPYLBENZENE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 U	--
M+P-XYLENES	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 U	--
METHYL ACETATE	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 UJ	--
METHYL CYCLOHEXANE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.011 J+	0.0036 J	0.0057 U	--
METHYL TERT-BUTYL ETHER	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 UJ	--
METHYLENE CHLORIDE	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 UJ	--
O-XYLENE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 U	--
STYRENE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 U	--
TETRACHLOROETHENE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 U	--
TOLUENE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0064 J+	0.0031 J	0.0057 U	--
TRANS-1,2-DICHLOROETHENE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 UJ	0.0054 UJ	0.0055 UJ	0.0057 UJ	--
TRANS-1,3-DICHLOROPROPENE	0.01 UJ	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 UJ	0.0055 U	0.0057 UJ	--
TRICHLOROETHENE	0.01 R	0.0059 R	0.0076 R	--	0.0049 R	0.0051 R	0.0054 R	0.0055 R	0.0057 R	--
TRICHLOROFLUOROMETHANE	0.01 UJ	0.0059 UJ	0.0076 UJ	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 UJ	--
VINYL CHLORIDE	0.01 U	0.0059 U	0.0076 U	--	0.0049 U	0.0051 U	0.0054 U	0.0055 U	0.0057 U	--
SEMIVOLATILES (MG/KG)										
1,1-BIPHENYL	0.05 J	0.2 U	0.21 U	--	0.21 U	0.2 U	0.036 J	0.038 J	0.19 U	--
1,2,4,5-TETRACHLOROBENZENE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
1,4-DIOXANE	0.086 UJ	0.08 U	0.082 U	--	0.081 U	0.08 U	0.073 U	0.073 U	0.075 UJ	--
2,2'-OXYBIS(1-CHLOROPROPANE)	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
2,3,4,6-TETRACHLOROPHENOL	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
2,4,5-TRICHLOROPHENOL	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
2,4,6-TRICHLOROPHENOL	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
2,4-DICHLOROPHENOL	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
2,4-DIMETHYLPHENOL	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
2,4-DINITROPHENOL	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
2,4-DINITROTOLUENE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
2,6-DINITROTOLUENE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
2-CHLORONAPHTHALENE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
2-CHLOROPHENOL	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
2-METHYLNAPHTHALENE	0.27	0.029 J	0.061 J	--	0.21 U	0.022 J	0.13 J	0.13 J	0.084 J	--
2-METHYLPHENOL	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
2-NITROANILINE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
2-NITROPHENOL	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
3&4-METHYLPHENOL	0.42 U	0.4 U	0.4 U	--	0.4 U	0.035 J	0.36 U	0.36 U	0.37 U	--
3,3'-DICHLOROBENZIDINE	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
3-NITROANILINE	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
4,6-DINITRO-2-METHYLPHENOL	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
4-BROMOPHENYL PHENYL ETHER	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
4-CHLORO-3-METHYLPHENOL	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
4-CHLOROANILINE	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
4-CHLOROPHENYL PHENYL ETHER	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
4-NITROANILINE	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
4-NITROPHENOL	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-314	SB-315	SB-315	SB-315	SB-315	SB-316	SB-316	SB-316	SB-316	SB-316
SAMPLE ID	SB314-20191107-4872	SB315-20191107-0006	SB315-20191107-0624	SB315-20191107-2448	SB315-20191107-7296	SB316-20191108-0006	SB316-20191108-0624	SB316-20191108-0624-D	SB316-20191108-2448	SB316-20191108-6084
SAMPLE DATE	20191107	20191107	20191107	20191107	20191107	20191108	20191108	20191108	20191108	20191108
DUPLICATE								SB316-20191108-0624		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SB	SB	SS	SS	SS	SB	SB
TOP DEPTH	4	0	0.5	2	6	0	0.5	0.5	2	5
BOTTOM DEPTH	6	0.5	2	4	8	0.5	2	2	4	7
ACENAPHTHENE	0.025 R	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.019 J	--
ACENAPHTHYLENE	0.66	0.2 U	0.16 J	--	0.21 U	0.2 U	0.18 U	0.19 U	0.02 J	--
ACETOPHENONE	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
ANTHRACENE	0.64	0.2 U	0.08 J	--	0.21 U	0.2 U	0.18 U	0.19 U	0.082 J	--
ATRAZINE	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
BAP EQUIVALENT-HALFND	8.5309	0.146953	0.65586	--	0.21 U	0.191817	0.13271	0.136223	0.31021	--
BAP EQUIVALENT-POS	8.5309	0.046953	0.55086	--	0.21 U	0.091817	0.03281	0.030773	0.21521	--
BENZALDEHYDE	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
BENZO(A)ANTHRACENE	5.7	0.032 J	0.39	--	0.21 U	0.067 J	0.035 J	0.041 J	0.18 J	--
BENZO(A)PYRENE	6.1	0.034 J	0.4	--	0.21 U	0.069 J	0.024 J	0.021 J	0.16 J	--
BENZO(B)FLUORANTHENE	9.5	0.072 J	0.83	--	0.21 U	0.11 J	0.052 J	0.056 J	0.26	--
BENZO(G,H,I)PERYLENE	1.4	0.02 J	0.22	--	0.21 U	0.047 J	0.18 U	0.02 J	0.11 J	--
BENZO(K)FLUORANTHENE	2.4	0.019 J	0.25	--	0.21 U	0.042 J	0.18 U	0.19 U	0.097 J	--
BIS(2-CHLOROETHOXY)METHANE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
BIS(2-CHLOROETHYL)ETHER	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	0.032 J	0.028 J	0.039 J	--	0.21 U	0.044 J	0.18 U	0.19 U	0.019 J	--
BUTYL BENZYL PHTHALATE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
CAPROLACTAM	0.42 UJ	0.4 U	0.4 U	--	0.4 U	0.39 UJ	0.36 UJ	0.36 UJ	0.37 UJ	--
CARBAZOLE	0.19 J	0.4 U	0.025 J	--	0.4 U	0.39 U	0.36 U	0.36 U	0.044 J	--
CHRYSENE	6.9	0.063 J	0.36	--	0.21 U	0.097 J	0.11 J	0.073 J	0.24 J-	--
DIBENZO(A,H)ANTHRACENE	0.71	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
DIBENZOFURAN	0.15 J	0.2 U	0.033 J	--	0.21 U	0.2 U	0.028 J	0.027 J	0.037 J	--
DIETHYL PHTHALATE	0.22 U	0.2 U	0.024 J	--	0.058 J	0.2 U	0.18 U	0.19 U	0.19 U	--
DIMETHYL PHTHALATE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
DI-N-BUTYL PHTHALATE	0.023 J	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
DI-N-OCTYL PHTHALATE	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
FLUORANTHENE	7.7	0.056 J	0.5	--	0.4 U	0.14 J	0.064 J	0.064 J	0.41 J-	--
FLUORENE	0.09 R	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.029 J	--
HEXACHLOROBENZENE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
HEXACHLOROBUTADIENE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
HEXACHLOROCYCLOPENTADIENE	0.42 UJ	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
HEXACHLOROETHANE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
HIGH MOLECULAR WEIGHT PAHS	41.71	0.315	3.24	--	0 U	0.598	0.278	0.269	1.597	--
INDENO(1,2,3-CD)PYRENE	1.7	0.023 J	0.26	--	0.21 U	0.046 J	0.18 U	0.19 U	0.1 J	--
ISOPHORONE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
LOW MOLECULAR WEIGHT PAHS	10.38	0.125	0.951	--	0 U	0.212	0.333	0.332	0.931	--
NAPHTHALENE	0.18 J	0.017 J	0.041 J	--	0.21 U	0.2 U	0.069 J	0.068 J	0.031 J	--
NITROBENZENE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
N-NITROSO-DI-N-PROPYLAMINE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
N-NITROSODIPHENYLAMINE	0.22 U	0.2 U	0.21 U	--	0.21 U	0.2 U	0.18 U	0.19 U	0.19 U	--
PENTACHLOROPHENOL	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
PHENANTHRENE	1.2	0.052 J	0.17 J	--	0.21 U	0.072 J	0.2	0.2	0.34 J-	--
PHENOL	0.42 U	0.4 U	0.4 U	--	0.4 U	0.39 U	0.36 U	0.36 U	0.37 U	--
PYRENE	7.3	0.052 J	0.53	--	0.21 U	0.12 J	0.057 J	0.058 J	0.45 J-	--
TOTAL PAHS	52.09	0.44	4.191	--	0 U	0.81	0.611	0.601	2.528	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K										
1,4-DIOXANE	0.0086 U	0.008 U	0.0082 U	--	0.008 U	0.0079 U	0.0073 U	0.0072 U	0.0076 U	--
2-METHYLNAPHTHALENE	--	0.031	0.06	--	0.00069 J	0.023	0.14	0.15	0.098	--
ACENAPHTHENE	--	0.0023 J	0.0059	--	0.004 U	0.0029 J	0.0075	0.0037	0.018	--
ACENAPHTHYLENE	--	0.0075	0.13	--	0.00066 J	0.011	0.0044	0.0051	0.019	--
ANTHRACENE	--	0.0068	0.054	--	0.004 U	0.017	0.018	0.016	0.053 J-	--
BAP EQUIVALENT-HALFND	--	0.034007	0.42502	--	0.004476	0.07858	0.027952	0.03115	0.16645	--
BAP EQUIVALENT-POS	--	0.032007	0.42302	--	0.000256	0.07663	0.026152	0.02935	0.1646	--
BENZO(A)ANTHRACENE	--	0.024	0.3	--	0.00074 J	0.055	0.03	0.032	0.18 J-	--
BENZO(A)PYRENE	--	0.023	0.3	--	0.004 U	0.057	0.018	0.02	0.12	--
BENZO(B)FLUORANTHENE	--	0.054	0.58 J	--	0.0018 J	0.11	0.042	0.051	0.22	--
BENZO(G,H,I)PERYLENE	--	0.0088	0.27	--	0.004 U	0.025	0.0088	0.0098	0.031	--
BENZO(K)FLUORANTHENE	--	0.016	0.26	--	0.004 U	0.033 J	0.0099 J	0.011 J	0.078	--
CHRYSENE	--	0.047	0.42 J	--	0.0022 J	0.1	0.093	0.12	0.22 J-	--
DIBENZO(A,H)ANTHRACENE	--	0.004 U	0.004 U	--	0.004 U	0.0039 U	0.0036 U	0.0036 U	0.0037 U	--
FLUORANTHENE	--	0.044	0.45 J	--	0.00092 J	0.17	0.081	0.081	0.4 J	--
FLUORENE	--	0.004 U	0.0093	--	0.004 U	0.0064	0.0089	0.0072	0.051	--
HIGH MOLECULAR WEIGHT PAHS	--	0.2208	2.84	--	0.00572	0.517	0.2523	0.294	1.255	--
INDENO(1,2,3-CD)PYRENE	--	0.01	0.32	--	0.004 U	0.027	0.0076	0.0082	0.036	--
LOW MOLECULAR WEIGHT PAHS	--	0.1186	0.8492	--	0.00498	0.2833	0.3948	0.404	0.5807	--
NAPHTHALENE	--	0.018	0.04	--	0.004 U	0.013	0.085	0.081	0.036	--
PENTACHLOROPHENOL	--	0.008 UJ	0.0082 UJ	--	0.0081 UJ	0.008 UJ	0.0073 UJ	0.0073 UJ	0.0075 UJ	--
PHENANTHRENE	--	0.04	0.16	--	0.0034 J	0.063	0.19	0.21	0.0037 J	--
PYRENE	--	0.038	0.39 J	--	0.00098 J	0.11	0.043	0.042	0.37 J	--
TOTAL PAHS	--	0.047	0.42	--	0.0022	0.1	0.093	0.12	0.22	--
PESTICIDES (MG/KG)										
4,4'-DDD	0.0027 J	0.00062 J	0.0021 J	--	0.004 U	0.004 U	0.0036 U	0.0036 U	0.0038 U	--
4,4'-DDE	0.0041 U	0.0039 U	0.004 U	--	0.004 U	0.004 U	0.0036 U	0.0036 U	0.0038 U	--
4,4'-DDT	0.0041 U	0.0039 U	0.004 U	--	0.004 U	0.004 U	0.0036 U	0.0036 U	0.0038 U	--
ALDRIN	0.0021 U	0.002 U	0.0021 U	--	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	--
ALPHA-BHC	0.0021 U	0.002 U	0.0021 U	--	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	--
ALPHA-CHLORDANE	0.0021 U	0.002 U	0.0021 U	--	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	--
BETA-BHC	0.0021 U	0.002 U	0.0021 U	--	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	--
DELTA-BHC	0.0021 U	0.002 U	0.0021 U	--	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	--
DIELDRIN	0.0041 U	0.0039 U	0.004 U	--	0.004 U	0.004 U	0.0036 U	0.0036 U	0.0038 U	--
ENDOSULFAN I	0.0021 U	0.002 U	0.0021 U	--	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-314	SB-315	SB-315	SB-315	SB-315	SB-316	SB-316	SB-316	SB-316	SB-316
SAMPLE ID	SB314-20191107-4872	SB315-20191107-0006	SB315-20191107-0624	SB315-20191107-2448	SB315-20191107-7296	SB316-20191108-0006	SB316-20191108-0624	SB316-20191108-0624-D	SB316-20191108-2448	SB316-20191108-6084
SAMPLE DATE	20191107	20191107	20191107	20191107	20191107	20191108	20191108	20191108	20191108	20191108
DUPLICATE								SB316-20191108-0624		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SB	SB	SS	SS	SS	SB	SB
TOP DEPTH	4	0	0.5	2	6	0	0.5	0.5	2	5
BOTTOM DEPTH	6	0.5	2	4	8	0.5	2	2	4	7
ENDOSULFAN II	0.00077 R	0.0039 U	0.00073 J	--	0.004 U	0.004 U	0.0036 U	0.0036 U	0.0038 U	--
ENDOSULFAN SULFATE	0.0041 U	0.0039 U	0.004 U	--	0.004 U	0.004 U	0.0036 U	0.0036 U	0.0038 U	--
ENDRIN	0.0041 U	0.0039 U	0.00028 R	--	0.004 U	0.004 U	0.0036 U	0.0036 U	0.0038 U	--
ENDRIN ALDEHYDE	0.0041 U	0.0039 U	0.004 U	--	0.004 U	0.004 U	0.0036 U	0.0036 U	0.0038 U	--
ENDRIN KETONE	0.0041 U	0.0039 U	0.004 U	--	0.004 U	0.004 U	0.0036 U	0.0036 U	0.0038 U	--
GAMMA-BHC (LINDANE)	0.0033 J	0.00035 J	0.0013 J	--	0.0021 U	0.00053 J	0.0027 J	0.0049 J	0.0019	--
GAMMA-CHLORDANE	0.0021 U	0.002 U	0.0021 U	--	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	--
HEPTACHLOR	0.0021 U	0.002 U	0.0021 U	--	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	--
HEPTACHLOR EPOXIDE	0.0021 U	0.002 U	0.0021 U	--	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	--
METHOXYCHLOR	0.021 U	0.02 U	0.021 U	--	0.021 U	0.021 U	0.019 U	0.019 U	0.02 U	--
TOXAPHENE	0.21 U	0.2 U	0.21 U	--	0.21 U	0.21 U	0.19 U	0.19 U	0.19 U	--
PCBS (MG/KG)										
AROCLOR-1016	0.041 U	--	--	--	0.04 U	--	--	--	0.038 U	--
AROCLOR-1221	0.041 U	--	--	--	0.04 U	--	--	--	0.038 U	--
AROCLOR-1232	0.041 U	--	--	--	0.04 U	--	--	--	0.038 U	--
AROCLOR-1242	0.041 U	--	--	--	0.04 U	--	--	--	0.038 U	--
AROCLOR-1248	0.041 U	--	--	--	0.04 U	--	--	--	0.038 U	--
AROCLOR-1254	0.0061 J	--	--	--	0.021 J	--	--	--	0.038 U	--
AROCLOR-1260	0.041 U	--	--	--	0.04 U	--	--	--	1.8	--
AROCLOR-1262	0.041 U	--	--	--	0.04 U	--	--	--	0.038 U	--
AROCLOR-1268	0.041 U	--	--	--	0.04 U	--	--	--	0.038 U	--
TOTAL AROCLOR	0.0061	--	--	--	0.021	--	--	--	1.8	--
TOTAL AROCLOR HALFND	0.1701	--	--	--	0.181	--	--	--	1.952	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)										
AROCLOR-1016	--	--	0.313 U	0.305 U	--	--	0.269 U	--	--	0.284 U
AROCLOR-1221	--	--	0.625 U	0.61 U	--	--	0.538 U	--	--	0.568 U
AROCLOR-1232	--	--	0.313 U	0.305 U	--	--	0.269 U	--	--	0.284 U
AROCLOR-1242	--	--	0.313 U	0.305 U	--	--	0.269 U	--	--	0.284 U
AROCLOR-1248	--	--	0.313 U	0.305 U	--	--	0.269 U	--	--	0.284 U
AROCLOR-1254	--	--	0.313 U	0.305 U	--	--	0.269 U	--	--	0.284 U
AROCLOR-1260	--	--	0.231 J	0.305 U	--	--	0.279	--	--	0.195 J
AROCLOR-1262	--	--	0.313 U	0.305 U	--	--	0.269 U	--	--	0.284 U
AROCLOR-1268	--	--	0.313 U	0.305 U	--	--	0.269 U	--	--	0.284 U
TOTAL AROCLOR	--	--	0.231	0 U	--	--	0.279	--	--	0.195
TOTAL AROCLOR HALFND	--	--	1.639	1.525	--	--	1.4895	--	--	1.473
PCB CONGENERS (MG/KG)										
DICHLOROBIPHENYLS	0.000038 J	0.00013 J	0.00036 J	--	0 UJ	0.00093 J	0.00063 J	0.00086 J	0.0086 J	--
HEPTACHLOROBIPHENYLS	0.0089 J	0.019 J	0.11 J	--	0.0001 J	0.17 J	0.32 J	0.45 J	1.7 J	--
HEXACHLOROBIPHENYLS	0.0081 J	0.02 J	0.12 J	--	0.000091 J	0.16 J	0.28 J	0.37 J	1.7 J	--
MONOCHLOROBIPHENYLS	0.000017 J	0.000018 J	0.000052 J	--	0 UJ	0.000056 J	0.00016 J	0.00027 J	0.00024 J	--
NONACHLOROBIPHENYLS	0.00035 J	0.00032 J	0.0013 J	--	0.0000011 J	0.0024 J	0.0041 J	0.0049 J	0.028 J	--
OCTACHLOROBIPHENYLS	0.0019 J	0.0039 J	0.021 J	--	0.000017 J	0.033 J	0.067 J	0.088 J	0.41 J	--
PCB-1	0.0000036	0.0000063	0.000017	--	0.000002 U	0.000022	0.000048	0.00012	0.000088	--
PCB-10	0.000002 U	0.000002 U	0.0000016 J	--	0.000002 U	0.000004	0.0000042	0.00001	0.000065	--
PCB-100	0.000002 U	0.000002 U	0.0000017 J	--	0.000002 U	0.0000094	0.0000047	0.0000048	0.000065	--
PCB-101/90	0.0007	0.0014	0.009	--	0.0000062	0.011	0.014	0.018	0.074 J	--
PCB-103	0.000002 U	0.0000018 J	0.0000042	--	0.000002 U	0.00002	0.000018	0.000018	0.00015	--
PCB-104	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-105	0.00007	0.00016	0.00059	--	0.00000072 J	0.0012	0.0011	0.0013	0.0079	--
PCB-106	--	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--	--
PCB-108/107	0.0000082	0.000034	0.000092	--	0.000004 U	0.00021	0.00024	0.00032	0.0013	--
PCB-108/124	--	--	--	--	--	--	--	--	--	--
PCB-109	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-11	0.0000055	0.000036	0.000037	--	0.000002 U	0.00021	0.0000081	0.0000084	0.000048	--
PCB-110	0.00036	0.0008	0.0046	--	0.0000044	0.006	0.008	0.011	0.058 J	--
PCB-110/115	--	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--	--
PCB-111/115	0.0000036 J	0.0000068	0.000023	--	0.000004 U	0.000041	0.000018	0.000037	0.00027	--
PCB-112	--	--	--	--	--	--	--	--	--	--
PCB-113	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-114	0.0000055	0.000012	0.000054	--	0.00000083 U	0.000043	0.000025	0.000032	0.00026	--
PCB-118	--	--	--	--	--	--	--	--	--	--
PCB-118/106	0.00021	0.00059	0.0024	--	0.0000025 J	0.0041	0.0044	0.0056	0.023	--
PCB-119	0.0000018 J	0.0000032	0.000016	--	0.000002 U	0.000035	0.000036	0.000054	0.00032	--
PCB-12	0.0000019 J	0.0000033	0.000006	--	0.000002 U	0.000022	0.000021	0.000028	0.00018	--
PCB-12/13	--	--	--	--	--	--	--	--	--	--
PCB-120	0.000002	0.0000031	0.000022	--	0.000002 U	0.000041	0.00012	0.00012	0.00055	--
PCB-121	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-122	0.0000025	0.0000073	0.000022	--	0.000002 U	0.000025	0.00002	0.000056	0.00023	--
PCB-123	0.0000037	0.0000058	0.00002	--	0.0000005 U	0.000049	0.000047	0.000089	0.00078	--
PCB-124	0.000014	0.000042	0.00017	--	0.000002 U	0.00031	0.0005	0.00026	0.0027	--
PCB-126	0.0000031	0.0000082	0.000026	--	0.00000067 U	0.000061	0.00011	0.00016	0.0003	--
PCB-127	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-128/162	0.00011	0.00028	0.0015	--	0.0000017 J	0.0021	0.0035	0.0043	0.023	--
PCB-128/166	--	--	--	--	--	--	--	--	--	--
PCB-129	0.000028	0.00006	0.00034	--	0.000002 U	0.00049	0.0008	0.00097	0.0049	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--	--
PCB-13	0.0000022	0.0000036	0.000014	--	0.000002 U	0.000014	0.000017	0.000028	0.00018	--
PCB-130	0.000047	0.00016	0.00077	--	0.000002 U	0.0012	0.002	0.0026	0.011	--
PCB-131	--	--	--	--	--	--	--	--	--	--

LOCATION	SB-314	SB-315	SB-315	SB-315	SB-315	SB-316	SB-316	SB-316	SB-316	SB-316	SB-316
SAMPLE ID	SB314-20191107-4872	SB315-20191107-0006	SB315-20191107-0624	SB315-20191107-2448	SB315-20191107-7296	SB316-20191108-0006	SB316-20191108-0624	SB316-20191108-0624-D	SB316-20191108-2448	SB316-20191108-6084
SAMPLE DATE	20191107	20191107	20191107	20191107	20191107	20191108	20191108	20191108	20191108	20191108
DUPLICATE								SB316-20191108-0624		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SB	SB	SS	SS	SS	SB	SB
TOP DEPTH	4	0	0.5	2	6	0	0.5	0.5	2	5
BOTTOM DEPTH	6	0.5	2	4	8	0.5	2	2	4	7
PCB-131/133	0.000031	0.000065	0.00039	--	0.000004 U	0.00053	0.00094	0.0013	0.0065	--
PCB-132	--	--	--	--	--	--	--	--	--	--
PCB-132/161	0.00049	0.00065	0.0055	--	0.0000054	0.0064	0.013	0.017	0.097 J	--
PCB-133	--	--	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--	--	--
PCB-134/143	0.000069	0.00012	0.00084	--	0.000004 U	0.001	0.0021	0.0027	0.015	--
PCB-135	0.00024	0.00045	0.003	--	0.0000026	0.0037	0.009	0.013	0.052 J	--
PCB-135/151	--	--	--	--	--	--	--	--	--	--
PCB-136	0.0003	0.00032	0.0031	--	0.0000031	0.0045	0.011	0.015	0.062 J	--
PCB-137	0.000021	0.00003	0.00014	--	0.000002 U	0.00021	0.00032	0.0004	0.0031	--
PCB-138/163/164	0.0017	0.0047	0.025	--	0.00002	0.036	0.061 J	0.075 J	0.33 J	--
PCB-139/140	--	--	--	--	--	--	--	--	--	--
PCB-139/149	0.0016	0.0035	0.023	--	0.000018	0.03	0.051 J	0.075 J	0.35 J	--
PCB-14	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-140	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.00013	0.00021	0.00013	0.00022	--
PCB-141	0.0005	0.0011	0.0071	--	0.0000054	0.0092	0.018	0.023 J	0.096 J	--
PCB-142	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-143	--	--	--	--	--	--	--	--	--	--
PCB-144	0.000071	0.0002	0.00086	--	0.0000013 J	0.0018	0.0037	0.0039	0.024 J	--
PCB-145	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000034	0.0000056	0.000015	--
PCB-146	--	--	--	--	--	--	--	--	--	--
PCB-146/165	0.00022	0.0006	0.0029	--	0.0000027 J	0.0044	0.0083	0.011	0.046 J	--
PCB-147	0.0000039	0.000011	0.000051	--	0.000002 U	0.000097	0.00014	0.00015	0.001	--
PCB-147/149	--	--	--	--	--	--	--	--	--	--
PCB-148	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-15	0.000014	0.000044	0.00013	--	0.000002 U	0.00041	0.00037	0.0004	0.0062	--
PCB-150	0.000002 U	0.000002 U	0.0000036	--	0.000002 U	0.000011	0.000054	0.000088	0.000061	--
PCB-151	0.00059	0.0013	0.0081	--	0.000006	0.011	0.024 J	0.033 J	0.14 J	--
PCB-152	0.000002 U	0.000002 U	0.0000015 J	--	0.000002 U	0.0000031	0.000011	0.000018	0.000037	--
PCB-153	0.0017	0.0054	0.029 J	--	0.000021	0.038 J	0.062 J	0.082 J	0.34 J	--
PCB-153/168	--	--	--	--	--	--	--	--	--	--
PCB-154	0.000002 U	0.0000066	0.000021	--	0.000002 U	0.000068	0.00016	0.00023	0.00029	--
PCB-155	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-156	0.00011	0.00029	0.0015	--	0.0000015 J	0.0021	0.0025	0.0033	0.0068	--
PCB-156/157	--	--	--	--	--	--	--	--	--	--
PCB-157	0.0000082	0.000024	0.00011	--	0.0000008 U	0.00018	0.00029	0.00033	0.00099	--
PCB-158	--	--	--	--	--	--	--	--	--	--
PCB-158/160	0.00015	0.00038	0.0021	--	0.0000021 J	0.003	0.0053	0.0063	0.029	--
PCB-159	0.000024	0.000066	0.00028	--	0.000002 U	0.00037	0.0008	0.00099	0.0038	--
PCB-16	0.000006	0.0000084	0.000031	--	0.000002 U	0.00013	0.00014	0.000065	0.0029	--
PCB-160	--	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--	--
PCB-166	0.000002 U	0.000002	0.0000054	--	0.000002 U	0.0000081	0.00021	0.00018	0.00011	--
PCB-167	0.000045	0.00013	0.00062	--	0.00000063 U	0.00091	0.0016	0.0023	0.009	--
PCB-168	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-169	0.0000013 U	0.00000079 U	0.0000011 U	--	0.00000059 U	0.00000082 U	0.000026	0.000037	0.000096	--
PCB-17	0.0000075	0.000013	0.000041	--	0.000002 U	0.00015	0.00012	0.0001	0.0032	--
PCB-170	0.00096	0.0022	0.014	--	0.000011	0.02	0.034 J	0.048 J	0.2 J	--
PCB-171	0.00028	0.00048	0.0035	--	0.0000033	0.0051	0.0098	0.013	0.055 J	--
PCB-171/173	--	--	--	--	--	--	--	--	--	--
PCB-172	0.00016	0.00039	0.0021	--	0.0000024	0.0036	0.0059	0.0085	0.035 J	--
PCB-173	0.000021	0.000047	0.00027	--	0.000002 U	0.00035	0.00074	0.00092	0.0042	--
PCB-174	0.0012	0.0025	0.016	--	0.000013	0.022 J	0.037 J	0.049 J	0.2 J	--
PCB-175	0.00001	0.000063	0.000002 U	--	0.000002 U	0.00074	0.0015	0.0024	0.007	--
PCB-176	0.00014	0.00015	0.0014	--	0.0000018 J	0.002	0.005	0.007	0.028 J	--
PCB-177	0.00061	0.0013	0.0079	--	0.0000072	0.012	0.023 J	0.03 J	0.12 J	--
PCB-178	0.00021	0.00054	0.0027	--	0.0000031	0.0031	0.008	0.01	0.041 J	--
PCB-179	0.00042	0.00077	0.0055	--	0.000005	0.0079	0.017	0.022 J	0.087 J	--
PCB-18	0.000011	0.000025	0.000078	--	0.000002 U	0.00029	0.00021	0.00014	0.0068	--
PCB-18/30	--	--	--	--	--	--	--	--	--	--
PCB-180	0.0026	0.0054	0.031 J	--	0.000028	0.051 J	0.097 J	0.14 J	0.52 J	--
PCB-180/193	--	--	--	--	--	--	--	--	--	--
PCB-181	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-182	--	--	--	--	--	--	--	--	--	--
PCB-182/187	0.0012	0.003	0.015	--	0.000012	0.022	0.044 J	0.059 J	0.23 J	--
PCB-183	0.00056	0.00088	0.0072	--	0.0000074	0.011	0.018	0.03 J	0.12 J	--
PCB-183/185	--	--	--	--	--	--	--	--	--	--
PCB-184	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.0000046	0.000019	0.000028	0.000037	--
PCB-185	0.00011	0.00029	0.0014	--	0.0000016 J	0.0024	0.0044	0.0067	0.026 J	--
PCB-186	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-187	--	--	--	--	--	--	--	--	--	--
PCB-188	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.0000075	0.000033	0.00005	0.000048	--
PCB-189	0.000031	0.000082	0.00045	--	0.00000065 U	0.0006	0.0011	0.0014	0.0061	--
PCB-19	0.0000025	0.0000022	0.000006	--	0.000002 U	0.000027	0.000024	0.000024	0.00069	--
PCB-190	0.00022	0.00056	0.0028	--	0.0000029	0.0045	0.0068	0.01	0.039 J	--
PCB-191	0.00004	0.000074	0.00049	--	0.000002 U	0.00076	0.0014	0.0021	0.0084	--
PCB-192	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-193	0.00011	0.00029	0.0014	--	0.0000015 J	0.0023	0.004	0.0054	0.023	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-314	SB-315	SB-315	SB-315	SB-315	SB-316	SB-316	SB-316	SB-316	SB-316
SAMPLE ID	SB314-20191107-4872	SB315-20191107-0006	SB315-20191107-0624	SB315-20191107-2448	SB315-20191107-7296	SB316-20191108-0006	SB316-20191108-0624	SB316-20191108-0624-D	SB316-20191108-2448	SB316-20191108-6084
SAMPLE DATE	20191107	20191107	20191107	20191107	20191107	20191108	20191108	20191108	20191108	20191108
DUPLICATE								SB316-20191108-0624		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SB	SB	SS	SS	SS	SB	SB
TOP DEPTH	4	0	0.5	2	6	0	0.5	0.5	2	5
BOTTOM DEPTH	6	0.5	2	4	8	0.5	2	2	4	7
PCB-194	0.0004	0.00089	0.0047	--	0.0000052	0.0078	0.015	0.02	0.1	--
PCB-195	0.0002	0.00042	0.0023	--	0.0000021	0.0036	0.0065	0.0091	0.043	--
PCB-196	--	--	--	--	--	--	--	--	--	--
PCB-196/203	0.00053	0.00098	0.0062	--	0.0000051	0.0088	0.019	0.024	0.12 J	--
PCB-197	0.000019	0.000022	0.00019	--	0.000002 U	0.00028	0.00067	0.00092	0.0036	--
PCB-197/200	--	--	--	--	--	--	--	--	--	--
PCB-198	0.0000086	0.000062	0.00034	--	0.000002 U	0.00048	0.00072	0.0014	0.0044	--
PCB-198/199	--	--	--	--	--	--	--	--	--	--
PCB-199	0.00048	0.0011	0.0051	--	0.000005	0.0086	0.017	0.022 J	0.097 J	--
PCB-2	0.0000066	0.0000028	0.0000084	--	0.000002 U	0.0000077	0.000031	0.000038	0.00003	--
PCB-20/21/33	0.000013	0.000032	0.00011	--	0.000006 U	0.00024	0.00017	0.00016	0.0029	--
PCB-20/28	--	--	--	--	--	--	--	--	--	--
PCB-200	0.000044	0.00011	0.00072	--	0.000002 U	0.0011	0.0022	0.003	0.012	--
PCB-201	0.000067	0.000076	0.00066	--	0.000002 U	0.00082	0.0021	0.0028	0.013	--
PCB-202	0.000092	0.0002	0.00096	--	0.000002 U	0.0014	0.0029	0.0036	0.016	--
PCB-203	--	--	--	--	--	--	--	--	--	--
PCB-204	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-205	0.000027	0.000059	0.0003	--	0.000002 U	0.00043	0.00083	0.0011	0.0054	--
PCB-206	0.00024	0.00025	0.001	--	0.0000011 J	0.0018	0.0032	0.0036	0.021	--
PCB-207	0.000031	0.000021	0.00013	--	0.000002 U	0.00024	0.00047	0.00061	0.0029	--
PCB-208	0.000081	0.000053	0.00018	--	0.000002 U	0.0004	0.00046	0.00068	0.0037	--
PCB-209	0.00021	0.00008	0.00015	--	0.000002 U	0.00046	0.000086	0.000092	0.0038	--
PCB-21/33	--	--	--	--	--	--	--	--	--	--
PCB-22	0.000015	0.000026	0.000064	--	0.000002 U	0.00029	0.00017	0.00013	0.0034	--
PCB-23	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-24	0.00000087 J	0.0000016 J	0.0000042	--	0.000002 U	0.000029	0.000019	0.000011	0.0004	--
PCB-25	0.0000039	0.0000052	0.000016	--	0.000002 U	0.000051	0.000035	0.000035	0.00073	--
PCB-26	0.0000062	0.0000097	0.000031	--	0.000002 U	0.000093	0.000072	0.000064	0.0016	--
PCB-26/29	--	--	--	--	--	--	--	--	--	--
PCB-27	0.000002	0.0000015 J	0.0000065	--	0.000002 U	0.000023	0.000017	0.000019	0.00043	--
PCB-28	0.00003	0.000064	0.00017	--	0.000002 U	0.00067	0.00055	0.00049	0.01	--
PCB-29	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.0000026	0.0000016 J	0.0000019 J	0.00002	--
PCB-3	0.0000068	0.0000092	0.000027	--	0.000002 U	0.000026	0.000078	0.00011	0.00012	--
PCB-30	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-31	0.000038	0.000065	0.0002	--	0.000002 U	0.00058	0.00035	0.00038	0.011	--
PCB-32	0.0000096	0.000012	0.000047	--	0.000002 U	0.00015	0.0001	0.00013	0.0032	--
PCB-34	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.0000024	0.000002 U	0.0000015 J	0.000043	--
PCB-35	0.000002 U	0.000003	0.0000072	--	0.000002 U	0.00002	0.000012	0.000013	0.00024	--
PCB-36	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-37	0.000021	0.000055	0.00014	--	0.000002 U	0.00045	0.00033	0.00034	0.0056	--
PCB-38	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.0000021	0.000002 U	0.000002 U	0.000039	--
PCB-39	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-4	0.0000034	0.0000059	0.000019	--	0.000002 U	0.000049	0.00004	0.000063	0.00062	--
PCB-40	0.000005	0.0000091	0.00003	--	0.000002 U	0.00012	0.000094	0.000084	0.0029	--
PCB-40/71	--	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	0.000032	0.000072	0.00023	--	0.000008 U	0.00088	0.00054	0.00052	0.012	--
PCB-42	--	--	--	--	--	--	--	--	--	--
PCB-42/59	0.000012	0.000022	0.000081	--	0.000004 U	0.00033	0.00022	0.0002	0.0058	--
PCB-43	--	--	--	--	--	--	--	--	--	--
PCB-43/49	0.000032	0.000084	0.00023	--	0.000004 U	0.00082	0.00046	0.00046	0.012	--
PCB-44	0.000034	0.000058	0.00025	--	0.000002 U	0.00084	0.00051	0.00055	0.014	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--	--
PCB-45	0.0000058	0.0000044	0.000019	--	0.000002 U	0.000088	0.000068	0.000073	0.0033	--
PCB-45/51	--	--	--	--	--	--	--	--	--	--
PCB-46	0.0000026	0.0000018 J	0.0000059	--	0.000002 U	0.000024	0.000027	0.00002	0.0015	--
PCB-47	0.000014	0.000032	0.000081	--	0.000002 U	0.00036	0.00021	0.00022	0.0055	--
PCB-48	--	--	--	--	--	--	--	--	--	--
PCB-48/75	0.0000033 J	0.000011	0.000028	--	0.000004 U	0.00012	0.000094	0.00007	0.002	--
PCB-49/69	--	--	--	--	--	--	--	--	--	--
PCB-5	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.0000066	0.000002 U	0.000002 U	0.000049	--
PCB-50	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.0000017 J	0.000002 U	0.0000012 J	0.000047	--
PCB-50/53	--	--	--	--	--	--	--	--	--	--
PCB-51	0.0000017 J	0.0000012 J	0.0000042	--	0.000002 U	0.00002	0.000014	0.000014	0.00098	--
PCB-52	--	--	--	--	--	--	--	--	--	--
PCB-52/69	0.000085	0.00012	0.00068	--	0.000004 U	0.0014	0.001	0.0011	0.019	--
PCB-53	0.0000054	0.0000037	0.000018	--	0.000002 U	0.000071	0.000064	0.000064	0.0033	--
PCB-54	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.00000095 J	0.000002 U	0.0000012 J	0.000045	--
PCB-55	0.0000014 J	0.0000034	0.0000086	--	0.000002 U	0.000034	0.000023	0.000025	0.00035	--
PCB-56	--	--	--	--	--	--	--	--	--	--
PCB-56/60	0.000031	0.000079	0.0002	--	0.000004 U	0.00087	0.00055	0.00055	0.0093	--
PCB-57	0.000002 U	0.000002 U	0.0000018 J	--	0.000002 U	0.0000073	0.0000041	0.0000028	0.000083	--
PCB-58	0.000002 U	0.000002 U	0.00000095 J	--	0.000002 U	0.0000036	0.0000022	0.0000018 J	0.000048	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--	--
PCB-6	0.0000025	0.0000056	0.000023	--	0.000002 U	0.000041	0.000026	0.000054	0.00022	--
PCB-60	--	--	--	--	--	--	--	--	--	--
PCB-61/70	0.000082	0.00023	0.00062	--	0.000004 U	0.0018	0.0011	0.0011	0.021	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--	--
PCB-62	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-63	0.0000024	0.0000057	0.000012	--	0.000002 U	0.000048	0.000025	0.000027	0.0005	--
PCB-64	--	--	--	--	--	--	--	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-314	SB-315	SB-315	SB-315	SB-315	SB-316	SB-316	SB-316	SB-316	SB-316
SAMPLE ID	SB314-20191107-4872	SB315-20191107-0006	SB315-20191107-0624	SB315-20191107-2448	SB315-20191107-7296	SB316-20191108-0006	SB316-20191108-0624	SB316-20191108-0624-D	SB316-20191108-2448	SB316-20191108-6084
SAMPLE DATE	20191107	20191107	20191107	20191107	20191107	20191108	20191108	20191108	20191108	20191108
DUPLICATE								SB316-20191108-0624		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SB	SB	SS	SS	SS	SB	SB
TOP DEPTH	4	0	0.5	2	6	0	0.5	0.5	2	5
BOTTOM DEPTH	6	0.5	2	4	8	0.5	2	2	4	7
PCB-65	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-66	--	--	--	--	--	--	--	--	--	--
PCB-66/76	0.000065	0.00015	0.00047	--	0.000004 U	0.0015	0.0011	0.0011	0.02	--
PCB-67	0.0000018 J	0.0000038	0.00001	--	0.000002 U	0.000041	0.000025	0.000023	0.00054	--
PCB-68	0.000002 U	0.0000013 J	0.0000022	--	0.000002 U	0.0000096	0.0000035	0.0000019 J	0.000062	--
PCB-7	0.000002 U	0.0000015 J	0.0000054	--	0.000002 U	0.000007	0.000007	0.000016	0.000066	--
PCB-72	--	--	--	--	--	--	--	--	--	--
PCB-73	0.000002 U	0.0000011 J	0.0000049	--	0.000002 U	0.000011	0.0000099	0.00001	0.00015	--
PCB-74	0.000027	0.000067	0.00017	--	0.000002 U	0.0006	0.00037	0.00039	0.0082	--
PCB-77	0.0000089	0.00003	0.000082	--	0.00000042 U	0.00022	0.00019	0.00024	0.0022	--
PCB-78	0.000002 U	0.000002 U	0.0000018 J	--	0.000002 U	0.0000038	0.0000037	0.0000047	0.000045	--
PCB-79	0.000002 U	0.0000035	0.0000063	--	0.000002 U	0.000026	0.000017	0.000014	0.0001	--
PCB-8	0.0000084	0.000028	0.00012	--	0.000002 U	0.00016	0.00013	0.00023	0.00092	--
PCB-80	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-81	0.0000029	0.0000075	0.000035	--	0.00000036 U	0.00007	0.000054	0.000045	0.00031	--
PCB-82	0.000012	0.000026	0.000096	--	0.000002 U	0.00022	0.00023	0.00026	0.0024	--
PCB-83	--	--	--	--	--	--	--	--	--	--
PCB-83/112	0.0000048	0.0000084	0.000043	--	0.000004 U	0.000076	0.000094	0.00013	0.0012	--
PCB-84	--	--	--	--	--	--	--	--	--	--
PCB-84/92	0.00011	0.0002	0.0012	--	0.0000016 J	0.0017	0.0025	0.003	0.023	--
PCB-85/116	0.000015	0.000048	0.00015	--	0.000004 U	0.00035	0.00029	0.00036	0.0036	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--	--
PCB-86	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--	--
PCB-87/117/125	0.000091	0.00019	0.0011	--	0.0000014 J	0.0016	0.0015	0.0017	0.0094	--
PCB-88/91	0.000013	0.000028	0.000099	--	0.000004 U	0.00023	0.00027	0.00029	0.0036	--
PCB-89	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000017	0.000002 U	0.000019	0.00054	--
PCB-9	0.000002 U	0.0000018 J	0.0000055	--	0.000002 U	0.000011	0.0000086	0.000018	0.000037	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--	--
PCB-93	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--
PCB-93/100	--	--	--	--	--	--	--	--	--	--
PCB-94	0.000002 U	0.000002 U	0.0000025	--	0.000002 U	0.0000075	0.000017	0.00002	0.00018	--
PCB-95	0.0006	0.00073	0.0058	--	0.0000052	0.0072	0.011	0.012	0.11 J	--
PCB-96	0.000002 U	0.000002 U	0.0000027	--	0.000002 U	0.000007	0.000022	0.000024	0.00025	--
PCB-97	0.000043	0.00009	0.00042	--	0.000002 U	0.00077	0.00077	0.00086	0.0077	--
PCB-98/102	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U	--
PCB-99	0.000034	0.00012	0.00033	--	0.000002 U	0.00097	0.00066	0.00079	0.0068	--
PENTACHLOROBIPHENYLS	0.0023 J	0.0045 J	0.026 J	--	0.000022 J	0.036 J	0.046 J	0.057 J	0.34 J	--
TEQ DIOXIN-LIKE PCBs (BIRD)	1.06517E-06	3.12078E-06	1.04363E-05	--	2.22E-10	2.44679E-05	2.6345E-05	3.30711E-05	0.00017285	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.06582E-06	3.12117E-06	1.04369E-05	--	6.2606E-08	2.44683E-05	2.6345E-05	3.30711E-05	0.00017285	--
TEQ DIOXIN-LIKE PCBs (FISH)	1.9206E-08	5.1269E-08	1.7242E-07	--	1E-11	3.8741E-07	6.3061E-07	8.92105E-07	2.03895E-06	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	1.9238E-08	5.1288E-08	1.72447E-07	--	1.817E-09	3.8743E-07	6.3061E-07	8.92105E-07	2.03895E-06	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	3.19962E-07	8.46364E-07	2.71902E-06	--	6.6E-11	6.29546E-06	1.20151E-05	1.741E-05	3.41479E-05	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	3.39462E-07	8.58214E-07	2.73552E-06	--	4.254E-08	6.30776E-06	1.20151E-05	1.741E-05	3.41479E-05	--
TETRACHLOROBIPHENYLS	0.00046 J	0.001 J	0.0033 J	--	0 UJ	0.01 J	0.0068 J	0.0069 J	0.15 J	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0002883	0.0007495	0.003487	--	0.00000222	0.005433	0.007042	0.009233	0.034736	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.02206527	0.0484218	0.27971805	--	0.0002293	0.41034855	0.72063	0.9700398	4.358538	--
TOTAL PCB CONGENERS ZEROND	0.02235357	0.0491713	0.28320505	--	0.00023152	0.41578155	0.727672	0.9792728	4.393274	--
TOTAL PCB CONGENERS-NOAA	0.0101334	0.024325	0.132708	--	0.00010632	0.19612	0.334286	0.449602	1.88642	--
TOTAL PCB CONGENERS-NOAA HALFND	0.02240822	0.049216695	0.2832426	--	0.000381245	0.41580796	0.727703	0.9792998	4.393299	--
TOTAL PCB CONGENERS-NOAA X2	0.0202668	0.04865	0.265416	--	0.00021264	0.39224	0.668572	0.899204	3.77284	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0202668	0.04865	0.265416	--	0.00023064	0.39224	0.668572	0.899204	3.77284	--
TRICHLOROBIPHENYLS	0.00017 J	0.00032 J	0.00095 J	--	0 UJ	0.0032 J	0.0023 J	0.0021 J	0.053 J	--
DIOXINS/FURANS (NG/KG)										
1,2,3,4,6,7,8,9-OCDD	71	77	110	--	110	400	150	200	3700	--
1,2,3,4,6,7,8,9-OCDF	4.8 J	4.6 J	11	--	0.46 U	21	20	16	350	--
1,2,3,4,6,7,8-HPCDD	2.6 J	6.2	11	--	2.8 J	32	11	14	280	--
1,2,3,4,6,7,8-HPCDF	3.8 J	3.2 J	7.6	--	0.18 U	11	6.6	4.5 J	100	--
1,2,3,4,7,8,9-HPCDF	0.56 J	0.2 U	1.3 J	--	0.2 U	1.3 J	1.3 J	0.58 J	11	--
1,2,3,4,7,8-HXCDD	0.39 U	0.31 U	0.41 J	--	0.23 U	0.93 J	0.25 J	0.18 U	0.84 J	--
1,2,3,4,7,8-HXCDF	0.91 J	1.1 J	3.5 J	--	0.16 U	4 J	3.3 J	1.6 J	17	--
1,2,3,6,7,8-HXCDD	0.43 U	0.59 J	1 J	--	0.25 U	2 J	0.71 J	0.52 J	6.9	--
1,2,3,6,7,8-HXCDF	0.68 J	0.55 J	1.8 J	--	0.3 U	1.3 J	1.1 J	0.61 J	4.3 J	--
1,2,3,7,8,9-HXCDD	0.38 U	0.38 U	0.57 J	--	0.38 U	1.3 J	0.42 J	0.23 J	1.6 J	--
1,2,3,7,8,9-HXCDF	0.35 J	0.21 U	0.68 J	--	0.21 U	0.43 U	0.4 J	0.22 U	1.3 J	--
1,2,3,7,8-PECDD	0.24 U	0.33 U	0.42 J	--	0.23 U	0.56 J	0.29 J	0.2 U	0.51 J	--
1,2,3,7,8-PECDF	0.42 J	0.25 U	0.69 J	--	0.25 U	0.8 J	0.87 J	0.6 J	2.1 J	--
2,3,4,6,7,8-HXCDF	0.78 J	0.68 J	3.3 J	--	0.15 U	1.3 J	1.1 J	0.63 J	4.3 J	--
2,3,4,7,8-PECDF	0.82 J	0.82 J	5	--	0.15 U	1.8 J	2.6 J	1.5 J	5.6	--
2,3,7,8-TCDD	0.13 U	0.13 U	0.28 J	--	0.12 U	0.33 J	0.18 J	0.17 J	0.26 J	--
2,3,7,8-TCDF	0.48 J	0.39 J	0.97 J	--	0.091 U	1.2	3	1.8	4.1	--
TEQ DIOXINS (BIRD)	1.66778	1.49526	7.8666	--	0.0138	5.0236	6.9156	3.9286	15.436	--
TEQ DIOXINS (BIRD) HALFND	1.88368	1.77601	7.8666	--	0.390723	5.0451	6.9156	4.0441	15.436	--
TEQ DIOXINS (FISH)	0.78078	0.71476	4.5438	--	0.0138	3.2451	2.7968	1.4179	8.87	--
TEQ DIOXINS (FISH) HALFND	1.06733	1.04191	4.5438	--	0.338398	3.2666	2.7968	1.5739	8.87	--
TEQ DIOXINS (HUMANS/MAMMALS)	0.67094	0.69548	3.679	--	0.061	3.2263	2.5441	1.4326	11.672	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	0.91594	0.97523	3.679	--	0.352769	3.2478	2.5441	1.5526	11.672	--
TOTAL HPCDD	5.2 J	13 J	22 J	--	5.9 J	70 J	27 J	34 J	1100 J	--
TOTAL HPCDF	6.2 J	5.7 J	17 J	--	0 UJ	26 J	18 J	14 J	350 J	--
TOTAL HXCDD	3.8 J	5.3 J	10 J	--	0.63 J	24 J	8 J	5.2 J	56 J	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-314	SB-315	SB-315	SB-315	SB-315	SB-316	SB-316	SB-316	SB-316	SB-316
SAMPLE ID	SB314-20191107-4872	SB315-20191107-0006	SB315-20191107-0624	SB315-20191107-2448	SB315-20191107-7296	SB316-20191108-0006	SB316-20191108-0624	SB316-20191108-0624-D	SB316-20191108-2448	SB316-20191108-6084
SAMPLE DATE	20191107	20191107	20191107	20191107	20191107	20191108	20191108	20191108	20191108	20191108
DUPLICATE								SB316-20191108-0624		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SB	SB	SS	SS	SS	SB	SB
TOP DEPTH	4	0	0.5	2	6	0	0.5	0.5	2	5
BOTTOM DEPTH	6	0.5	2	4	8	0.5	2	2	4	7
TOTAL HXCDF	5.9 J	7.1 J	35 J	--	0 UJ	20 J	18 J	9.1 J	110 J	--
TOTAL PECDD	3.6 J	2.9 J	6.3 J	--	0 UJ	14 J	4.6 J	2.9 J	9.3 J	--
TOTAL PECDF	7.5 J	8.4 J	46 J	--	0 UJ	28 J	22 J	12 J	54 J	--
TOTAL TCDD	4.1 J	3.5 J	4.9 J	--	0 UJ	13 J	4.9 J	3.8 J	6.9 J	--
TOTAL TCDF	11 J	8.6 J	29 J	--	0 UJ	22 J	19 J	11 J	41 J	--
METALS (MG/KG)										
ALUMINUM	1790	2300	3370	--	5700	6550	12200	2220	7190 J	--
ANTIMONY	0.48 J	0.21 J	0.82 U	--	0.88 J	0.38 J	0.43 J	0.56 J	0.88 J	--
ARSENIC	10.6	5.5	6.3	--	6.4	11.7	19.5	42.4	25.3 J	--
BARIUM	93.1	37.1	109	--	116	72.1	189	263	84.4 J	--
BERYLLIUM	0.79	0.33 J	0.72	--	0.7	0.63	1.2	1.6	0.32 J	--
CADMIUM	0.39 J	0.15 J	0.31 J	--	0.31 J	0.5 J	0.27 J	0.26 J	0.39 J	--
CALCIUM	7080	858	1040	--	341 J	4140	3080	2180	890	--
CHROMIUM	12	7.6	8.8	--	8.9	12.7	15.2	20.8	19.9 J	--
COBALT	10	7.6	8.1	--	8.6	8.8	10.5	15.5	2.9 J	--
COPPER	30	9.2	54.4	--	57.1	22.4	44.5	56.2	107 J	--
CYANIDE	0.25 J	0.15 J	0.64 J-	--	0.069 J	0.028 J	0.54 R	0.13 J	0.068 J	--
IRON	20200	12700	19000	--	8730	17900	21700	22200	28800 J	--
LEAD	36.4	21.2	53.8	--	57.7	35.1	28.8	33.3	39.8 J	--
MAGNESIUM	741	755	564 J	--	325 J	1550	2880	708	1260	--
MANGANESE	408	332	430	--	444	434	320	380	203 J	--
MERCURY	0.044 J	0.11 U	0.027 J	--	0.022 J	0.039 J	0.09 J	0.13	0.21 J	--
NICKEL	18	11.8	15	--	16.1	19.1	22.7	30.9	13.7 J	--
POTASSIUM	587 U	579 U	937	--	556 U	1550	3210	528 U	2100	--
SELENIUM	0.64 J	0.41 J	0.72 J	--	0.64 J	3 UJ	2.7 UJ	3.1	2.8 UJ	--
SILVER	0.15 J	0.55 U	0.59 U	--	0.57 U	0.065 J	0.075 J	0.078 J	0.57 U	--
SODIUM	44.6 J	12.7 J	40.4 J	--	36.5 J	108 J	256 J	32.8 J	190 J	--
THALLIUM	0.6 U	0.55 U	0.59 U	--	0.57 U	0.6 U	0.54 U	0.53 U	0.57 UJ	--
VANADIUM	12.2	5	12.4	--	12.9	9.4	16.9	22.8	5.1 J	--
ZINC	70.8	42	58.4	--	62.4	75.7	64.4	82.4	44.9 J	--
MISCELLANEOUS (%)										
TOTAL SOLIDS	--	--	--	--	--	85	--	--	--	--
MISCELLANEOUS (MG/KG)										
TOTAL ORGANIC CARBON	--	--	--	--	--	51900	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)										
PERCENT SOLIDS	--	--	80	82	--	--	93	--	--	88

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-317	SB-317	SB-317	SB-318	SB-318	SB-318	SB-318	SB-319	SB-319	SB-319
SAMPLE ID	SB317-20191108-0006	SB317-20191108-0624	SB317-20191108-6084	SB318-20191108-0006	SB318-20191108-0624	SB318-20191108-2448	SB318-20191108-4872	SB319-20191107-0006	SB319-20191107-0624	SB319-20191107-6084
SAMPLE DATE	20191108	20191108	20191108	20191108	20191108	20191108	20191108	20191107	20191107	20191107
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	0	0.5	5	0	0.5	2	4	0	0.5	5
BOTTOM DEPTH	0.5	2	7	0.5	2	4	6	0.5	2	7
VOLATILES (MG/KG)										
1,1,1-TRICHLOROETHANE	0.0049 U	0.0047 U	0.0051 U	0.0062 UJ	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
1,1,2,2-TETRACHLOROETHANE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
1,1,2-TRICHLOROETHANE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0049 U	0.0047 U	0.0051 U	0.0062 UJ	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
1,1-DICHLOROETHANE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
1,1-DICHLOROETHENE	0.0049 UJ	0.0047 UJ	0.0051 UJ	0.0062 UJ	0.0096 UJ	--	0.0051 UJ	0.006 U	0.005 U	0.0052 U
1,2,3-TRICHLOROBENZENE	0.0049 UJ	0.0047 UJ	0.0051 U	0.0062 UJ	0.0096 UJ	--	0.0051 UJ	0.006 UJ	0.005 UJ	0.0052 UJ
1,2,4-TRICHLOROBENZENE	0.0049 UJ	0.0047 UJ	0.0051 U	0.0062 UJ	0.0096 UJ	--	0.0051 UJ	0.006 UJ	0.005 UJ	0.0052 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.0049 U	0.0047 UJ	0.0051 U	0.0062 UJ	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
1,2-DIBROMOETHANE	0.0049 U	0.0047 U	0.0051 U	0.0062 UJ	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
1,2-DICHLOROBENZENE	0.0049 UJ	0.0047 UJ	0.0051 U	0.0062 UJ	0.0096 UJ	--	0.0051 UJ	0.006 UJ	0.005 UJ	0.0052 UJ
1,2-DICHLOROETHANE	0.0049 U	0.0047 U	0.0051 U	0.0062 UJ	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
1,2-DICHLOROPROPANE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
1,3-DICHLOROBENZENE	0.0049 UJ	0.0047 UJ	0.0051 U	0.0062 UJ	0.0096 UJ	--	0.0051 UJ	0.006 UJ	0.005 UJ	0.0052 UJ
1,4-DICHLOROBENZENE	0.0049 UJ	0.0047 UJ	0.0051 U	0.0062 UJ	0.0096 UJ	--	0.0051 UJ	0.006 UJ	0.005 UJ	0.0052 UJ
2-BUTANONE	0.0098 U	0.0094 U	0.01 U	0.012 U	0.019 U	--	0.01 U	0.012 U	0.01 U	0.01 U
2-HEXANONE	0.0098 U	0.0094 U	0.01 U	0.012 U	0.019 U	--	0.01 U	0.012 UJ	0.01 U	0.01 U
4-METHYL-2-PENTANONE	0.0098 U	0.0094 U	0.01 U	0.012 U	0.019 U	--	0.01 U	0.012 UJ	0.01 U	0.01 U
ACETONE	0.0098 U	0.0094 U	0.014	0.012 U	0.013 J	--	0.017	0.0097 J	0.01 U	0.01 U
BENZENE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
BROMOCHLOROMETHANE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
BROMODICHLOROMETHANE	0.0049 R	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 R	0.005 R	0.0052 R
BROMOFORM	0.0049 U	0.0047 UJ	0.0051 U	0.0062 UJ	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
BROMOMETHANE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
CARBON DISULFIDE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
CARBON TETRACHLORIDE	0.0049 U	0.0047 U	0.0051 U	0.0062 UJ	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
CHLOROBENZENE	0.0049 UJ	0.0047 UJ	0.0051 U	0.0062 UJ	0.0096 UJ	--	0.0051 UJ	0.006 UJ	0.005 UJ	0.0052 UJ
CHLORODIBROMOMETHANE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
CHLOROETHANE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
CHLOROFORM	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
CHLOROMETHANE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
CIS-1,2-DICHLOROETHENE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
CIS-1,3-DICHLOROPROPENE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
CYCLOHEXANE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
DICHLORODIFLUOROMETHANE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
ETHYLBENZENE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
ISOPROPYLBENZENE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
M+P-XYLENES	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
METHYL ACETATE	0.0049 U	0.0047 U	0.0051 U	0.0062 UJ	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
METHYL CYCLOHEXANE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
METHYL TERT-BUTYL ETHER	0.0049 U	0.0047 U	0.0051 U	0.0062 UJ	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
METHYLENE CHLORIDE	0.0049 U	0.0047 U	0.0051 U	0.0062 UJ	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
O-XYLENE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
STYRENE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
TETRACHLOROETHENE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
TOLUENE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
TRANS-1,2-DICHLOROETHENE	0.0049 UJ	0.0047 UJ	0.0051 UJ	0.0062 UJ	0.0096 UJ	--	0.0051 UJ	0.006 U	0.005 U	0.0052 U
TRANS-1,3-DICHLOROPROPENE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
TRICHLOROETHENE	0.0049 R	0.0047 R	0.0051 R	0.0062 U	0.0096 R	--	0.0051 R	0.006 R	0.005 R	0.0052 R
TRICHLOROFLUOROMETHANE	0.0049 U	0.0047 U	0.0051 U	0.0062 UJ	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
VINYL CHLORIDE	0.0049 U	0.0047 U	0.0051 U	0.0062 U	0.0096 U	--	0.0051 U	0.006 U	0.005 U	0.0052 U
SEMIVOLATILES (MG/KG)										
1,1-BIPHENYL	0.2 U	0.014 J	0.21 U	0.2 U	0.035 J	--	0.2 U	0.22 U	0.2 U	0.018 J
1,2,4,5-TETRACHLOROBENZENE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
1,4-DIOXANE	0.078 U	0.075 U	0.082 U	0.079 U	0.083 U	--	0.079 U	0.085 U	0.079 U	0.079 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U
2,3,4,6-TETRACHLOROPHENOL	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
2,4,5-TRICHLOROPHENOL	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
2,4,6-TRICHLOROPHENOL	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
2,4-DICHLOROPHENOL	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
2,4-DIMETHYLPHENOL	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
2,4-DINITROPHENOL	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U
2,4-DINITROTOLUENE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
2,6-DINITROTOLUENE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
2-CHLORONAPHTHALENE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
2-CHLOROPHENOL	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
2-METHYLNAPHTHALENE	0.2 U	0.058 J	0.21 U	0.049 J	0.31	--	0.021 J	0.22 U	0.061 J	0.14 J
2-METHYLPHENOL	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U
2-NITROANILINE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
2-NITROPHENOL	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
3&4-METHYLPHENOL	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U
3,3'-DICHLOROBENZIDINE	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U
3-NITROANILINE	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U
4,6-DINITRO-2-METHYLPHENOL	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U
4-BROMOPHENYL PHENYL ETHER	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
4-CHLORO-3-METHYLPHENOL	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
4-CHLOROANILINE	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U
4-CHLOROPHENYL PHENYL ETHER	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
4-NITROANILINE	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U
4-NITROPHENOL	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-317	SB-317	SB-317	SB-318	SB-318	SB-318	SB-318	SB-319	SB-319	SB-319
SAMPLE ID	SB317-20191108-0006	SB317-20191108-0624	SB317-20191108-6084	SB318-20191108-0006	SB318-20191108-0624	SB318-20191108-2448	SB318-20191108-4872	SB319-20191107-0006	SB319-20191107-0624	SB319-20191107-6084
SAMPLE DATE	20191108	20191108	20191108	20191108	20191108	20191108	20191108	20191107	20191107	20191107
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	0	0.5	5	0	0.5	2	4	0	0.5	5
BOTTOM DEPTH	0.5	2	7	0.5	2	4	6	0.5	2	7
ACENAPHTHENE	0.2 U	0.19 U	0.21 U	0.2 U	0.024 J	--	0.2 U	0.22 U	0.2 U	0.2 U
ACENAPHTHYLENE	0.2 U	0.19 U	0.21 U	0.2 U	0.86	--	0.2 U	0.22 U	0.2 U	0.015 J
ACETOPHENONE	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U
ANTHRACENE	0.2 U	0.19 U	0.21 U	0.035 J	0.37	--	0.2 U	0.22 U	0.033 J	0.028 J
ATRAZINE	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U
BAP EQUIVALENT-HALFND	0.141838	0.134214	0.21 U	0.18487	4.5354	--	0.15641	0.24551	0.19558	0.22379
BAP EQUIVALENT-POS	0.030838	0.028764	0.21 U	0.08487	4.4304	--	0.05641	0.0023	0.09558	0.12379
BENZALDEHYDE	0.38 U	0.37 U	0.4 U	0.39 U	0.035 J	--	0.39 U	0.16 J	0.39 U	0.022 J
BENZO(A)ANTHRACENE	0.026 J	0.03 J	0.21 U	0.074 J	3.9	--	0.049 J	0.22 U	0.078 J	0.099 J
BENZO(A)PYRENE	0.023 J	0.021 J	0.21 U	0.061 J	3.3	--	0.042 J	0.22 U	0.071 J	0.092 J
BENZO(B)FLUORANTHENE	0.052 J	0.047 J	0.21 U	0.12 J	5.7	--	0.068 J	0.023 J	0.12 J	0.16 J
BENZO(G,H,I)PERYLENE	0.019 J	0.19 U	0.21 U	0.039 J	1.2	--	0.032 J	0.22 U	0.045 J	0.052 J
BENZO(K)FLUORANTHENE	0.2 U	0.19 U	0.21 U	0.036 J	1.8	--	0.025 J	0.22 U	0.037 J	0.053 J
BIS(2-CHLOROETHOXY)METHANE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
BIS(2-CHLOROETHYL)ETHER	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.03 J	0.39 U	0.39 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.025 J	0.19 U	0.038 J	0.022 J	0.21 U	--	0.2 U	0.22 U	0.13 J	0.17 J
BUTYL BENZYL PHTHALATE	0.2 U	0.19 U	0.049 J	0.2 U	0.21 U	--	0.2 U	0.22 U	0.045 J	0.033 J
CAPROLACTAM	0.38 UJ	0.37 UJ	0.4 UJ	0.39 UJ	0.41 UJ	--	0.39 UJ	0.42 UJ	0.39 UJ	0.39 UJ
CARBAZOLE	0.38 U	0.37 U	0.4 U	0.39 U	0.061 J	--	0.39 U	0.42 U	0.39 U	0.39 U
CHRYSENE	0.038 J	0.064 J	0.21 U	0.11 J	2.4	--	0.06 J	0.22 U	0.11 J	0.16 J
DIBENZO(A,H)ANTHRACENE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
DIBENZOFURAN	0.2 U	0.19 U	0.21 U	0.018 J	0.1 J	--	0.2 U	0.22 U	0.03 J	0.047 J
DIETHYL PHTHALATE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
DIMETHYL PHTHALATE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
DI-N-BUTYL PHTHALATE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.032 J	0.033 J
DI-N-OCTYL PHTHALATE	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U
FLUORANTHENE	0.042 J	0.058 J	0.4 U	0.17 J	6.6	--	0.066 J	0.42 U	0.14 J	0.15 J
FLUORENE	0.2 U	0.19 U	0.21 U	0.019 J	0.037 J	--	0.2 U	0.22 U	0.2 U	0.2 U
HEXACHLOROBENZENE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
HEXACHLOROBUTADIENE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
HEXACHLOROCYCLOPENTADIENE	0.38 UJ	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 UJ	0.39 UJ	0.39 UJ
HEXACHLOROETHANE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
HIGH MOLECULAR WEIGHT PAHS	0.194	0.222	0 U	0.62	26.7	--	0.369	0.023	0.634	0.818
INDENO(1,2,3-CD)PYRENE	0.2 U	0.19 U	0.21 U	0.04 J	1.5	--	0.024 J	0.22 U	0.043 J	0.052 J
ISOPHORONE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
LOW MOLECULAR WEIGHT PAHS	0.071	0.209	0 U	0.399	8.511	--	0.138	0 U	0.388	0.482
NAPHTHALENE	0.2 U	0.031 J	0.21 U	0.025 J	0.18 J	--	0.014 J	0.22 U	0.045 J	0.079 J
NITROBENZENE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
N-NITROSO-DI-N-PROPYLAMINE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
N-NITROSODIPHENYLAMINE	0.2 U	0.19 U	0.21 U	0.2 U	0.21 U	--	0.2 U	0.22 U	0.2 U	0.2 U
PENTACHLOROPHENOL	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U
PHENANTHRENE	0.029 J	0.12 J	0.21 U	0.15 J	0.44	--	0.058 J	0.22 U	0.17 J	0.21
PHENOL	0.38 U	0.37 U	0.4 U	0.39 U	0.41 U	--	0.39 U	0.42 U	0.39 U	0.39 U
PYRENE	0.036 J	0.06 J	0.21 U	0.14 J	6.9	--	0.069 J	0.22 U	0.13 J	0.15 J
TOTAL PAHS	0.265	0.431	0 U	1.019	35.211	--	0.507	0.023	1.022	1.3
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K										
1,4-DIOXANE	0.0078 U	0.0076 U	0.0083 U	0.008 U	0.0085 U	--	0.0078 U	0.0086 U	0.0078 U	0.0078 U
2-METHYLNAPHTHALENE	0.014	0.082	0.0062	0.049	--	--	0.028	0.0085	0.074	0.16
ACENAPHTHENE	0.0038 U	0.0043	0.004 U	0.0097	--	--	0.0029 J	0.0011 J	0.017	0.014
ACENAPHTHYLENE	0.0072	0.0036 J	0.00066 J	0.011	--	--	0.0086	0.0023 J	0.0062	0.015
ANTHRACENE	0.0057	0.012	0.0026 J	0.026	--	--	0.013	0.0016 J	0.025	0.026
BAP EQUIVALENT-HALFND	0.032159	0.025879	0.006092	0.060404	--	--	0.049128	0.012082	0.076055	0.09729
BAP EQUIVALENT-POS	0.030259	0.024029	0.004092	0.058454	--	--	0.049128	0.009982	0.074105	0.09534
BENZO(A)ANTHRACENE	0.021	0.023	0.0041	0.052	--	--	0.034	0.0045	0.07	0.092
BENZO(A)PYRENE	0.023	0.017	0.0028 J	0.042	--	--	0.034	0.0074	0.055	0.066
BENZO(B)FLUORANTHENE	0.039	0.038	0.007	0.092	--	--	0.054	0.017	0.096	0.17
BENZO(G,H,I)PERYLENE	0.014	0.0089	0.0017 J	0.015	--	--	0.014	0.0059	0.021	0.027 J+
BENZO(K)FLUORANTHENE	0.013 J	0.0094 J	0.0023 J	0.027 J	--	--	0.018 J	0.0051	0.041	0.05 J+
CHRYSENE	0.029	0.095	0.0092	0.084	--	--	0.048	0.011	0.095	0.14
DIBENZO(A,H)ANTHRACENE	0.0038 U	0.0037 U	0.004 U	0.0039 U	--	--	0.0049	0.0042 U	0.0039 U	0.0039 UJ
FLUORANTHENE	0.044	0.055	0.0095	0.17	--	--	0.059	0.0082	0.14	0.16
FLUORENE	0.0038 U	0.0066	0.0014 J	0.017	--	--	0.0068	0.0042 U	0.017	0.015
HIGH MOLECULAR WEIGHT PAHS	0.18	0.2367	0.036	0.428	--	--	0.2719	0.0634	0.487	0.68
INDENO(1,2,3-CD)PYRENE	0.011	0.0074	0.0015 J	0.017	--	--	0.012	0.0037 J	0.02	0.025 J+
LOW MOLECULAR WEIGHT PAHS	0.0942	0.2585	0.02846	0.4007	--	--	0.1563	0.0307	0.4132	0.521
NAPHTHALENE	0.0093	0.037	0.0033 J	0.027	--	--	0.018	0.0045	0.048	0.091
PENTACHLOROPHENOL	0.0078 UJ	0.0075 UJ	0.0082 UJ	0.0079 UJ	--	--	0.0079 UJ	0.0085 UJ	0.0079 UJ	0.0079 UJ
PHENANTHRENE	0.028	0.14	0.011	0.14	--	--	0.048	0.013	0.16	0.2
PYRENE	0.03	0.038	0.0074	0.099	--	--	0.053	0.0088	0.089	0.11
TOTAL PAHS	0.029	0.095	0.0092	0.084	--	--	0.048	0.011	0.095	0.14
PESTICIDES (MG/KG)										
4,4'-DDD	0.004 U	0.0037 U	0.0039 U	0.0039 U	0.0043 U	--	0.0005 J	0.0042 U	0.0039 U	0.0039 U
4,4'-DDE	0.004 U	0.0037 U	0.0039 U	0.0039 U	0.0043 U	--	0.0039 U	0.0042 U	0.0039 U	0.0039 U
4,4'-DDT	0.004 U	0.0037 U	0.00053 J	0.0039 U	0.0043 U	--	0.0039 U	0.0042 U	0.0039 U	0.0039 U
ALDRIN	0.002 U	0.0019 U	0.002 U	0.002 U	0.0022 U	--	0.002 U	0.0022 U	0.002 U	0.002 U
ALPHA-BHC	0.002 U	0.0019 U	0.002 U	0.002 U	0.0022 U	--	0.002 U	0.0022 U	0.002 U	0.002 U
ALPHA-CHLORDANE	0.002 U	0.0019 U	0.002 U	0.002 U	0.0022 U	--	0.002 U	0.0022 U	0.002 U	0.002 U
BETA-BHC	0.002 U	0.0019 U	0.002 U	0.002 U	0.0022 U	--	0.002 U	0.0022 U	0.002 U	0.002 U
DELTA-BHC	0.002 U	0.0019 U	0.002 U	0.002 U	0.0022 U	--	0.002 U	0.0022 U	0.002 U	0.002 U
DIELDRIN	0.004 U	0.0037 U	0.0039 U	0.0039 U	0.0043 U	--	0.0039 U	0.0042 U	0.0039 U	0.0039 U
ENDOSULFAN I	0.002 U	0.0019 U	0.002 U	0.002 U	0.0022 U	--	0.002 U	0.0022 U	0.002 U	0.002 U

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-317	SB-317	SB-317	SB-318	SB-318	SB-318	SB-318	SB-319	SB-319	SB-319
SAMPLE ID	SB317-20191108-0006	SB317-20191108-0624	SB317-20191108-6084	SB318-20191108-0006	SB318-20191108-0624	SB318-20191108-2448	SB318-20191108-4872	SB319-20191107-0006	SB319-20191107-0624	SB319-20191107-6084
SAMPLE DATE	20191108	20191108	20191108	20191108	20191108	20191108	20191108	20191107	20191107	20191107
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	0	0.5	5	0	0.5	2	4	0	0.5	5
BOTTOM DEPTH	0.5	2	7	0.5	2	4	6	0.5	2	7
ENDOSULFAN II	0.004 U	0.0037 U	0.0039 U	0.0039 U	0.0043 U	--	0.0039 U	0.0042 U	0.0039 U	0.0039 U
ENDOSULFAN SULFATE	0.004 U	0.0037 U	0.0039 U	0.0039 U	0.0043 U	--	0.0039 U	0.0042 U	0.0039 U	0.0039 U
ENDRIN	0.004 U	0.0037 U	0.0039 U	0.0039 U	0.0043 U	--	0.0039 U	0.0042 U	0.0039 U	0.0039 U
ENDRIN ALDEHYDE	0.004 U	0.0037 U	0.0039 U	0.0039 U	0.0043 U	--	0.0039 U	0.0042 U	0.0039 U	0.0039 U
ENDRIN KETONE	0.004 U	0.0037 U	0.0039 U	0.0039 U	0.0043 U	--	0.0039 U	0.0042 U	0.0039 U	0.0039 U
GAMMA-BHC (LINDANE)	0.00027 J	0.0012 J	0.002 U	0.00035 J	0.0022	--	0.00045 J	0.0022 U	0.0011 J	0.00073 J
GAMMA-CHLORDANE	0.002 U	0.0019 U	0.002 U	0.002 U	0.0022 U	--	0.002 U	0.0022 U	0.002 U	0.002 U
HEPTACHLOR	0.002 U	0.0019 U	0.002 U	0.002 U	0.0022 U	--	0.002 U	0.0022 U	0.002 U	0.002 U
HEPTACHLOR EPOXIDE	0.002 U	0.0019 U	0.002 U	0.002 U	0.0022 U	--	0.002 U	0.0022 U	0.002 U	0.002 U
METHOXYCHLOR	0.021 U	0.019 U	0.02 U	0.02 U	0.022 U	--	0.02 U	0.022 U	0.02 U	0.02 U
TOXAPHENE	0.2 U	0.19 U	0.2 U	0.2 U	0.22 U	--	0.2 U	0.22 U	0.2 U	0.2 U
PCBS (MG/KG)										
AROCLOR-1016	--	--	0.039 U	0.039 U	--	--	--	--	0.039 U	--
AROCLOR-1221	--	--	0.039 U	0.039 U	--	--	--	--	0.039 U	--
AROCLOR-1232	--	--	0.039 U	0.039 U	--	--	--	--	0.039 U	--
AROCLOR-1242	--	--	0.039 U	0.039 U	--	--	--	--	0.039 U	--
AROCLOR-1248	--	--	0.039 U	0.039 U	--	--	--	--	0.039 U	--
AROCLOR-1254	--	--	0.013 J	0.039 U	--	--	--	--	0.19	--
AROCLOR-1260	--	--	0.039 U	0.09	--	--	--	--	0.039 U	--
AROCLOR-1262	--	--	0.039 U	0.039 U	--	--	--	--	0.039 U	--
AROCLOR-1268	--	--	0.039 U	0.039 U	--	--	--	--	0.039 U	--
TOTAL AROCLOR	--	--	0.013	0.09	--	--	--	--	0.19	--
TOTAL AROCLOR HALFND	--	--	0.169	0.246	--	--	--	--	0.346	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)										
AROCLOR-1016	--	0.281 U	0.284 U	--	0.316 U	0.294 U	--	--	0.352 U	0.281 U
AROCLOR-1221	--	0.562 U	0.568 U	--	0.633 U	0.588 U	--	--	0.704 U	0.562 U
AROCLOR-1232	--	0.281 U	0.284 U	--	0.316 U	0.294 U	--	--	0.352 U	0.281 U
AROCLOR-1242	--	0.281 U	0.284 U	--	0.316 U	0.294 U	--	--	0.352 U	0.281 U
AROCLOR-1248	--	0.281 U	0.284 U	--	0.316 U	0.294 U	--	--	0.352 U	0.281 U
AROCLOR-1254	--	0.281 U	0.284 U	--	0.316 U	0.294 U	--	--	0.551	0.387
AROCLOR-1260	--	0.397	0.205 J	--	0.098 J	0.294 U	--	--	0.352 U	0.281 U
AROCLOR-1262	--	0.281 U	0.284 U	--	0.316 U	0.294 U	--	--	0.352 U	0.281 U
AROCLOR-1268	--	0.281 U	0.284 U	--	0.316 U	0.294 U	--	--	0.352 U	0.281 U
TOTAL AROCLOR	--	0.397	0.205	--	0.098	0 U	--	--	0.551	0.387
TOTAL AROCLOR HALFND	--	1.6615	1.483	--	1.5205	1.47	--	--	2.135	1.6515
PCB CONGENERS (MG/KG)										
DICHLOROBIPHENYLS	0.00063 J	0.00042 J	0.0073 J	0.0015 J	0.00055 J	--	0 UJ	0.000024 J	0.0004 J	0.00024 J
HEPTACHLOROBIPHENYLS	0.085 J	0.062 J	0.035 J	0.2 J	0.19 J	--	0.00041 J	0.00093 J	0.016 J	0.027 J
HEXACHLOROBIPHENYLS	0.087 J	0.11 J	0.11 J	0.15 J	0.21 J	--	0.00038 J	0.001 J	0.086 J	0.16 J
MONOCHLOROBIPHENYLS	0.00002 J	0.00007 J	0.0086 J	0.000051 J	0.000045 J	--	0 UJ	0 UJ	0.000066 J	0.000032 J
NONACHLOROBIPHENYLS	0.0012 J	0.0011 J	0.00013 J	0.0025 J	0.0025 J	--	0.0000042 J	0.000023 J	0.00098 J	0.0039 J
OCTACHLOROBIPHENYLS	0.018 J	0.01 J	0.0036 J	0.042 J	0.037 J	--	0.000082 J	0.00023 J	0.0022 J	0.0038 J
PCB-1	0.00001	0.000031	0.0063	0.000024	0.000016	--	0.000002 U	0.000002 U	0.00001	0.000011
PCB-10	0.0000058	0.000016	0.00018	0.0000081	0.0000047	--	0.000002 U	0.000002 U	0.0000018 J	0.0000012 J
PCB-100	0.0000089	0.000002 U	0.0000059	0.000012	0.000024	--	0.000002 U	0.000002 U	0.000025	0.000067
PCB-101/90	0.0076	0.018	0.02	0.015	0.031	--	0.000036	0.000075	0.024	0.043 J
PCB-103	0.000015	0.0000059	0.00055	0.000021	0.000048	--	0.000002 U	0.000002 U	0.000058	0.00013
PCB-104	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-105	0.0011	0.00042	0.00046	0.0014	0.0071	--	0.0000057	0.000016	0.0076	0.015
PCB-106	--	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--	--
PCB-108/107	0.00019	0.000032	0.00013	0.00024	0.0012	--	0.000004 U	0.0000038 J	0.0014	0.0024
PCB-108/124	--	--	--	--	--	--	--	--	--	--
PCB-109	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-11	0.000079	0.0000079	0.0000047	0.00026	0.000038	--	0.000002 U	0.000017	0.00014	0.00011
PCB-110	0.0048	0.0059	0.012	0.0076	0.026 J	--	0.000022	0.000059	0.031 J	0.054 J
PCB-110/115	--	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--	--
PCB-111/115	0.000057	0.000015	0.000015	0.000045	0.00031	--	0.000004 U	0.000004 U	0.00043	0.00079
PCB-112	--	--	--	--	--	--	--	--	--	--
PCB-113	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.028	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-114	0.000087	0.0000066	0.0000054	0.000055	0.00046	--	0.000001 U	0.0000012 U	0.00039	0.00064
PCB-118	--	--	--	--	--	--	--	--	--	--
PCB-118/106	0.0035	0.0014	0.0021	0.005	0.019	--	0.000016	0.000043	0.02	0.036
PCB-119	0.000037	0.00001	0.00044	0.000057	0.00026	--	0.000002 U	0.000002 U	0.00038	0.00058
PCB-12	0.000014	0.0000026	0.000029	0.000025	0.000014	--	0.000002 U	0.000002 U	0.0000091	0.0000032
PCB-12/13	--	--	--	--	--	--	--	--	--	--
PCB-120	0.000019	0.000089	0.000099	0.000042	0.000064	--	0.000002 U	0.000002 U	0.000021	0.000048
PCB-121	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-122	0.000046	0.0000026	0.0000029	0.000033	0.00022	--	0.000002 U	0.000002 U	0.00025	0.00046
PCB-123	0.000053	0.0000065	0.000023	0.000065	0.00049	--	0.0000012 U	0.000001 U	0.00043	0.00093
PCB-124	0.00023	0.00006	0.00024	0.00016	0.0004	--	0.000002 U	0.0000032	0.001	0.0018
PCB-126	0.000036	0.000015	0.0000098	0.000071	0.00016	--	0.0000013 U	0.0000012 U	0.000067	0.00012
PCB-127	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-128/162	0.0014	0.00081	0.00098	0.0025	0.005	--	0.0000071	0.000017	0.0046	0.009
PCB-128/166	--	--	--	--	--	--	--	--	--	--
PCB-129	0.00032	0.00024	0.0002	0.00055	0.0014	--	0.000002 U	0.0000058	0.0013	0.0025
PCB-129/138/163	--	--	--	--	--	--	--	--	--	--
PCB-13	0.00001	0.0000071	0.000018	0.000025	0.00001	--	0.000002 U	0.000002 U	0.00001	0.0000068
PCB-130	0.00073	0.00053	0.00093	0.0012	0.0018	--	0.000002 U	0.00001	0.0013	0.0028
PCB-131	--	--	--	--	--	--	--	--	--	--

LOCATION	SB-317	SB-317	SB-317	SB-318	SB-318	SB-318	SB-318	SB-319	SB-319	SB-319
SAMPLE ID	SB317-20191108-0006	SB317-20191108-0624	SB317-20191108-6084	SB318-20191108-0006	SB318-20191108-0624	SB318-20191108-2448	SB318-20191108-4872	SB319-20191107-0006	SB319-20191107-0624	SB319-20191107-6084
SAMPLE DATE	20191108	20191108	20191108	20191108	20191108	20191108	20191108	20191107	20191107	20191107
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	0	0.5	5	0	0.5	2	4	0	0.5	5
BOTTOM DEPTH	0.5	2	7	0.5	2	4	6	0.5	2	7
PCB-131/133	0.00029	0.00037	0.00042	0.00061	0.00094	--	0.000004 U	0.0000049	0.00056	0.001
PCB-132	--	--	--	--	--	--	--	--	--	--
PCB-132/161	0.0035	0.0067	0.0076	0.0077	0.011	--	0.000016	0.00004	0.0058	0.012
PCB-133	--	--	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--	--	--
PCB-134/143	0.00058	0.0012	0.0012	0.0012	0.0019	--	0.000004 U	0.0000074	0.0011	0.0019
PCB-135	0.0021	0.0041	0.0046	0.0051	0.0055	--	0.000012	0.000026	0.0018	0.0031
PCB-135/151	--	--	--	--	--	--	--	--	--	--
PCB-136	0.0019	0.011	0.0095	0.0052	0.0068	--	0.000012	0.000026	0.0019	0.0033
PCB-137	0.00016	0.000047	0.000053	0.00023	0.0014	--	0.000002 U	0.0000033	0.0018	0.0031
PCB-138/163/164	0.02	0.015	0.016	0.041	0.049	--	0.000085	0.00023	0.023	0.043
PCB-139/140	--	--	--	--	--	--	--	--	--	--
PCB-139/149	0.016	0.029	0.028	0.0002	0.037	--	0.000069	0.00018	0.012	0.022
PCB-14	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-140	0.000044	0.000061	0.00026	0.00019	0.000062	--	0.000002 U	0.000002 U	0.00012	0.00019
PCB-141	0.0051	0.0053	0.0035	0.011	0.012	--	0.000023	0.00005	0.0031	0.0058
PCB-142	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000047	0.000002 U
PCB-143	--	--	--	--	--	--	--	--	--	--
PCB-144	0.00096	0.0021	0.0011	0.002	0.0018	--	0.0000057	0.000011	0.00055	0.00094
PCB-145	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000098	--	0.000002 U	0.000002 U	0.0000079	0.000013
PCB-146	--	--	--	--	--	--	--	--	--	--
PCB-146/165	0.0025	0.0022	0.0026	0.0046	0.0054	--	0.000012	0.000033	0.0021	0.0037
PCB-147	0.000073	0.000062	0.000044	0.000084	0.00025	--	0.000002 U	0.0000021	0.00042	0.00082
PCB-147/149	--	--	--	--	--	--	--	--	--	--
PCB-148	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-15	0.00029	0.000065	0.00025	0.00055	0.00022	--	0.000002 U	0.0000052	0.00017	0.000062
PCB-150	0.0000048	0.000002 U	0.0000086	0.0000092	0.000022	--	0.000002 U	0.000002 U	0.000018	0.000028
PCB-151	0.0059	0.012	0.0088	0.014	0.014	--	0.000032	0.000064	0.0022	0.0039
PCB-152	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.00002	--	0.000002 U	0.000002 U	0.000019	0.000034
PCB-153	0.022 J	0.019	0.018	0.042 J	0.045 J	--	0.000088	0.00026	0.015	0.027 J
PCB-153/168	--	--	--	--	--	--	--	--	--	--
PCB-154	0.000041	0.00001	0.00038	0.000071	0.00016	--	0.000002 U	0.000002 U	0.00016	0.00028
PCB-155	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-156	0.0012	0.00044	0.00039	0.0025	0.004	--	0.0000065	0.000015	0.0027	0.0054
PCB-156/157	--	--	--	--	--	--	--	--	--	--
PCB-157	0.00012	0.000034	0.00000073 U	0.00021	0.0007	--	0.0000014 U	0.0000016 U	0.00074	0.0014
PCB-158	--	--	--	--	--	--	--	--	--	--
PCB-158/160	0.0017	0.0012	0.0011	0.0034	0.0046	--	0.0000085	0.00002	0.0026	0.005
PCB-159	0.00024	0.00016	0.000099	0.00064	0.00056	--	0.0000027	0.0000043	0.000023	0.000039
PCB-16	0.00011	0.00013	0.00025	0.00029	0.00012	--	0.000002 U	0.000002 U	0.00053	0.00018
PCB-160	--	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--	--
PCB-166	0.000017	0.0000026	0.0000031	0.0000087	0.000064	--	0.000002 U	0.000002 U	0.000085	0.00018
PCB-167	0.00056	0.00016	0.0002	0.001	0.0017	--	0.0000039	0.0000074	0.0011	0.002
PCB-168	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-169	0.0000012 U	0.0000012 U	0.00000067 U	0.00001	0.000011	--	0.0000013 U	0.0000014 U	0.0000013 U	0.00000099 U
PCB-17	0.00013	0.00017	0.0003	0.00028	0.00014	--	0.000002 U	0.000002 U	0.00063	0.00009
PCB-170	0.01	0.0046	0.0031	0.023 J	0.021 J	--	0.000045	0.00011	0.0026	0.0044
PCB-171	0.0025	0.0019	0.0011	0.0055	0.0057	--	0.000014	0.000024	0.00065	0.0011
PCB-171/173	--	--	--	--	--	--	--	--	--	--
PCB-172	0.0017	0.0011	0.00054	0.0038	0.0037	--	0.000014	0.000022	0.00038	0.00061
PCB-173	0.00019	0.00017	0.000083	0.00042	0.00044	--	0.000002 U	0.000002 U	0.000067	0.00011
PCB-174	0.01	0.0095	0.0052	0.021 J	0.021 J	--	0.000042	0.00012	0.002	0.003
PCB-175	0.00036	0.00033	0.00016	0.00067	0.0008	--	0.000002 U	0.0000043	0.000002 U	0.00012
PCB-176	0.00092	0.0014	0.00088	0.0023	0.0024	--	0.0000062	0.000011	0.00019	0.00033
PCB-177	0.0061	0.0043	0.003	0.014	0.013	--	0.00003	0.000063	0.001	0.0018
PCB-178	0.0021	0.0017	0.00095	0.0047	0.0045	--	0.000014	0.000022	0.00031	0.0005
PCB-179	0.0037	0.0049	0.003	0.0088	0.0084	--	0.000021	0.000042	0.00058	0.00089
PCB-18	0.00024	0.00048	0.0011	0.00054	0.0003	--	0.000002 U	0.0000038	0.0021	0.0003
PCB-18/30	--	--	--	--	--	--	--	--	--	--
PCB-180	0.025 J	0.015	0.0075	0.062 J	0.059 J	--	0.00012	0.00025	0.0045	0.0074
PCB-180/193	--	--	--	--	--	--	--	--	--	--
PCB-181	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.00011
PCB-182	--	--	--	--	--	--	--	--	--	--
PCB-182/187	0.012	0.0093	0.0051	0.027	0.026	--	0.000056	0.00015	0.0019	0.003
PCB-183	0.0051	0.0046	0.0022	0.012	0.012	--	0.000024	0.000053	0.00097	0.0016
PCB-183/185	--	--	--	--	--	--	--	--	--	--
PCB-184	0.0000024	0.000002 U	0.0000015 J	0.0000042	0.0000068	--	0.000002 U	0.000002 U	0.000002 U	0.0000044
PCB-185	0.0013	0.001	0.00048	0.003	0.0022	--	0.0000087	0.000015	0.00016	0.00024
PCB-186	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-187	--	--	--	--	--	--	--	--	--	--
PCB-188	0.0000041	0.000002 U	0.0000014 J	0.0000078	0.000011	--	0.000002 U	0.000002 U	0.000002 U	0.0000041
PCB-189	0.00035	0.00012	0.000086	0.00075	0.00074	--	0.0000018 U	0.0000044	0.00011	0.0002
PCB-19	0.000034	0.000083	0.00025	0.000067	0.000034	--	0.000002 U	0.000002 U	0.00014	0.00012
PCB-190	0.0022	0.001	0.00063	0.0049	0.0048	--	0.000011	0.000027	0.00048	0.00079
PCB-191	0.0004	0.00023	0.00014	0.00089	0.00087	--	0.000002 U	0.000002 U	0.000089	0.00017
PCB-192	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-193	0.0012	0.00069	0.00044	0.0029	0.0024	--	0.0000089	0.000017	0.00018	0.00031

LOCATION	SB-317	SB-317	SB-317	SB-318	SB-318	SB-318	SB-318	SB-319	SB-319	SB-319
SAMPLE ID	SB317-20191108-0006	SB317-20191108-0624	SB317-20191108-6084	SB318-20191108-0006	SB318-20191108-0624	SB318-20191108-2448	SB318-20191108-4872	SB319-20191107-0006	SB319-20191107-0624	SB319-20191107-6084
SAMPLE DATE	20191108	20191108	20191108	20191108	20191108	20191108	20191108	20191107	20191107	20191107
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	0	0.5	5	0	0.5	2	4	0	0.5	5
BOTTOM DEPTH	0.5	2	7	0.5	2	4	6	0.5	2	7
PCB-194	0.0044	0.0021	0.00075	0.0087	0.0073	--	0.000021	0.000046	0.00041	0.00072
PCB-195	0.002	0.00097	0.00038	0.0045	0.0041	--	0.000011	0.000021	0.0002	0.0003
PCB-196	--	--	--	--	--	--	--	--	--	--
PCB-196/203	0.0049	0.0029	0.00096	0.013	0.011	--	0.000022	0.000064	0.00062	0.0011
PCB-197	0.00014	0.0001	0.000045	0.00035	0.00036	--	0.000002 U	0.0000022	0.000018	0.00003
PCB-197/200	--	--	--	--	--	--	--	--	--	--
PCB-198	0.00024	0.00014	0.000041	0.0005	0.00043	--	0.000002 U	0.0000062	0.000029	0.000071
PCB-198/199	--	--	--	--	--	--	--	--	--	--
PCB-199	0.0046	0.0027	0.00091	0.011	0.009	--	0.00002	0.000061	0.00062	0.0011
PCB-2	0.000002	0.000012	0.0000031	0.0000059	0.0000081	--	0.000002 U	0.000002 U	0.000026	0.0000071
PCB-20/21/33	0.0002	0.00009	0.00013	0.00041	0.00021	--	0.000006 U	0.0000026 J	0.00092	0.00012
PCB-20/28	--	--	--	--	--	--	--	--	--	--
PCB-200	0.00055	0.00039	0.00013	0.0013	0.0012	--	0.0000032	0.0000081	0.000067	0.0001
PCB-201	0.00046	0.00039	0.00014	0.00097	0.0011	--	0.000002 U	0.0000059	0.000066	0.00011
PCB-202	0.00077	0.00057	0.00019	0.0016	0.0016	--	0.0000043	0.0000099	0.00014	0.00027
PCB-203	--	--	--	--	--	--	--	--	--	--
PCB-204	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-205	0.00026	0.0001	0.000044	0.00056	0.0005	--	0.000002 U	0.0000043	0.000026	0.000043
PCB-206	0.00096	0.00081	0.0001	0.0019	0.0019	--	0.0000042	0.000017	0.00065	0.0025
PCB-207	0.00011	0.00011	0.000016	0.00023	0.00026	--	0.000002 U	0.0000021	0.000069	0.00026
PCB-208	0.00017	0.00018	0.000017	0.00035	0.00036	--	0.000002 U	0.0000041	0.00026	0.0011
PCB-209	0.00014	0.000079	0.000003	0.00016	0.00019	--	0.000002 U	0.000012	0.0015	0.0072
PCB-21/33	--	--	--	--	--	--	--	--	--	--
PCB-22	0.00029	0.000051	0.000063	0.00055	0.00016	--	0.0000044	0.0000049	0.00063	0.000085
PCB-23	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-24	0.000031	0.000016	0.000037	0.000058	0.00002	--	0.000002 U	0.000002 U	0.00012	0.000061
PCB-25	0.00005	0.000012	0.000024	0.000088	0.000038	--	0.000002 U	0.000002 U	0.00011	0.000016
PCB-26	0.000084	0.000024	0.000039	0.00016	0.000067	--	0.000002 U	0.0000014 J	0.00033	0.000049
PCB-26/29	--	--	--	--	--	--	--	--	--	--
PCB-27	0.00002	0.000019	0.000033	0.000055	0.000018	--	0.000002 U	0.000002 U	0.00011	0.000054
PCB-28	0.00066	0.000096	0.00012	0.0013	0.00037	--	0.00001	0.000012	0.0012	0.00022
PCB-29	0.0000027	0.0000017 J	0.0000012 J	0.0000055	0.000002 U	--	0.000002 U	0.000002 U	0.0000041	0.00000096 J
PCB-3	0.0000076	0.000027	0.0023	0.000021	0.000021	--	0.000002 U	0.000002 U	0.00003	0.000014
PCB-30	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-31	0.00051	0.00013	0.0002	0.001	0.00053	--	0.0000042	0.0000088	0.0021	0.00035
PCB-32	0.00015	0.00013	0.00024	0.00024	0.0001	--	0.000002 U	0.0000026	0.00077	0.00017
PCB-34	0.0000023	0.000002 U	0.0000018 J	0.000005	0.000002 U	--	0.000002 U	0.000002 U	0.0000082	0.0000015 J
PCB-35	0.000013	0.000002 U	0.000002 U	0.000025	0.000015	--	0.000002 U	0.000002 U	0.000041	0.000018
PCB-36	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.0000017 J
PCB-37	0.00034	0.000045	0.000025	0.00064	0.00025	--	0.000002 U	0.0000063	0.001	0.00029
PCB-38	0.0000026	0.000002 U	0.0000035	0.000011	0.000059	--	0.000002 U	0.000002 U	0.000021	0.000013
PCB-39	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000046	0.0000014 J
PCB-4	0.000051	0.00018	0.0037	0.00008	0.000053	--	0.000002 U	0.000002 U	0.0000092	0.00001
PCB-40	0.00013	0.000059	0.00005	0.00021	0.00019	--	0.000002 U	0.0000032	0.00087	0.00082
PCB-40/71	--	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	0.00091	0.00028	0.00027	0.0014	0.0013	--	0.0000071 J	0.000025	0.0045	0.0045
PCB-42	--	--	--	--	--	--	--	--	--	--
PCB-42/59	0.00034	0.000099	0.00009	0.00052	0.00031	--	0.0000032 J	0.00001	0.0017	0.0015
PCB-43	--	--	--	--	--	--	--	--	--	--
PCB-43/49	0.001	0.00029	0.0022	0.0012	0.002	--	0.0000074	0.000026	0.0046	0.0063
PCB-44	0.00098	0.00043	0.00051	0.0013	0.003	--	0.0000067	0.000013	0.0058	0.0088
PCB-44/47/65	--	--	--	--	--	--	--	--	--	--
PCB-45	0.0001	0.0001	0.000076	0.0002	0.000091	--	0.000002 U	0.0000075	0.00071	0.00059
PCB-45/51	--	--	--	--	--	--	--	--	--	--
PCB-46	0.000029	0.000047	0.000028	0.000053	0.000029	--	0.000002 U	0.000004	0.00025	0.00024
PCB-47	0.00037	0.000071	0.00023	0.00052	0.00043	--	0.0000024	0.00001	0.0013	0.0014
PCB-48	--	--	--	--	--	--	--	--	--	--
PCB-48/75	0.00013	0.00007	0.000035	0.00021	0.00011	--	0.000004 U	0.0000036 J	0.00082	0.00041
PCB-49/69	--	--	--	--	--	--	--	--	--	--
PCB-5	0.0000073	0.000002 U	0.00012	0.00022	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-50	0.0000021	0.0000021	0.0000014 J	0.0000032	0.000002 U	--	0.000002 U	0.000002 U	0.000014	0.0000099
PCB-50/53	--	--	--	--	--	--	--	--	--	--
PCB-51	0.000029	0.000022	0.000019	0.000046	0.00002	--	0.000002 U	0.0000029	0.0002	0.00014
PCB-52	--	--	--	--	--	--	--	--	--	--
PCB-52/69	0.0018	0.0038	0.01	0.0019	0.0069	--	0.0000079	0.00003	0.01	0.017
PCB-53	0.000084	0.00011	0.000099	0.00014	0.00014	--	0.000002 U	0.0000083	0.00064	0.0006
PCB-54	0.0000014 J	0.0000032	0.000002	0.0000038	0.000002 U	--	0.000002 U	0.000002 U	0.000011	0.0000079
PCB-55	0.00003	0.0000058	0.0000057	0.000049	0.000092	--	0.000002 U	0.000002 U	0.00019	0.00015
PCB-56	--	--	--	--	--	--	--	--	--	--
PCB-56/60	0.00069	0.000095	0.000037	0.0015	0.0014	--	0.0000076	0.000017	0.0028	0.0019
PCB-57	0.0000067	0.000002 U	0.000016	0.00001	0.000002 U	--	0.000002 U	0.000002 U	0.00003	0.000014
PCB-58	0.0000039	0.000002 U	0.0000016 J	0.0000043	0.000002 U	--	0.000002 U	0.000002 U	0.000011	0.0000092
PCB-59/62/75	--	--	--	--	--	--	--	--	--	--
PCB-6	0.000034	0.000025	0.0005	0.000057	0.000034	--	0.000002 U	0.000002 U	0.0000055	0.0000066
PCB-60	--	--	--	--	--	--	--	--	--	--
PCB-61/70	0.0015	0.00025	0.00055	0.0019	0.0053	--	0.0000072	0.000025	0.01	0.015
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--	--
PCB-62	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-63	0.000049	0.0000075	0.0000019 J	0.000074	0.000091	--	0.000002 U	0.000002 U	0.00018	0.00012
PCB-64	--	--	--	--	--	--	--	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-317	SB-317	SB-317	SB-318	SB-318	SB-318	SB-318	SB-319	SB-319	SB-319
SAMPLE ID	SB317-20191108-0006	SB317-20191108-0624	SB317-20191108-6084	SB318-20191108-0006	SB318-20191108-0624	SB318-20191108-2448	SB318-20191108-4872	SB319-20191107-0006	SB319-20191107-0624	SB319-20191107-6084
SAMPLE DATE	20191108	20191108	20191108	20191108	20191108	20191108	20191108	20191107	20191107	20191107
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	0	0.5	5	0	0.5	2	4	0	0.5	5
BOTTOM DEPTH	0.5	2	7	0.5	2	4	6	0.5	2	7
PCB-65	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-66	--	--	--	--	--	--	--	--	--	--
PCB-66/76	0.0012	0.00088	0.00092	0.002	0.0031	--	0.000011	0.000031	0.0055	0.0058
PCB-67	0.000036	0.0000048	0.0000053	0.000059	0.000027	--	0.000002 U	0.000002 U	0.00016	0.000053
PCB-68	0.0000087	0.000002 U	0.00001	0.000011	0.0000034	--	0.000002 U	0.000002 U	0.000002 U	0.00002
PCB-7	0.0000048	0.0000058	0.00017	0.0000069	0.0000077	--	0.000002 U	0.000002 U	0.000002	0.0000017 J
PCB-72	--	--	--	--	--	--	--	--	--	--
PCB-73	0.000018	0.00003	0.00008	0.000011	0.000072	--	0.000002 U	0.000002 U	0.000081	0.00014
PCB-74	0.00056	0.00008	0.000027	0.00089	0.0016	--	0.0000057	0.000013	0.0023	0.0022
PCB-77	0.00015	0.000016	0.000008	0.00031	0.00045	--	0.0000017 J	0.000006	0.00067	0.00066
PCB-78	0.0000059	0.0000021	0.000007	0.0000083	0.000043	--	0.000002 U	0.000002 U	0.000042	0.000072
PCB-79	0.000025	0.0000054	0.000035	0.000024	0.0001	--	0.000002 U	0.000002 U	0.00018	0.00026
PCB-8	0.00012	0.0001	0.0021	0.00022	0.00016	--	0.000002 U	0.000002	0.000053	0.000038
PCB-80	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-81	0.000057	0.000058	0.000096	0.000092	0.00035	--	0.000001 U	0.00000098 J	0.00033	0.0005
PCB-82	0.00023	0.00005	0.000052	0.0003	0.002	--	0.000002 U	0.0000062	0.0026	0.0042
PCB-83	--	--	--	--	--	--	--	--	--	--
PCB-83/112	0.000086	0.000047	0.000092	0.00011	0.00074	--	0.000004 U	0.000004 U	0.00089	0.0015
PCB-84	--	--	--	--	--	--	--	--	--	--
PCB-84/92	0.0013	0.0033	0.0057	0.0022	0.0081	--	0.0000074	0.000022	0.0078	0.014
PCB-85/116	0.0004	0.000063	0.00013	0.00046	0.0029	--	0.0000034 J	0.000011	0.0045	0.0077
PCB-85/116/117	--	--	--	--	--	--	--	--	--	--
PCB-86	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--	--
PCB-87/117/125	0.0014	0.0016	0.0023	0.002	0.009	--	0.0000065	0.000017	0.01	0.018
PCB-88/91	0.00024	0.00012	0.00017	0.00025	0.0017	--	0.000004 U	0.0000072	0.0028	0.0048
PCB-89	0.000019	0.000011	0.000012	0.000023	0.000074	--	0.000002 U	0.000002 U	0.00012	0.00022
PCB-9	0.0000098	0.0000067	0.00022	0.000019	0.000013	--	0.000002 U	0.000002 U	0.0000021	0.0000022
PCB-90/101/113	--	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--	--
PCB-93	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-93/100	--	--	--	--	--	--	--	--	--	--
PCB-94	0.0000082	0.0000056	0.0000029	0.000012	0.000046	--	0.000002 U	0.000002 U	0.000043	0.000097
PCB-95	0.0044	0.031	0.037 J	0.0081	0.02	--	0.000018	0.000066	0.017	0.028 J
PCB-96	0.0000072	0.000013	0.0000064	0.000013	0.000054	--	0.000002 U	0.000002 U	0.000042	0.000091
PCB-97	0.0008	0.0005	0.00057	0.00096	0.0064	--	0.0000049	0.000013	0.0079	0.014
PCB-98/102	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	0.000004 U
PCB-99	0.0011	0.00024	0.0021	0.0011	0.0054	--	0.0000052	0.000019	0.011	0.019
PENTACHLOROBIPHENYLS	0.028 J	0.063 J	0.084 J	0.045 J	0.17 J	--	0.00013 J	0.00036 J	0.15 J	0.27 J
TEQ DIOXIN-LIKE PCBs (BIRD)	1.70603E-05	8.19293E-06	1.10686E-05	3.22447E-05	7.47663E-05	--	8.6259E-08	4.01218E-07	7.43594E-05	9.72753E-05
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.70609E-05	8.19353E-06	1.1069E-05	3.22447E-05	7.47663E-05	--	2.02044E-07	4.62063E-07	7.43601E-05	9.72758E-05
TEQ DIOXIN-LIKE PCBs (FISH)	2.40855E-07	1.11535E-07	1.03622E-07	4.624E-07	1.0965E-06	--	2.49E-10	1.304E-09	6.3235E-07	1.04385E-06
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	2.40888E-07	1.11565E-07	1.03639E-07	4.624E-07	1.0965E-06	--	3.793E-09	4.348E-09	6.32382E-07	1.04387E-06
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	3.7362E-06	1.55461E-06	1.04453E-06	0.000007638	1.69357E-05	--	6.53E-10	2.178E-09	7.2581E-06	1.29831E-05
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	3.7542E-06	1.57261E-06	1.05459E-06	0.000007638	1.69357E-05	--	8.5384E-08	8.3235E-08	7.2776E-06	1.2998E-05
TETRACHLOROBIPHENYLS	0.01 J	0.0068 J	0.015 J	0.015 J	0.027 J	--	0.000068 J	0.00024 J	0.054 J	0.069 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.003713	0.0012761	0.0012782	0.006463	0.016161	--	0.0000178	0.00004978	0.014137	0.02685
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.2300832	0.2555234	0.2613469	0.4507359	0.6255345	--	0.0010777	0.0028304	0.3096842	0.51437086
TOTAL PCB CONGENERS ZEROND	0.2337962	0.2567995	0.2626251	0.4571989	0.6416955	--	0.0010955	0.00288018	0.3238212	0.54122086
TOTAL PCB CONGENERS-NOAA	0.1107	0.091175	0.088473	0.23272	0.28212	--	0.0005096	0.0012928	0.130203	0.229958
TOTAL PCB CONGENERS-NOAA HALFND	0.2338238	0.2568381	0.2626538	0.4572259	0.6417265	--	0.001218	0.00296238	0.32384985	0.541244355
TOTAL PCB CONGENERS-NOAA X2	0.2214	0.18235	0.176946	0.46544	0.56424	--	0.0010192	0.0025856	0.260406	0.459916
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.2214	0.18235	0.176946	0.46544	0.56424	--	0.0010252	0.0025856	0.260406	0.459916
TRICHLOROBIPHENYLS	0.0029 J	0.0015 J	0.0028 J	0.0057 J	0.0024 J	--	0.000019 J	0.000042 J	0.011 J	0.0021 J
DIOXINS/FURANS (NG/KG)										
1,2,3,4,6,7,8,9-OCDD	1200 J-	100	130	230	260	--	330	1400	1800	1100
1,2,3,4,6,7,8,9-OCDF	6.5 J	3.8 J	1.1 J	17	23	--	0.4 U	1.7 J	22	17
1,2,3,4,6,7,8-HPCDD	11	7.7	5	14	18	--	5.4	14	140	100
1,2,3,4,6,7,8-HPCDF	2.4 J	3 J	0.6 J	6.1	14	--	0.4 J	0.85 J	30	12
1,2,3,4,7,8,9-HPCDF	1.3 U	0.44 J	0.24 U	1.3 J	3.5 J	--	0.16 U	0.2 U	2.5 J	0.92 J
1,2,3,4,7,8-HXCDD	1.1 U	0.35 J	0.18 U	0.48 J	0.73 J	--	0.36 U	0.47 J	2.2 J	0.57 J
1,2,3,4,7,8-HXCDF	4.1 J	1.2 J	0.21 U	5.7	6.7	--	0.21 U	0.24 U	7.9	2.7 J
1,2,3,6,7,8-HXCDD	1.1 U	0.71 J	0.19 U	0.93 J	1.9 J	--	0.36 U	0.34 J	5.8	2.2 J
1,2,3,6,7,8-HXCDF	1 J	0.51 J	0.2 U	1.4 J	2.6 J	--	0.2 U	0.3 U	6.7	1.7 J
1,2,3,7,8,9-HXCDD	1 U	0.46 J	0.17 U	0.32 U	1.1 J	--	0.33 U	0.38 U	3.6 J	1 J
1,2,3,7,8,9-HXCDF	1.2 U	0.23 J	0.16 U	0.48 U	1.7 J	--	0.27 U	0.3 U	2.2 J	0.7 J
1,2,3,7,8-PECDD	0.3 U	0.2 U	0.18 U	0.46 J	0.66 J	--	0.24 U	0.2 U	1.8 J	0.48 J
1,2,3,7,8-PECDF	0.56 U	0.6 J	0.17 U	0.67 J	1.3 J	--	0.24 U	0.25 U	4.8 J	1.4 J
2,3,4,6,7,8-HXCDF	0.99 U	0.49 J	0.13 U	1.3 J	3.8 J	--	0.24 U	0.29 U	9.5	2 J
2,3,4,7,8-PECDF	0.67 U	0.78 J	0.19 U	2.2 J	5.1 J	--	0.26 U	0.24 U	8.8	2.7 J
2,3,7,8-TCDD	0.11 U	0.14 J	0.11 U	0.14 U	0.41 J	--	0.13 U	0.11 U	0.45 J	0.12 U
2,3,7,8-TCDF	0.45 J	0.66 J	0.15 U	1.5	2.1	--	0.16 U	0.2 J	4.7	1.7
TEQ DIOXINS (BIRD)	1.11565	2.00608	0.02411	5.213	10.2668	--	0.0424	0.38957	20.0352	6.2214
TEQ DIOXINS (BIRD) HALFND	1.88265	2.10608	0.39776	5.323	10.2668	--	0.52352	0.75357	20.0352	6.2814
TEQ DIOXINS (FISH)	0.68815	1.07518	0.02411	2.8705	5.8863	--	0.0424	0.41107	11.5962	3.3529
TEQ DIOXINS (FISH) HALFND	1.47615	1.17518	0.30761	2.9661	5.8863	--	0.44267	0.69172	11.5962	3.4129
TEQ DIOXINS (HUMANS/MAMMALS)	1.05095	0.99554	0.09533	2.5592	5.1419	--	0.157	0.67001	11.5656	4.0533
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	1.64085	1.09554	0.34208	2.6692	5.1419	--	0.49196	0.94126	11.5656	4.1133
TOTAL HPCDD	22 J	18 J	12 J	30 J	37 J	--	11 J	25 J	280 J	210 J
TOTAL HPCDF	5.1 J	6.2 J	1.8 J	16 J	30 J	--	0.4 J	1.8 J	53 J	27 J
TOTAL HXCDD	4 J	9.7 J	1.1 J	10 J	29 J	--	3.4 J	5.5 J	77 J	21 J

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-317	SB-317	SB-317	SB-318	SB-318	SB-318	SB-318	SB-319	SB-319	SB-319
SAMPLE ID	SB317-20191108-0006	SB317-20191108-0624	SB317-20191108-6084	SB318-20191108-0006	SB318-20191108-0624	SB318-20191108-2448	SB318-20191108-4872	SB319-20191107-0006	SB319-20191107-0624	SB319-20191107-6084
SAMPLE DATE	20191108	20191108	20191108	20191108	20191108	20191108	20191108	20191107	20191107	20191107
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	0	0.5	5	0	0.5	2	4	0	0.5	5
BOTTOM DEPTH	0.5	2	7	0.5	2	4	6	0.5	2	7
TOTAL HXCDF	11 J	6.4 J	0.36 J	25 J	42 J	--	0.28 J	0.64 J	78 J	23 J
TOTAL PECDD	1.5 J	5.9 J	0 UJ	9.3 J	26 J	--	2.4 J	1.1 J	44 J	6.6 J
TOTAL PECDF	21 J	7.1 J	0 UJ	48 J	43 J	--	0 UJ	0.35 J	99 J	30 J
TOTAL TCDD	1.3 J	6.8 J	0 UJ	9.7 J	36 J	--	1.8 J	1.3 J	29 J	4.4 J
TOTAL TCDF	9.9 J	9.7 J	0 UJ	28 J	27 J	--	1.9 J	1.8 J	110 J	34 J
METALS (MG/KG)										
ALUMINUM	10100	9630	6100	7260	4020	--	13900	15700	9800	7710
ANTIMONY	0.23 J	2	0.25 J	0.27 J	3.5	--	0.21 J	1.2	1.6	0.45 J
ARSENIC	14.6	82.8	27.2	7.5	13.3	--	7	9.2	15.2	9.7
BARIUM	86.6	101	274	74.9	163	--	84.5	79	249	92
BERYLLIUM	1.4	0.55 J	1.1	0.84	0.91	--	0.68	0.46 J	1.4	1.2
CADMIUM	0.12 J	0.077 J	0.12 J	0.19 J	0.49 J	--	0.067 J	0.44 J	2.2	0.34 J
CALCIUM	5550	1320	2680	1950	2030	--	680	776	4750	1630
CHROMIUM	17.3	20.5	14.1	14	16.7	--	12.4	9.3	43.9	23.6
COBALT	23.6	9.2	22.3	10.2	10	--	9.5	6.6	23.7	17.6
COPPER	29.9	86.9	42.5	22.4	191	--	12.8	86	69	24
CYANIDE	0.57 R	0.29 J	0.18 J	0.58 R	0.024 J	--	0.13 J	0.47 J	0.82	0.76
IRON	16200	42800	13700	14300	15300	--	17800	24800	44400	30500
LEAD	26	54.8	13.2	26.3	124	--	52.5	99.9	170	56.6
MAGNESIUM	1620	1470	908	1520	522 J	--	1120	1020	912	879
MANGANESE	463	714	481	371	379	--	280	276	2630	815
MERCURY	0.022 J	0.11	0.12 U	0.03 J	0.042 J	--	0.032 J	0.03 J	0.091 J	0.036 J
NICKEL	22.7	17.4	14.9	28.1	30	--	10.4	11.4	40.7	25.4
POTASSIUM	2290	2450	902	1820	838	--	1230	3400	1380	1620
SELENIUM	2.9 UJ	2.8 UJ	2.8 UJ	2.8 UJ	3.1 UJ	--	2.7 UJ	1.3 J	2.9 UJ	2.9 UJ
SILVER	0.59 U	0.075 J	0.56 U	0.053 J	0.087 J	--	0.55 U	0.067 J	0.13 J	0.58 U
SODIUM	73.8 J	255 J	43.8 J	102 J	84.3 J	--	54.8 J	63.6 J	121 J	66.1 J
THALLIUM	0.59 U	0.56 U	0.56 U	0.56 U	0.62 U	--	0.55 U	0.56 U	0.57 U	0.58 U
VANADIUM	19.2	11.2	11.9	10.8	20.5	--	22.6	5.5	27.7	18.1
ZINC	69.3	28.9	62.4	66.3	143	--	39.6	98.4	401	166
MISCELLANEOUS (%)										
TOTAL SOLIDS	--	--	--	--	--	--	86	--	--	--
MISCELLANEOUS (MG/KG)										
TOTAL ORGANIC CARBON	--	--	--	--	--	--	19000	--	--	--
MOBILE LAB MISCELLANEOUS (%)										
PERCENT SOLIDS	--	89	88	--	79	85	--	--	71	89

LOCATION	SB-320	SB-320	SB-320	SB-320	SB-321	SB-321	SB-321	SB-321	SB-322	SB-322
SAMPLE ID	SB320-20191125-0006	SB320-20191125-0624	SB320-20191125-2448	SB320-20191125-6084	SB321-20191125-0006	SB321-20191125-0624	SB321-20191125-2448	SB321-20191125-6084	SB322-20191122-0006	SB322-20191122-0624
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191122	20191122
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	5	0	0.5	2	5	0	0.5
BOTTOM DEPTH	0.5	2	4	7	0.5	2	4	7	0.5	2
VOLATILES (MG/KG)										
1,1,1-TRICHLOROETHANE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
1,1,2,2-TETRACHLOROETHANE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 UJ	0.0046 UJ
1,1,2-TRICHLOROETHANE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
1,1-DICHLOROETHANE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
1,1-DICHLOROETHENE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
1,2,3-TRICHLOROBENZENE	0.0048 UJ	0.0047 R	0.0046 R	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
1,2,4-TRICHLOROBENZENE	0.0048 UJ	0.0047 R	0.0046 R	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
1,2-DIBROMO-3-CHLOROPROPANE	0.0048 UJ	0.0047 R	0.0046 R	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
1,2-DIBROMOETHANE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
1,2-DICHLOROBENZENE	0.0048 UJ	0.0047 R	0.0046 R	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
1,2-DICHLOROETHANE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 UJ	0.0046 UJ
1,2-DICHLOROPROPANE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
1,3-DICHLOROBENZENE	0.0048 UJ	0.0047 R	0.0046 R	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
1,4-DICHLOROBENZENE	0.0048 UJ	0.0047 R	0.0046 R	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
2-BUTANONE	0.0096 U	0.0094 U	0.0093 U	--	0.0085 U	0.0083 U	--	0.0085 U	0.01 U	0.0093 U
2-HEXANONE	0.0096 U	0.0094 UJ	0.0093 UJ	--	0.0085 U	0.0083 U	--	0.0085 U	0.01 U	0.0093 U
4-METHYL-2-PENTANONE	0.0096 U	0.0094 UJ	0.0093 UJ	--	0.0085 U	0.0083 U	--	0.0085 U	0.01 U	0.0093 U
ACETONE	0.0096 U	0.0073 J	0.0081 J	--	0.0085 U	0.0045 J	--	0.0085 U	0.01 U	0.0093 U
BENZENE	0.0048 U	0.00089 J	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
BROMOCHLOROMETHANE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
BROMODICHLOROMETHANE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
BROMOFORM	0.0048 UJ	0.0047 R	0.0046 R	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
BROMOMETHANE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
CARBON DISULFIDE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
CARBON TETRACHLORIDE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
CHLOROBENZENE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
CHLORODIBROMOMETHANE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
CHLOROETHANE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
CHLOROFORM	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
CHLOROMETHANE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
CIS-1,2-DICHLOROETHENE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
CIS-1,3-DICHLOROPROPENE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
CYCLOHEXANE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
DICHLORODIFLUOROMETHANE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
ETHYLBENZENE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
ISOPROPYLBENZENE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
M+P-XYLENES	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
METHYL ACETATE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
METHYL CYCLOHEXANE	0.00096 J	0.0013 J	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
METHYL TERT-BUTYL ETHER	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
METHYLENE CHLORIDE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
O-XYLENE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
STYRENE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
TETRACHLOROETHENE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
TOLUENE	0.0048 U	0.0015 J	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
TRANS-1,2-DICHLOROETHENE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
TRANS-1,3-DICHLOROPROPENE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
TRICHLOROETHENE	0.0048 U	0.0047 UJ	0.0046 UJ	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
TRICHLOROFLUOROMETHANE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
VINYL CHLORIDE	0.0048 U	0.0047 U	0.0046 U	--	0.0042 U	0.0041 U	--	0.0043 U	0.0052 U	0.0046 U
SEMIVOLATILES (MG/KG)										
1,1-BIPHENYL	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
1,2,4,5-TETRACHLOROBENZENE	0.2 U	0.062 J	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
1,4-DIOXANE	0.078 U	0.073 U	0.082 U	--	0.086 U	0.081 U	--	0.079 U	0.085 U	0.076 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
2,3,4,6-TETRACHLOROPHENOL	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
2,4,5-TRICHLOROPHENOL	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
2,4,6-TRICHLOROPHENOL	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
2,4-DICHLOROPHENOL	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
2,4-DIMETHYLPHENOL	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
2,4-DINITROPHENOL	0.39 UJ	0.36 UJ	0.4 UJ	--	0.42 UJ	0.4 UJ	--	0.39 UJ	0.42 U	0.37 U
2,4-DINITROTOLUENE	0.2 UJ	0.19 UJ	0.21 UJ	--	0.22 UJ	0.21 UJ	--	0.2 UJ	0.22 U	0.19 U
2,6-DINITROTOLUENE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
2-CHLORONAPHTHALENE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
2-CHLOROPHENOL	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
2-METHYLNAPHTHALENE	0.2 U	0.12 J	0.055 J	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
2-METHYLPHENOL	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
2-NITROANILINE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
2-NITROPHENOL	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
3&4-METHYLPHENOL	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
3,3'-DICHLOROBENZIDINE	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
3-NITROANILINE	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
4,6-DINITRO-2-METHYLPHENOL	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
4-BROMOPHENYL PHENYL ETHER	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
4-CHLORO-3-METHYLPHENOL	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
4-CHLOROANILINE	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
4-CHLOROPHENYL PHENYL ETHER	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
4-NITROANILINE	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
4-NITROPHENOL	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-320	SB-320	SB-320	SB-320	SB-321	SB-321	SB-321	SB-321	SB-322	SB-322
SAMPLE ID	SB320-20191125-0006	SB320-20191125-0624	SB320-20191125-2448	SB320-20191125-6084	SB321-20191125-0006	SB321-20191125-0624	SB321-20191125-2448	SB321-20191125-6084	SB322-20191122-0006	SB322-20191122-0624
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191122	20191122
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	5	0	0.5	2	5	0	0.5
BOTTOM DEPTH	0.5	2	4	7	0.5	2	4	7	0.5	2
ACENAPHTHENE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
ACENAPHTHYLENE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
ACETOPHENONE	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
ANTHRACENE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
ATRAZINE	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
BAP EQUIVALENT-HALFND	0.2 U	0.23777	0.21568	--	0.22 U	0.205329	--	0.2 U	0.22 U	0.19 U
BAP EQUIVALENT-POS	0.2 U	0.23777	0.09913	--	0.22 U	0.088779	--	0.2 U	0.22 U	0.19 U
BENZALDEHYDE	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
BENZO(A)ANTHRACENE	0.2 U	0.18 J	0.11 J	--	0.22 U	0.067 J	--	0.2 U	0.22 U	0.19 U
BENZO(A)PYRENE	0.2 U	0.14 J	0.075 J	--	0.22 U	0.071 J	--	0.2 U	0.22 U	0.19 U
BENZO(B)FLUORANTHENE	0.2 U	0.18 J	0.13 J	--	0.22 U	0.11 J	--	0.2 U	0.22 U	0.19 U
BENZO(G,H,I)PERYLENE	0.2 U	0.09 J	0.044 J	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
BENZO(K)FLUORANTHENE	0.2 U	0.048 J	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
BIS(2-CHLOROETHOXY)METHANE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
BIS(2-CHLOROETHYL)ETHER	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
BUTYL BENZYL PHTHALATE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
CAPROLACTAM	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
CARBAZOLE	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
CHRYSENE	0.2 U	0.29	0.13 J	--	0.22 U	0.079 J	--	0.2 U	0.22 U	0.19 U
DIBENZO(A,H)ANTHRACENE	0.2 U	0.055 J	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
DIBENZOFURAN	0.2 U	0.19 U	0.043 J	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
DIETHYL PHTHALATE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
DIMETHYL PHTHALATE	0.15 J	0.2	0.29	--	0.28	0.24	--	0.19 J	0.18 J	0.52
DI-N-BUTYL PHTHALATE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
DI-N-OCTYL PHTHALATE	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
FLUORANTHENE	0.39 U	0.16 J	0.19 J	--	0.42 U	0.074 J	--	0.39 U	0.42 U	0.37 U
FLUORENE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
HEXACHLOROBENZENE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
HEXACHLOROBUTADIENE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
HEXACHLOROCYCLOPENTADIENE	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
HEXACHLOROETHANE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
HIGH MOLECULAR WEIGHT PAHS	0 U	1.273	0.679	--	0 U	0.413	--	0 U	0 U	0 U
INDENO(1,2,3-CD)PYRENE	0.2 U	0.06 J	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
ISOPHORONE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
LOW MOLECULAR WEIGHT PAHS	0 U	0.385	0.378	--	0 U	0.121	--	0 U	0 U	0 U
NAPHTHALENE	0.2 U	0.065 J	0.058 J	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
NITROBENZENE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
N-NITROSO-DI-N-PROPYLAMINE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
N-NITROSODIPHENYLAMINE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.21 U	--	0.2 U	0.22 U	0.19 U
PENTACHLOROPHENOL	0.39 U	0.36 U	0.4 U	--	0.42 U	0.4 U	--	0.39 U	0.42 U	0.37 U
PHENANTHRENE	0.2 U	0.16 J	0.13 J	--	0.22 U	0.047 J	--	0.2 U	0.22 U	0.19 U
PHENOL	0.045 J	0.06 J	0.073 J	--	0.073 J	0.061 J	--	0.045 J	0.42 U	0.046 J
PYRENE	0.2 U	0.23	0.19 J	--	0.22 U	0.086 J	--	0.2 U	0.22 U	0.19 U
TOTAL PAHS	0 U	1.658	1.057	--	0 U	0.534	--	0 U	0 U	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K										
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	0.0089	0.1	0.059	--	0.01	0.031	--	0.0023 J	0.0011 J	0.0037 U
ACENAPHTHENE	0.0039 U	0.0034 J	0.019	--	0.0042 U	0.0016 J	--	0.0039 U	0.0042 U	0.0037 U
ACENAPHTHYLENE	0.0039 U	0.0092	0.016	--	0.0029 J	0.016	--	0.0039 U	0.0017 J	0.0037 U
ANTHRACENE	0.0039 U	0.029	0.04	--	0.0026 J	0.014	--	0.0039 U	0.0018 J	0.0037 U
BAP EQUIVALENT-HALFND	0.003877	0.20839	0.10835	--	0.016117	0.095136	--	0.003854	0.008787	0.00353
BAP EQUIVALENT-POS	0.001927	0.20839	0.10835	--	0.016117	0.095136	--	0.001904	0.008787	0.00168
BENZO(A)ANTHRACENE	0.0018 J	0.16	0.11	--	0.013	0.065	--	0.0017 J	0.0075	0.0016 J
BENZO(A)PYRENE	0.0014 J	0.12	0.069	--	0.01	0.064	--	0.0014 J	0.0055	0.0012 J
BENZO(B)FLUORANTHENE	0.0025 J	0.16	0.11	--	0.017	0.098	--	0.0024 J	0.0079	0.0023 J
BENZO(G,H,I)PERYLENE	0.001 J	0.074	0.041	--	0.007	0.034	--	0.00087 J	0.014	0.00087 J
BENZO(K)FLUORANTHENE	0.001 J	0.053	0.043	--	0.0061	0.036	--	0.00095 J	0.003 J	0.00083 J
CHRYSENE	0.0032 J	0.26	0.12	--	0.016	0.076	--	0.0023 J	0.0079	0.0018 J
DIBENZO(A,H)ANTHRACENE	0.0039 U	0.05	0.013	--	0.0024 J	0.011	--	0.0039 U	0.0013 J	0.0037 U
FLUORANTHENE	0.0027 J	0.12	0.17	--	0.02	0.067	--	0.002 J	0.01	0.0023 J
FLUORENE	0.0039 U	0.0086	0.026	--	0.001 J	0.003 J	--	0.0039 U	0.0042 U	0.0037 U
HIGH MOLECULAR WEIGHT PAHS	0.01494	1.113	0.714	--	0.0989	0.495	--	0.01275	0.0622	0.01191
INDENO(1,2,3-CD)PYRENE	0.00084 J	0.056	0.038	--	0.0064	0.034	--	0.00083 J	0.0041 J	0.00081 J
LOW MOLECULAR WEIGHT PAHS	0.0155	0.3532	0.437	--	0.0485	0.1726	--	0.0061	0.0194	0.0036
NAPHTHALENE	0.006	0.053	0.056	--	0.008	0.027	--	0.0015 J	0.0013 J	0.0037 U
PENTACHLOROPHENOL	0.0078 U	0.0073 U	0.00098 J	--	0.001 J	0.0081 U	--	0.0079 U	0.0085 U	0.0076 U
PHENANTHRENE	0.0068	0.13	0.11	--	0.014	0.044	--	0.0026 J	0.0046	0.0013 J
PYRENE	0.0032 J	0.18	0.17	--	0.021	0.077	--	0.0023 J	0.011	0.0025 J
TOTAL PAHS	0.0032	0.26	0.12	--	0.016	0.076	--	0.0023	0.0079	0.0018
PESTICIDES (MG/KG)										
4,4'-DDD	0.0038 U	0.0036 U	0.004 U	--	0.0042 U	0.0093 J	--	0.0039 U	0.0042 U	0.0037 U
4,4'-DDE	0.0038 U	0.0036 U	0.004 U	--	0.0042 U	0.0009 R	--	0.0039 U	0.0042 U	0.0037 U
4,4'-DDT	0.0038 U	0.0036 U	0.004 U	--	0.0042 U	0.004 U	--	0.0039 U	0.0042 U	0.0037 U
ALDRIN	0.002 U	0.0019 U	0.0021 U	--	0.0022 U	0.002 U	--	0.002 U	0.0022 U	0.0019 U
ALPHA-BHC	0.002 U	0.0019 U	0.0021 U	--	0.0022 U	0.002 U	--	0.002 U	0.0022 U	0.0019 U
ALPHA-CHLORDANE	0.002 U	0.0019 U	0.0021 U	--	0.0022 U	0.002 U	--	0.002 U	0.0022 U	0.0019 U
BETA-BHC	0.002 U	0.0019 U	0.0021 U	--	0.0022 U	0.002 U	--	0.002 U	0.0022 U	0.0019 U
DELTA-BHC	0.002 U	0.0019 U	0.0021 U	--	0.0022 U	0.002 U	--	0.002 U	0.0022 U	0.0019 U
DIELDRIN	0.0038 U	0.0036 U	0.004 U	--	0.0042 U	0.004 U	--	0.0039 U	0.0042 U	0.0037 U
ENDOSULFAN I	0.002 U	0.0019 U	0.0021 U	--	0.0022 U	0.002 U	--	0.002 U	0.0022 U	0.0019 U

LOCATION	SB-320	SB-320	SB-320	SB-320	SB-321	SB-321	SB-321	SB-321	SB-322	SB-322
SAMPLE ID	SB320-20191125-0006	SB320-20191125-0624	SB320-20191125-2448	SB320-20191125-6084	SB321-20191125-0006	SB321-20191125-0624	SB321-20191125-2448	SB321-20191125-6084	SB322-20191122-0006	SB322-20191122-0624
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191122	20191122
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	5	0	0.5	2	5	0	0.5
BOTTOM DEPTH	0.5	2	4	7	0.5	2	4	7	0.5	2
ENDOSULFAN II	0.0038 U	0.0036 U	0.004 U	--	0.0042 U	0.0022 J	--	0.0039 U	0.0042 U	0.0037 U
ENDOSULFAN SULFATE	0.0038 U	0.0036 U	0.004 U	--	0.0042 U	0.004 U	--	0.0039 U	0.0042 U	0.0037 U
ENDRIN	0.0038 U	0.0036 U	0.004 U	--	0.0042 U	0.0034 J	--	0.0039 U	0.0042 U	0.0037 U
ENDRIN ALDEHYDE	0.0038 U	0.0036 U	0.004 U	--	0.0042 U	0.004 U	--	0.0039 U	0.0042 U	0.0037 U
ENDRIN KETONE	0.0038 U	0.0036 U	0.004 U	--	0.0042 U	0.004 U	--	0.0039 U	0.0042 U	0.0037 U
GAMMA-BHC (LINDANE)	0.002 U	0.0019 U	0.0015 J	--	0.0018 J	0.012 J	--	0.002 U	0.0022 U	0.0019 U
GAMMA-CHLORDANE	0.002 U	0.0019 U	0.0021 U	--	0.0022 U	0.002 U	--	0.002 U	0.0022 U	0.0019 U
HEPTACHLOR	0.002 U	0.0019 U	0.0021 U	--	0.0022 U	0.002 U	--	0.002 U	0.0022 U	0.0019 U
HEPTACHLOR EPOXIDE	0.002 U	0.0019 U	0.0021 U	--	0.0022 U	0.002 U	--	0.002 U	0.0022 U	0.0019 U
METHOXYCHLOR	0.02 U	0.019 U	0.021 U	--	0.022 U	0.02 U	--	0.02 U	0.022 U	0.019 U
TOXAPHENE	0.2 U	0.19 U	0.21 U	--	0.22 U	0.2 U	--	0.2 U	0.22 U	0.19 U
PCBS (MG/KG)										
AROCLOR-1016	0.038 U	0.036 U	0.04 U	--	0.042 U	0.04 U	--	0.039 U	0.042 U	0.037 U
AROCLOR-1221	0.038 U	0.036 U	0.04 U	--	0.042 U	0.04 U	--	0.039 U	0.042 U	0.037 U
AROCLOR-1232	0.038 U	0.036 U	0.04 U	--	0.042 U	0.04 U	--	0.039 U	0.042 U	0.037 U
AROCLOR-1242	0.038 U	0.036 U	0.04 U	--	0.042 U	0.04 U	--	0.039 U	0.042 U	0.037 U
AROCLOR-1248	0.038 U	0.036 U	0.04 U	--	0.042 U	0.04 U	--	0.039 U	0.042 U	0.037 U
AROCLOR-1254	0.038 U	0.036 U	0.04 U	--	0.042 U	0.04 U	--	0.039 U	0.042 U	0.037 U
AROCLOR-1260	0.028 J	24 C	11 C	--	0.25	0.3 J	--	0.15 J	0.16	0.022 J
AROCLOR-1262	0.038 U	0.036 U	0.04 U	--	0.042 U	0.04 U	--	0.039 U	0.042 U	0.037 U
AROCLOR-1268	0.038 U	0.036 U	0.04 U	--	0.042 U	0.04 U	--	0.039 U	0.042 U	0.037 U
TOTAL AROCLOR	0.028	24	11	--	0.25	0.3	--	0.15	0.16	0.022
TOTAL AROCLOR HALFND	0.18	24.144	11.16	--	0.418	0.46	--	0.306	0.328	0.17
MOBILE LAB PESTICIDES/PCBS (MG/KG)										
AROCLOR-1016	--	0.278 U	--	0.301 U	--	0.298 U	0.298 U	--	--	0.278 U
AROCLOR-1221	--	0.556 U	--	0.602 U	--	0.595 U	0.595 U	--	--	0.556 U
AROCLOR-1232	--	0.278 U	--	0.301 U	--	0.298 U	0.298 U	--	--	0.278 U
AROCLOR-1242	--	0.278 U	--	0.301 U	--	0.298 U	0.298 U	--	--	0.278 U
AROCLOR-1248	--	0.278 U	--	0.301 U	--	0.298 U	0.298 U	--	--	0.278 U
AROCLOR-1254	--	0.278 U	--	0.301 U	--	0.298 U	0.298 U	--	--	0.278 U
AROCLOR-1260	--	17.3	--	0.618	--	0.992	0.298 U	--	--	0.082 J
AROCLOR-1262	--	0.278 U	--	0.301 U	--	0.298 U	0.298 U	--	--	0.278 U
AROCLOR-1268	--	0.278 U	--	0.301 U	--	0.298 U	0.298 U	--	--	0.278 U
TOTAL AROCLOR	--	17.3	--	0.618	--	0.992	0 U	--	--	0.082
TOTAL AROCLOR HALFND	--	18.551	--	1.9725	--	2.3325	1.4895	--	--	1.333
PCB CONGENERS (MG/KG)										
DICHLOROBIPHENYLS	0.00052 J	0.025 J	0.019 J	--	0.0024 J	0 UJ	--	0.00024 J	0.011 J	0.00021 J
HEPTACHLOROBIPHENYLS	0.08 J	11 J	7.5 J	--	0.82 J	0.41 J	--	0.17 J	1.3 J	0.027 J
HEXACHLOROBIPHENYLS	0.088 J	11 J	7.4 J	--	0.96 J	0.45 J	--	0.2 J	1.6 J	0.033 J
MONOCHLOROBIPHENYLS	0.00002 J	0.0033 J	0.0026 J	--	0 UJ	0 UJ	--	0.000017 J	0.00015 J	0.0000076 J
NONACHLOROBIPHENYLS	0.0012 J	0.15 J	0.11 J	--	0.012 J	0.0058 J	--	0.0027 J	0.021 J	0.00042 J
OCTACHLOROBIPHENYLS	0.019 J	2.6 J	1.9 J	--	0.2 J	0.097 J	--	0.042 J	0.32 J	0.0061 J
PCB-1	0.0000095 J	0.0021	0.0017	--	0.0013 U	0.0012 U	--	0.0000093	0.00024 U	0.0000044
PCB-10	0.0000019 U	0.0011 U	0.00024 J	--	0.0013 U	0.0012 U	--	0.0000017 J	0.00012 J	0.000002 U
PCB-100	--	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--	--
PCB-103	0.0000051	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000058	0.00023 J	0.0000044
PCB-104	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-105	0.00065	0.036	0.024	--	0.006	0.0026	--	0.0014	0.015	0.00035
PCB-106	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-107	0.000099	0.0039	0.0025	--	0.001 J	0.00041 J	--	0.00019	0.002	0.000047
PCB-108/107	--	--	--	--	--	--	--	--	--	--
PCB-108/124	0.000071	0.0032	0.0018 J	--	0.00068 J	0.00038 J	--	0.00014	0.0014	0.000034
PCB-109	--	--	--	--	--	--	--	--	--	--
PCB-11	0.000075	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000061	0.00024 U	0.000002 U
PCB-110	--	--	--	--	--	--	--	--	--	--
PCB-110/115	0.0033	0.32	0.21	--	0.033	0.015	--	0.0077	0.066	0.0014
PCB-111	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-111/115	--	--	--	--	--	--	--	--	--	--
PCB-112	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-113	--	--	--	--	--	--	--	--	--	--
PCB-114	0.000032	0.0021	0.001 J	--	0.00034 U	0.00025 U	--	0.000064	0.00088	0.000021
PCB-118	0.0021	0.14	0.096	--	0.019	0.008	--	0.0052	0.04	0.00095
PCB-118/106	--	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--	--
PCB-12/13	0.000027	0.0022 U	0.0022 U	--	0.0027 U	0.0024 U	--	0.000011	0.00047 J	0.0000039 U
PCB-120	0.0000069	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000053	0.000098 J	0.000002 U
PCB-121	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-122	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.000022	0.00024 U	0.000011
PCB-123	0.000023	0.00074 Z	0.00039 U	--	0.00034 U	0.00025 U	--	0.000041	0.00057	0.000013
PCB-124	--	--	--	--	--	--	--	--	--	--
PCB-126	0.0000022 U	0.00055 U	0.00047 U	--	0.0004 U	0.0003 U	--	0.000021	0.0011	0.0000021 U
PCB-127	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-128/162	--	--	--	--	--	--	--	--	--	--
PCB-128/166	0.001	0.1	0.073	--	0.013	0.006	--	0.0026	0.019	0.0004
PCB-129	--	--	--	--	--	--	--	--	--	--
PCB-129/138/163	0.021	2.5	1.6	--	0.26	0.11	--	0.052	0.35	0.0073
PCB-13	--	--	--	--	--	--	--	--	--	--
PCB-130	0.00058	0.056	0.037	--	0.0064	0.0031	--	0.0013	0.011	0.00022
PCB-131	0.000073	0.012	0.0078	--	0.0006 J	0.0012 U	--	0.00016	0.0016	0.000037

LOCATION	SB-320	SB-320	SB-320	SB-320	SB-321	SB-321	SB-321	SB-321	SB-322	SB-322
SAMPLE ID	SB320-20191125-0006	SB320-20191125-0624	SB320-20191125-2448	SB320-20191125-6084	SB321-20191125-0006	SB321-20191125-0624	SB321-20191125-2448	SB321-20191125-6084	SB322-20191122-0006	SB322-20191122-0624
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191122	20191122
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	5	0	0.5	2	5	0	0.5
BOTTOM DEPTH	0.5	2	4	7	0.5	2	4	7	0.5	2
PCB-131/133	--	--	--	--	--	--	--	--	--	--
PCB-132	0.0041	0.67	0.44	--	0.042	0.022	--	0.01	0.089	0.0018
PCB-132/161	--	--	--	--	--	--	--	--	--	--
PCB-133	0.0002	0.022	0.015	--	0.0025	0.0012	--	0.00046	0.0036	0.000071
PCB-134	0.00053	0.098	0.061	--	0.0023	0.0015	--	0.0016	0.016	0.0003
PCB-134/143	--	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--	--
PCB-135/151	0.0082	1.3	0.83	--	0.09	0.046	--	0.02	0.16	0.0032
PCB-136	0.0016	0.41	0.27	--	0.014	0.009	--	0.0038	0.044	0.00089
PCB-137	0.000065	0.01	0.008	--	0.0026	0.00086 J	--	0.00026	0.0014	0.000026
PCB-138/163/164	--	--	--	--	--	--	--	--	--	--
PCB-139/140	0.000028	0.0015 J	0.0022 U	--	0.0027 U	0.0024 U	--	0.0000039 U	0.0007	0.0000039 U
PCB-139/149	--	--	--	--	--	--	--	--	--	--
PCB-14	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-140	--	--	--	--	--	--	--	--	--	--
PCB-141	0.0048	0.7	0.46	--	0.053	0.026	--	0.011	0.088	0.0018
PCB-142	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-143	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-144	0.00099	0.17	0.11	--	0.0087	0.0053	--	0.0018	0.019	0.00041
PCB-145	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.000052 J	0.000002 U
PCB-146	0.0027	0.3	0.2	--	0.032	0.015	--	0.0065	0.048	0.00099
PCB-146/165	--	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--	--
PCB-147/149	0.016	1.9	1.1	--	0.11	0.052	--	0.042	0.32	0.0065
PCB-148	0.0000026	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000025	0.00006 J	0.0000013 J
PCB-15	0.00023	0.0048	0.0033	--	0.0011 J	0.0012 U	--	0.00011	0.0064	0.00014
PCB-150	0.0000026	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000025	0.00024 U	0.0000017 J
PCB-151	--	--	--	--	--	--	--	--	--	--
PCB-152	0.00000078 J	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000011 J	0.000033 J	0.00000083 J
PCB-153	--	--	--	--	--	--	--	--	--	--
PCB-153/168	0.022	2.8	1.8	--	0.27	0.13	--	0.055	0.36	0.0074
PCB-154	0.000029	0.0011 U	0.0011 U	--	0.00028 J	0.0012 U	--	0.000034	0.00067	0.000013
PCB-155	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-156	--	--	--	--	--	--	--	--	--	--
PCB-156/157	0.0013	0.12	0.085	--	0.014	0.0064	--	0.0034	0.019	0.00042
PCB-157	--	--	--	--	--	--	--	--	--	--
PCB-158	0.0015	0.19	0.12	--	0.017	0.0081	--	0.0034	0.026	0.00054
PCB-158/160	--	--	--	--	--	--	--	--	--	--
PCB-159	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-16	0.000043	0.0044	0.0032	--	0.0013 U	0.0012 U	--	0.000027	0.0016	0.000024
PCB-160	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-161	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-162	0.0000019 U	0.0011 U	0.0011 U	--	0.00048 J	0.00042 J	--	0.000078	0.00024 U	0.000002 U
PCB-164	0.0013	0.16	0.1	--	0.015	0.0073	--	0.0034	0.024	0.00049
PCB-165	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-166	--	--	--	--	--	--	--	--	--	--
PCB-167	0.00054	0.041	0.029	--	0.0056	0.0024	--	0.0012	0.0089	0.00019
PCB-168	--	--	--	--	--	--	--	--	--	--
PCB-169	0.0000018 U	0.00041 U	0.00053 U	--	0.00042 U	0.00023 U	--	0.000002 U	0.000014 U	0.000002 U
PCB-17	0.000055	0.0053	0.0039	--	0.0013 U	0.00013 J	--	0.000037	0.0022	0.000044
PCB-170	0.009	1.1	0.81	--	0.095	0.045	--	0.02	0.15	0.0031
PCB-171	--	--	--	--	--	--	--	--	--	--
PCB-171/173	0.0025	0.35	0.24	--	0.023	0.013	--	0.005	0.047	0.00094
PCB-172	0.0017	0.21	0.15	--	0.017	0.0084	--	0.0037	0.028	0.00057
PCB-173	--	--	--	--	--	--	--	--	--	--
PCB-174	0.0093	1.4	0.98	--	0.1	0.053	--	0.022	0.17	0.0034
PCB-175	0.00033	0.055	0.038	--	0.0025	0.0016	--	0.00048	0.0062	0.00013
PCB-176	0.00088	0.18	0.12	--	0.0071	0.0048	--	0.0017	0.02	0.0004
PCB-177	0.0056	0.75	0.52	--	0.065	0.03	--	0.014	0.098	0.0019
PCB-178	0.0021	0.28	0.19	--	0.026	0.012	--	0.0051	0.034	0.00068
PCB-179	0.0037	0.61	0.41	--	0.04	0.02	--	0.0093	0.071	0.0014
PCB-18	--	--	--	--	--	--	--	--	--	--
PCB-18/30	0.000088	0.011	0.0082	--	0.00059 J	0.00026 J	--	0.000064	0.0034	0.000065
PCB-180	--	--	--	--	--	--	--	--	--	--
PCB-180/193	0.02	3	2.1	--	0.22	0.11	--	0.042	0.36	0.0074
PCB-181	0.000023	0.0011 U	0.00085 J	--	0.0013 U	0.0012 U	--	0.000051	0.00041	0.0000083
PCB-182	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.000002	0.00034	0.0000066
PCB-182/187	--	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--	--
PCB-183/185	0.0061	0.88	0.57	--	0.048	0.025	--	0.011	0.11	0.0023
PCB-184	0.0000013 J	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000012 J	0.00024 U	0.000002 U
PCB-185	--	--	--	--	--	--	--	--	--	--
PCB-186	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-187	0.012	1.6	1.1	--	0.15	0.071	--	0.027	0.19	0.0038
PCB-188	0.000003	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000037	0.000063 J	0.0000011 J
PCB-189	0.00035	0.036	0.025	--	0.0037	0.0018	--	0.00083	0.0058	0.00012
PCB-19	0.000014	0.0014	0.001 J	--	0.0013 U	0.0012 U	--	0.0000055	0.00099	0.000016
PCB-190	0.0021	0.25	0.18	--	0.026	0.011	--	0.0052	0.032	0.00066
PCB-191	0.00033	0.044	0.031	--	0.0032	0.0012 U	--	0.00058	0.0058	0.00012
PCB-192	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-193	--	--	--	--	--	--	--	--	--	--

LOCATION	SB-320	SB-320	SB-320	SB-320	SB-321	SB-321	SB-321	SB-321	SB-322	SB-322
SAMPLE ID	SB320-20191125-0006	SB320-20191125-0624	SB320-20191125-2448	SB320-20191125-6084	SB321-20191125-0006	SB321-20191125-0624	SB321-20191125-2448	SB321-20191125-6084	SB322-20191122-0006	SB322-20191122-0624
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191122	20191122
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	5	0	0.5	2	5	0	0.5
BOTTOM DEPTH	0.5	2	4	7	0.5	2	4	7	0.5	2
PCB-194	0.0043	0.62	0.46	--	0.044	0.022	--	0.0096	0.077	0.0014
PCB-195	0.002	0.26	0.19	--	0.023	0.01	--	0.0051	0.034	0.00068
PCB-196	0.002	0.33	0.24	--	0.017	0.01	--	0.0035	0.038	0.00074
PCB-196/203	--	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--	--
PCB-197/200	0.0007	0.11	0.077	--	0.007	0.0038	--	0.0016	0.013	0.00026
PCB-198	--	--	--	--	--	--	--	--	--	--
PCB-198/199	0.0052	0.67	0.49	--	0.055	0.026	--	0.011	0.08	0.0016
PCB-199	--	--	--	--	--	--	--	--	--	--
PCB-2	0.0000019 UJ	0.0011 U	0.00017 J	--	0.0013 U	0.0012 U	--	0.0000014 J	0.00024 U	0.000002 U
PCB-20/21/33	--	--	--	--	--	--	--	--	--	--
PCB-20/28	0.00065	0.019	0.013	--	0.0029	0.0009 J	--	0.0003	0.028	0.00059
PCB-200	--	--	--	--	--	--	--	--	--	--
PCB-201	0.00043	0.08	0.058	--	0.0033	0.0022	--	0.00071	0.0089	0.00018
PCB-202	0.00081	0.11	0.08	--	0.0094	0.0044	--	0.002	0.013	0.00026
PCB-203	0.0031	0.38	0.28	--	0.033	0.016	--	0.0072	0.048	0.00094
PCB-204	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000011 J	0.00024 U	0.000002 U
PCB-205	0.00025	0.03	0.022	--	0.003	0.0013	--	0.00066	0.0042	0.000082
PCB-206	0.00087	0.11	0.082	--	0.0092	0.0043	--	0.0022	0.016	0.00031
PCB-207	0.000098	0.017	0.013	--	0.00089 J	0.00051 J	--	0.00019	0.0021	0.000041
PCB-208	0.00018	0.022	0.017	--	0.0019	0.00093 J	--	0.00038	0.0035	0.000069
PCB-209	0.000085	0.002	0.0018	--	0.00034 J	0.00032 J	--	0.000054	0.004	0.00007
PCB-21/33	0.00018	0.012	0.0081	--	0.00081 J	0.00033 J	--	0.000098	0.0036	0.000086
PCB-22	0.00023	0.0074	0.005	--	0.00094 J	0.00033 J	--	0.00011	0.011	0.00022
PCB-23	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-24	0.0000028	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00035	0.0000046
PCB-25	0.000032	0.0014	0.00093 J	--	0.00017 J	0.0012 U	--	0.000015	0.0013	0.000026
PCB-26	--	--	--	--	--	--	--	--	--	--
PCB-26/29	0.000069	0.0031	0.002 J	--	0.00035 J	0.0024 U	--	0.000034	0.0025	0.000054
PCB-27	0.000016	0.00097 J	0.00064 J	--	0.0013 U	0.0012 U	--	0.0000077	0.0011	0.000016
PCB-28	--	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--	--
PCB-3	0.000011 J	0.0012	0.00076 J	--	0.0013 U	0.0012 U	--	0.0000068	0.00015 J	0.0000032
PCB-30	--	--	--	--	--	--	--	--	--	--
PCB-31	0.00047	0.016	0.011	--	0.0022	0.0012 U	--	0.00025	0.014	0.00031
PCB-32	0.000056	0.0035	0.0025	--	0.00029 J	0.00014 J	--	0.000027	0.0047	0.000073
PCB-34	0.0000014 J	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.00000067 J	0.000066 J	0.0000012 J
PCB-35	0.000016	0.00047 J	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000061	0.00035	0.0000088
PCB-36	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-37	0.00032	0.0065	0.0041	--	0.0015	0.00043 J	--	0.00015	0.0088	0.00018
PCB-38	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-39	0.0000021	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000011 J	0.00024 U	0.000002 U
PCB-4	0.000032 J	0.0056	0.0044	--	0.0013 U	0.0012 U	--	0.000024	0.00076	0.000019
PCB-40	--	--	--	--	--	--	--	--	--	--
PCB-40/71	0.00016	0.0064	0.0044	--	0.00067 J	0.0003 J	--	0.000073	0.012	0.00018
PCB-41	0.000035	0.0024	0.0012	--	0.0013 U	0.0012 U	--	0.000013	0.0022	0.000035
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--	--
PCB-42	0.00012	0.0039	0.0024	--	0.0013 U	0.0012 U	--	0.000063	0.0097	0.00014
PCB-42/59	--	--	--	--	--	--	--	--	--	--
PCB-43	0.000013	0.0011 U	0.00054 J	--	0.0013 U	0.0012 U	--	0.0000081	0.0013	0.000021
PCB-43/49	--	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--	--
PCB-44/47/65	0.00044	0.016	0.01	--	0.004 U	0.0035 U	--	0.00029	0.031	0.00048
PCB-45	--	--	--	--	--	--	--	--	--	--
PCB-45/51	0.000045	0.0024	0.0016 J	--	0.00022 J	0.00016 J	--	0.000016	0.0057	0.000073
PCB-46	0.00001	0.0008 J	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000043	0.0013	0.000015
PCB-47	--	--	--	--	--	--	--	--	--	--
PCB-48	0.000057	0.0035	0.0022	--	0.0013 U	0.0012 U	--	0.000035	0.0039	0.000065
PCB-48/75	--	--	--	--	--	--	--	--	--	--
PCB-49/69	0.00031	0.0086	0.0055	--	0.002 J	0.00076 J	--	0.00027	0.022	0.00034
PCB-5	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.000002	0.00024 U	0.000002 U
PCB-50	--	--	--	--	--	--	--	--	--	--
PCB-50/53	0.000027	0.0016 J	0.0011 J	--	0.0027 U	0.0024 U	--	0.000011	0.0033	0.000041
PCB-51	--	--	--	--	--	--	--	--	--	--
PCB-52	0.00068	0.054	0.035	--	0.0051	0.0025	--	0.0012	0.037	0.00064
PCB-52/69	--	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--	--
PCB-54	0.0000019 U	0.000095 J	0.0011 U	--	0.0013 U	0.000067 J	--	0.0000019 U	0.000092 J	0.0000014 J
PCB-55	0.0000019 U	0.00083 J	0.00029 J	--	0.0013 U	0.0012 U	--	0.0000086	0.00096	0.000014
PCB-56	0.00034	0.011	0.0071	--	0.0018	0.00058 J	--	0.00024	0.017	0.0003
PCB-56/60	--	--	--	--	--	--	--	--	--	--
PCB-57	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.000007	0.000079 J	0.0000017 J
PCB-58	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000046	0.000091 J	0.000002 U
PCB-59/62/75	0.000043	0.0014 J	0.0009 J	--	0.004 U	0.0035 U	--	0.00002	0.0036	0.000053
PCB-6	0.000035	0.0027	0.0019	--	0.0013 U	0.0012 U	--	0.000017	0.00064	0.000013
PCB-60	0.00018	0.0067	0.0045	--	0.0011 J	0.00031 J	--	0.00014	0.011	0.0002
PCB-61/70	--	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	0.0011	0.04	0.025	--	0.0073	0.0047 U	--	0.0014	0.04	0.00083
PCB-62	--	--	--	--	--	--	--	--	--	--
PCB-63	0.000023	0.00069 J	0.00042 J	--	0.0013 U	0.0012 U	--	0.000019	0.0015	0.000025
PCB-64	0.00024	0.0073	0.0045	--	0.0014	0.00048 J	--	0.00019	0.018	0.00028

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-320	SB-320	SB-320	SB-320	SB-321	SB-321	SB-321	SB-321	SB-322	SB-322
SAMPLE ID	SB320-20191125-0006	SB320-20191125-0624	SB320-20191125-2448	SB320-20191125-6084	SB321-20191125-0006	SB321-20191125-0624	SB321-20191125-2448	SB321-20191125-6084	SB322-20191122-0006	SB322-20191122-0624
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191122	20191122
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	5	0	0.5	2	5	0	0.5
BOTTOM DEPTH	0.5	2	4	7	0.5	2	4	7	0.5	2
PCB-65	--	--	--	--	--	--	--	--	--	--
PCB-66	0.00071	0.018	0.013	--	0.0039	0.0011 J	--	0.00056	0.032	0.00061
PCB-66/76	--	--	--	--	--	--	--	--	--	--
PCB-67	0.000014	0.00057 J	0.00028 J	--	0.0013 U	0.0012 U	--	0.0000083	0.001	0.000019
PCB-68	0.0000021	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.00000097 J	0.00024 U	0.0000018 J
PCB-7	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000031	0.000093 J	0.000002 U
PCB-72	0.0000034	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000025	0.00019 J	0.000003
PCB-73	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000072	0.00024 U	0.000002 U
PCB-74	--	--	--	--	--	--	--	--	--	--
PCB-77	0.0001	0.003	0.002	--	0.00058 J	0.00023 U	--	0.000065	0.0034	0.000062
PCB-78	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-79	0.00004	0.004	0.0025	--	0.0013 U	0.0012 U	--	0.000014	0.00024 U	0.000002 U
PCB-8	0.00011	0.011	0.008	--	0.00054 J	0.0012 U	--	0.000059	0.0021	0.000045
PCB-80	0.0000019 U	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000019 U	0.00024 U	0.000002 U
PCB-81	0.0000047	0.00045 U	0.00022 U	--	0.00029 U	0.00022 U	--	0.0000042	0.00018 J	0.0000036
PCB-82	0.0001	0.006	0.0037	--	0.0013 U	0.00043 J	--	0.00013	0.0041	0.000085
PCB-83	0.000074	0.012	0.0078	--	0.00086 J	0.00058 J	--	0.00013	0.0024	0.000048
PCB-83/112	--	--	--	--	--	--	--	--	--	--
PCB-84	0.00016	0.023	0.014	--	0.00092 J	0.0006 J	--	0.00024	0.0073	0.00016
PCB-84/92	--	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--	--
PCB-85/116/117	0.00019	0.00093 J	0.0012 J	--	0.004 U	0.0035 U	--	0.0003	0.0056	0.00012
PCB-86	--	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	0.0011	0.098	0.062	--	0.0098	0.0051 J	--	0.0025	0.028	0.00061
PCB-87/117/125	--	--	--	--	--	--	--	--	--	--
PCB-88/91	0.000098	0.004	0.0023	--	0.0027 U	0.00038 J	--	0.00014	0.0044	0.000085
PCB-89	0.0000048	0.0006 J	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000033	0.00045	0.0000072
PCB-9	0.0000071	0.00082 J	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000058	0.00015 J	0.000002 U
PCB-90/101/113	0.0055	0.74	0.47	--	0.061	0.03	--	0.014	0.094	0.002
PCB-92	0.00064	0.071	0.045	--	0.0067	0.0035	--	0.0015	0.013	0.00027
PCB-93	--	--	--	--	--	--	--	--	--	--
PCB-93/100	0.0000039	0.0022 U	0.0022 U	--	0.0027 U	0.0024 U	--	0.0000039 U	0.0004 J	0.0000076
PCB-94	0.0000022	0.0011 U	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000018 J	0.00019 J	0.0000033
PCB-95	0.0023	0.58	0.38	--	0.026	0.015	--	0.0068	0.067	0.0014
PCB-96	0.000002	0.00022 J	0.0011 U	--	0.0013 U	0.0012 U	--	0.0000011 J	0.00024	0.0000036
PCB-97	--	--	--	--	--	--	--	--	--	--
PCB-98/102	0.000016	0.00053 J	0.00078 J	--	0.0027 U	0.0024 U	--	0.0000084	0.0012	0.000019
PCB-99	0.0005	0.014	0.0087	--	0.0041	0.0016	--	0.00088	0.013	0.00029
PENTACHLOROBIPHENYLS	0.017 J	2.1 J	1.3 J	--	0.17 J	0.084 J	--	0.042 J	0.37 J	0.008 J
TEQ DIOXIN-LIKE PCBs (BIRD)	5.69833E-06	0.000167987	0.0001125	--	0.000031283	0.000001022	--	6.32911E-06	0.000302041	3.55183E-06
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	5.80923E-06	0.000218192	0.000147267	--	6.60117E-05	3.29008E-05	--	6.33011E-06	0.000302048	3.65783E-06
TEQ DIOXIN-LIKE PCBs (FISH)	3.73255E-08	2.1792E-06	0.0000015	--	2.995E-07	0.000000106	--	1.74275E-07	6.38075E-06	1.832E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	4.287E-08	3.67695E-06	2.74423E-06	--	1.3842E-06	9.295E-07	--	1.74325E-07	6.3811E-06	2.362E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.6126E-07	1.15752E-05	0.000008	--	0.000001507	0.000000636	--	2.47181E-06	0.000113099	6.92E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	2.9826E-07	4.52927E-05	3.94889E-05	--	2.78607E-05	0.000019138	--	2.50181E-06	0.000113309	2.042E-07
TETRACHLOROBIPHENYLS	0.0047 J	0.19 J	0.12 J	--	0.026 J	0.0098 J	--	0.0046 J	0.26 J	0.0044 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0050997	0.37884	0.262	--	0.04888	0.0212	--	0.0122252	0.09483	0.0021296
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.20393858	27.037725	18.0987	--	2.14863	1.032097	--	0.46740464	3.907387	0.07875603
TOTAL PCB CONGENERS ZEROND	0.20903828	27.416565	18.3607	--	2.19751	1.053297	--	0.47962984	4.002217	0.08088563
TOTAL PCB CONGENERS-NOAA	0.098883	12.517	8.434	--	1.13957	0.53198	--	0.229027	1.7655	0.03619
TOTAL PCB CONGENERS-NOAA HALFND	0.20907353	27.44697	18.393405	--	2.258005	1.113237	--	0.47965754	4.006304	0.08092758
TOTAL PCB CONGENERS-NOAA X2	0.197766	25.034	16.868	--	2.27914	1.06396	--	0.458054	3.531	0.07238
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.197766	25.034	16.868	--	2.28314	1.06866	--	0.458054	3.531	0.07238
TRICHLOROBIPHENYLS	0.0023 J	0.093 J	0.064 J	--	0.0097 J	0.0032 J	--	0.0011 J	0.083 J	0.0017 J
DIOXINS/FURANS (NG/KG)										
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	--	610	290
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	--	40	1.7 U
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	--	31	5.5
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	--	14	2 U
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	--	3.9 J	2 U
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	--	1.4 U	1.3 U
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	--	44	1.4 J
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	--	1.5 Z	1.1 U
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	--	2.2 J	1.7 U
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	--	2.3 U	2.2 U
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	--	1.4 U	1.3 U
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	--	4.1 Z	1.7 U
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	--	98	2.5 J
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	--	1.8 J	0.87 U
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	--	2.6 J	0.81 U
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	0.32 U	0.23 Z
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	4.6	0.56 J
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	--	26.19	1.2145
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	--	26.57	2.831085
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	--	15.62	0.5575
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	--	16.2115	2.165085
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	13.914	0.643
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	14.329	2.058255
TOTAL HPCDD	--	--	--	--	--	--	--	--	51 J	11 J
TOTAL HPCDF	--	--	--	--	--	--	--	--	36 J	2 UJ
TOTAL HXCDD	--	--	--	--	--	--	--	--	2.3 J	1.1 UJ

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-320	SB-320	SB-320	SB-320	SB-321	SB-321	SB-321	SB-321	SB-322	SB-322
SAMPLE ID	SB320-20191125-0006	SB320-20191125-0624	SB320-20191125-2448	SB320-20191125-6084	SB321-20191125-0006	SB321-20191125-0624	SB321-20191125-2448	SB321-20191125-6084	SB322-20191122-0006	SB322-20191122-0624
SAMPLE DATE	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191125	20191122	20191122
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	5	0	0.5	2	5	0	0.5
BOTTOM DEPTH	0.5	2	4	7	0.5	2	4	7	0.5	2
TOTAL HXCDF	--	--	--	--	--	--	--	--	92 J	1.4 J
TOTAL PECDD	--	--	--	--	--	--	--	--	1.8 UJ	1.7 UJ
TOTAL PECDF	--	--	--	--	--	--	--	--	320 J	3.5 J
TOTAL TCDD	--	--	--	--	--	--	--	--	1.2 J	0.2 UJ
TOTAL TCDF	--	--	--	--	--	--	--	--	89 J	0.33 J
METALS (MG/KG)										
ALUMINUM	11100	8850	6120	--	12000	9970	--	9880	9690	7030
ANTIMONY	1.1 U	1.1 U	1.1 U	--	1.4 U	1.2 U	--	1.1 U	1.2 U	1.1 U
ARSENIC	2.7	6.5	12.8	--	4.5	17.1	--	4.1	8.3	6.8
BARIUM	92.1	129	102	--	63	109	--	84.6	143	68.3
BERYLLIUM	0.39 J	0.73	0.72	--	0.5 J	0.82	--	0.35 J	1.3	0.69
CADMIUM	0.55 U	0.11 J	0.086 J	--	0.1 J	0.23 J	--	0.57 U	0.17 J	0.2 J
CALCIUM	4490	767	503 J	--	2420	953	--	319 J	1540	546 J
CHROMIUM	6.7	9.6	10.8	--	7.9	19.3	--	11.5	11.5	10.5
COBALT	3.8	8.4	6.3	--	6.4	9.9	--	1.6	20.7	8.4
COPPER	3.7	21	23.9	--	10	28.9	--	4.7	62.6	38.7
CYANIDE	0.53 R	0.55 R	0.55 R	--	0.7 R	0.55 R	--	0.58 R	0.6 R	0.56 R
IRON	77700	16400	43800	--	16700	15700	--	9230	20500	13900
LEAD	8.5	15.2	14.2	--	17.2	139	--	13.1	26.9	33.8
MAGNESIUM	4780	1340	849	--	1240	897	--	612	1190	815
MANGANESE	299	197	296	--	275	449	--	32.3	1140	323
MERCURY	0.11 UJ	0.1 UJ	0.11 UJ	--	0.027 J	0.053 J	--	0.065 J	0.12 UJ	0.11 UJ
NICKEL	4.5	17.6	13.1	--	11.5	15.8	--	3.8	19.1	11.3
POTASSIUM	1970	2120	1330	--	1350	1170	--	782	1530	992
SELENIUM	0.25 J	0.8 J	0.95 J	--	0.62 J	1.3 J	--	0.56 J	1.1 J	0.51 J
SILVER	0.55 U	0.55 U	0.57 U	--	0.68 U	0.37 J	--	0.57 U	0.61 U	0.55 U
SODIUM	566 UJ	515 UJ	591 UJ	--	701 UJ	586 UJ	--	572 UJ	603 UJ	556 UJ
THALLIUM	0.55 U	0.066 J	0.15 J	--	0.046 J	0.2 J	--	0.069 J	0.13 J	0.038 J
VANADIUM	12.2	12.7	9.7	--	9.6	33.2	--	14.7	14.9	14.3
ZINC	9.1	43.5	30.2	--	49.9	78	--	13.2	65.2	57.3
MISCELLANEOUS (%)										
MISCELLANEOUS (MG/KG)										
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	33400	--
MOBILE LAB MISCELLANEOUS (%)										
PERCENT SOLIDS	--	90	--	83	--	84	84	--	--	90
TOTAL SOLIDS	--	--	--	--	--	--	--	--	80	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-322	SB-322	SB-323	SB-323	SB-323	SB-323	SB-323	SB-324	SB-324	SB-324
SAMPLE ID	SB322-20191122-2448	SB322-20191122-4872	SB323-20191122-0006	SB323-20191122-0624	SB323-20191122-0624-RE	SB323-20191122-4872	SB323-20191122-7296	SB324-20191122-0006	SB324-20191122-0624	SB324-20191122-2448
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	4	0	0.5	0.5	4	6	0	0.5	2
BOTTOM DEPTH	4	6	0.5	2	2	6	8	0.5	2	4
VOLATILES (MG/KG)										
1,1,1-TRICHLOROETHANE	0.0046 U	--	0.0064 UJ	0.14 J	0.14 J	0.0064 UJ	--	0.0068 U	0.0047 U	--
1,1,2,2-TETRACHLOROETHANE	0.0046 UJ	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
1,1,2-TRICHLOROETHANE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
1,1-DICHLOROETHANE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
1,1-DICHLOROETHENE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
1,2,3-TRICHLOROBENZENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 R	--	0.0068 UJ	0.0047 UJ	--
1,2,4-TRICHLOROBENZENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 R	--	0.0068 UJ	0.0047 UJ	--
1,2-DIBROMO-3-CHLOROPROPANE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 R	--	0.0068 UJ	0.0047 UJ	--
1,2-DIBROMOETHANE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
1,2-DICHLOROBENZENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 R	--	0.0068 UJ	0.0047 UJ	--
1,2-DICHLOROETHANE	0.0046 UJ	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
1,2-DICHLOROPROPANE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
1,3-DICHLOROBENZENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 R	--	0.0068 UJ	0.0047 UJ	--
1,4-DICHLOROBENZENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 R	--	0.0068 UJ	0.0047 UJ	--
2-BUTANONE	0.0091 U	--	0.013 U	0.88 U	0.88 U	0.013 UJ	--	0.014 U	0.0094 U	--
2-HEXANONE	0.0091 U	--	0.013 UJ	0.88 U	0.88 U	0.013 UJ	--	0.014 U	0.0094 U	--
4-METHYL-2-PENTANONE	0.0091 U	--	0.013 UJ	0.88 U	0.88 U	0.013 UJ	--	0.014 U	0.0094 U	--
ACETONE	0.0091 U	--	0.013 U	0.88 U	0.88 U	0.042 J+	--	0.016 J+	0.023	--
BENZENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
BROMOCHLOROMETHANE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
BROMODICHLOROMETHANE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
BROMOFORM	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 R	--	0.0068 UJ	0.0047 UJ	--
BROMOMETHANE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
CARBON DISULFIDE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
CARBON TETRACHLORIDE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
CHLOROBENZENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
CHLORODIBROMOMETHANE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
CHLOROETHANE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
CHLOROFORM	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
CHLOROMETHANE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
CIS-1,2-DICHLOROETHENE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
CIS-1,3-DICHLOROPROPENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
CYCLOHEXANE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
DICHLORODIFLUOROMETHANE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
ETHYLBENZENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
ISOPROPYLBENZENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
M+P-XYLENES	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
METHYL ACETATE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
METHYL CYCLOHEXANE	0.0046 U	--	0.0064 UJ	0.13 J	0.13 J	0.0064 UJ	--	0.0068 U	0.0047 U	--
METHYL TERT-BUTYL ETHER	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
METHYLENE CHLORIDE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0045 J	--	0.0068 U	0.0047 U	--
O-XYLENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
STYRENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
TETRACHLOROETHENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
TOLUENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
TRANS-1,2-DICHLOROETHENE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
TRANS-1,3-DICHLOROPROPENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
TRICHLOROETHENE	0.0046 U	--	0.0064 UJ	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
TRICHLOROFLUOROMETHANE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
VINYL CHLORIDE	0.0046 U	--	0.0064 U	0.44 U	0.44 U	0.0064 UJ	--	0.0068 U	0.0047 U	--
SEMIVOLATILES (MG/KG)										
1,1-BIPHENYL	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
1,2,4,5-TETRACHLOROBENZENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
1,4-DIOXANE	0.075 U	--	0.079 U	0.077 U	--	0.087 U	--	0.09 U	0.079 U	--
2,2'-OXYBIS(1-CHLOROPROPANE)	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
2,3,4,6-TETRACHLOROPHENOL	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
2,4,5-TRICHLOROPHENOL	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
2,4,6-TRICHLOROPHENOL	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
2,4-DICHLOROPHENOL	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
2,4-DIMETHYLPHENOL	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
2,4-DINITROPHENOL	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
2,4-DINITROTOLUENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
2,6-DINITROTOLUENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
2-CHLORONAPHTHALENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
2-CHLOROPHENOL	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
2-METHYLNAPHTHALENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
2-METHYLPHENOL	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
2-NITROANILINE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
2-NITROPHENOL	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
3&4-METHYLPHENOL	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
3,3'-DICHLOROBENZIDINE	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
3-NITROANILINE	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
4,6-DINITRO-2-METHYLPHENOL	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
4-BROMOPHENYL PHENYL ETHER	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
4-CHLORO-3-METHYLPHENOL	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
4-CHLOROANILINE	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
4-CHLOROPHENYL PHENYL ETHER	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
4-NITROANILINE	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
4-NITROPHENOL	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--

LOCATION	SB-322	SB-322	SB-323	SB-323	SB-323	SB-323	SB-323	SB-324	SB-324	SB-324
SAMPLE ID	SB322-20191122-2448	SB322-20191122-4872	SB323-20191122-0006	SB323-20191122-0624	SB323-20191122-0624-RE	SB323-20191122-4872	SB323-20191122-7296	SB324-20191122-0006	SB324-20191122-0624	SB324-20191122-2448
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	4	0	0.5	0.5	4	6	0	0.5	2
BOTTOM DEPTH	4	6	0.5	2	2	6	8	0.5	2	4
ACENAPHTHENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
ACENAPHTHYLENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
ACETOPHENONE	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
ANTHRACENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
ATRAZINE	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
BAP EQUIVALENT-HALFND	0.19 U	--	0.184779	0.2254	--	0.22 U	--	0.23 U	0.193295	--
BAP EQUIVALENT-POS	0.19 U	--	0.073779	0.0043	--	0.22 U	--	0.23 U	0.092295	--
BENZALDEHYDE	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
BENZO(A)ANTHRACENE	0.19 U	--	0.067 J	0.2 U	--	0.22 U	--	0.23 U	0.091 J	--
BENZO(A)PYRENE	0.19 U	--	0.057 J	0.2 U	--	0.22 U	--	0.23 U	0.068 J	--
BENZO(B)FLUORANTHENE	0.19 U	--	0.1 J	0.043 J	--	0.22 U	--	0.23 U	0.11 J	--
BENZO(G,H,I)PERYLENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.044 J	--
BENZO(K)FLUORANTHENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
BIS(2-CHLOROETHOXY)METHANE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
BIS(2-CHLOROETHYL)ETHER	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
BUTYL BENZYL PHTHALATE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
CAPROLACTAM	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
CARBAZOLE	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
CHRYSENE	0.19 U	--	0.079 J	0.2 U	--	0.22 U	--	0.23 U	0.095 J	--
DIBENZO(A,H)ANTHRACENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
DIBENZOFURAN	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
DIETHYL PHTHALATE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
DIMETHYL PHTHALATE	0.78	--	0.17 J	0.26	--	0.3	--	0.25	0.19 J	--
DI-N-BUTYL PHTHALATE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
DI-N-OCTYL PHTHALATE	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
FLUORANTHENE	0.37 U	--	0.11 J	0.38 U	--	0.43 U	--	0.44 U	0.16 J	--
FLUORENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
HEXACHLOROBENZENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
HEXACHLOROBUTADIENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
HEXACHLOROCYCLOPENTADIENE	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
HEXACHLOROETHANE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0.399	0.086	--	0 U	--	0 U	0.569	--
INDENO(1,2,3-CD)PYRENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.041 J	--
ISOPHORONE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
LOW MOLECULAR WEIGHT PAHS	0 U	--	0.11	0 U	--	0 U	--	0 U	0.217	--
NAPHTHALENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
NITROBENZENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
N-NITROSO-DI-N-PROPYLAMINE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
N-NITROSODIPHENYLAMINE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
PENTACHLOROPHENOL	0.37 U	--	0.39 U	0.38 U	--	0.43 U	--	0.44 U	0.39 U	--
PHENANTHRENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.057 J	--
PHENOL	0.077 J	--	0.39 U	0.041 J	--	0.05 J	--	0.05 J	0.39 U	--
PYRENE	0.19 U	--	0.096 J	0.043 J	--	0.22 U	--	0.23 U	0.12 J	--
TOTAL PAHS	0 U	--	0.509	0.086	--	0 U	--	0 U	0.786	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K										
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	0.0037 U	--	0.014	0.0097	--	0.0018 J	--	0.0033 J	0.0049	--
ACENAPHTHENE	0.0037 U	--	0.0012 J	0.00089 J	--	0.0043 U	--	0.0044 U	0.00087 J	--
ACENAPHTHYLENE	0.0037 U	--	0.019	0.0057	--	0.0043 U	--	0.0045	0.02	--
ANTHRACENE	0.0037 U	--	0.0098	0.0043	--	0.0043 U	--	0.0033 J	0.013	--
BAP EQUIVALENT-HALFND	0.0037 U	--	0.087941	0.033231	--	0.0043 U	--	0.023226	0.090894	--
BAP EQUIVALENT-POS	0.0037 U	--	0.087941	0.033231	--	0.0043 U	--	0.023226	0.090894	--
BENZO(A)ANTHRACENE	0.0037 U	--	0.071	0.024	--	0.0043 U	--	0.02	0.091	--
BENZO(A)PYRENE	0.0037 U	--	0.055	0.021	--	0.0043 U	--	0.015	0.055	--
BENZO(B)FLUORANTHENE	0.0037 U	--	0.1	0.036	--	0.0043 U	--	0.024	0.11	--
BENZO(G,H,I)PERYLENE	0.0037 U	--	0.035	0.014	--	0.0043 U	--	0.0085	0.034	--
BENZO(K)FLUORANTHENE	0.0037 U	--	0.036	0.01	--	0.0043 U	--	0.0076	0.03	--
CHRYSENE	0.0037 U	--	0.081	0.031	--	0.0043 U	--	0.02	0.094	--
DIBENZO(A,H)ANTHRACENE	0.0037 U	--	0.012	0.0049	--	0.0043 U	--	0.0029 J	0.012	--
FLUORANTHENE	0.0037 U	--	0.094	0.029	--	0.00095 J	--	0.03	0.13	--
FLUORENE	0.0037 U	--	0.0021 J	0.0016 J	--	0.0043 U	--	0.0012 J	0.0023 J	--
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0.534	0.1849	--	0.001	--	0.1353	0.59	--
INDENO(1,2,3-CD)PYRENE	0.0037 U	--	0.034	0.012	--	0.0043 U	--	0.0083	0.034	--
LOW MOLECULAR WEIGHT PAHS	0.00086	--	0.1724	0.06639	--	0.00205	--	0.0531	0.21407	--
NAPHTHALENE	0.0037 U	--	0.0093	0.0059	--	0.0043 U	--	0.0031 J	0.0039	--
PENTACHLOROPHENOL	0.0075 U	--	0.0079 U	0.0077 U	--	0.0087 U	--	0.009 U	0.0079 U	--
PHENANTHRENE	0.00086 J	--	0.037	0.019	--	0.0011 J	--	0.011	0.044	--
PYRENE	0.0037 U	--	0.11	0.032	--	0.001 J	--	0.029	0.13	--
TOTAL PAHS	0.0037	--	0.081	0.031	--	0.0043	--	0.02	0.094	--
PESTICIDES (MG/KG)										
4,4'-DDD	0.0037 U	--	0.0039 U	0.0038 U	--	0.0043 U	--	0.0044 U	0.0009 R	--
4,4'-DDE	0.0037 U	--	0.0039 U	0.0038 U	--	0.0043 U	--	0.0044 U	0.0039 U	--
4,4'-DDT	0.0037 U	--	0.0039 U	0.0038 U	--	0.0043 U	--	0.0044 U	0.0039 U	--
ALDRIN	0.0019 U	--	0.002 U	0.002 U	--	0.0022 U	--	0.0023 U	0.002 U	--
ALPHA-BHC	0.0019 U	--	0.002 U	0.002 U	--	0.0022 U	--	0.0023 U	0.002 U	--
ALPHA-CHLORDANE	0.0019 U	--	0.002 U	0.002 U	--	0.0022 U	--	0.0023 U	0.002 U	--
BETA-BHC	0.0019 U	--	0.002 U	0.002 U	--	0.0022 U	--	0.0023 U	0.002 U	--
DELTA-BHC	0.0019 U	--	0.002 U	0.002 U	--	0.0022 U	--	0.0023 U	0.002 U	--
DIELDRIN	0.0037 U	--	0.0039 U	0.0038 U	--	0.0043 U	--	0.0044 U	0.0039 U	--
ENDOSULFAN I	0.0019 U	--	0.002 U	0.002 U	--	0.0022 U	--	0.0023 U	0.002 U	--

LOCATION	SB-322	SB-322	SB-323	SB-323	SB-323	SB-323	SB-323	SB-324	SB-324	SB-324
SAMPLE ID	SB322-20191122-2448	SB322-20191122-4872	SB323-20191122-0006	SB323-20191122-0624	SB323-20191122-0624-RE	SB323-20191122-4872	SB323-20191122-7296	SB324-20191122-0006	SB324-20191122-0624	SB324-20191122-2448
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	4	0	0.5	0.5	4	6	0	0.5	2
BOTTOM DEPTH	4	6	0.5	2	2	6	8	0.5	2	4
ENDOSULFAN II	0.0037 U	--	0.0039 U	0.0038 U	--	0.0043 U	--	0.0044 U	0.0039 U	--
ENDOSULFAN SULFATE	0.0037 U	--	0.0039 U	0.0038 U	--	0.0043 U	--	0.0044 U	0.0039 U	--
ENDRIN	0.0037 U	--	0.0039 U	0.0038 U	--	0.0043 U	--	0.0044 U	0.00031 J	--
ENDRIN ALDEHYDE	0.0037 U	--	0.0039 U	0.0038 U	--	0.0043 U	--	0.0044 U	0.0039 U	--
ENDRIN KETONE	0.0037 U	--	0.0039 U	0.0038 U	--	0.0043 U	--	0.0044 U	0.0039 U	--
GAMMA-BHC (LINDANE)	0.0019 U	--	0.001 J	0.00057 J	--	0.0022 U	--	0.0023 U	0.00075 J	--
GAMMA-CHLORDANE	0.0019 U	--	0.002 U	0.002 U	--	0.0022 U	--	0.0023 U	0.002 U	--
HEPTACHLOR	0.0019 U	--	0.002 U	0.002 U	--	0.0022 U	--	0.0023 U	0.002 U	--
HEPTACHLOR EPOXIDE	0.0019 U	--	0.002 U	0.002 U	--	0.0022 U	--	0.0023 U	0.002 U	--
METHOXYCHLOR	0.019 U	--	0.02 U	0.02 U	--	0.022 U	--	0.023 U	0.02 U	--
TOXAPHENE	0.19 U	--	0.2 U	0.2 U	--	0.22 U	--	0.23 U	0.2 U	--
PCBS (MG/KG)										
AROCLOR-1016	0.037 U	--	0.039 U	0.038 U	--	0.043 U	--	0.044 U	0.039 U	--
AROCLOR-1221	0.037 U	--	0.039 U	0.038 U	--	0.043 U	--	0.044 U	0.039 U	--
AROCLOR-1232	0.037 U	--	0.039 U	0.038 U	--	0.043 U	--	0.044 U	0.039 U	--
AROCLOR-1242	0.037 U	--	0.039 U	0.038 U	--	0.043 U	--	0.044 U	0.039 U	--
AROCLOR-1248	0.037 U	--	0.039 U	0.038 U	--	0.043 U	--	0.044 U	0.039 U	--
AROCLOR-1254	0.037 U	--	0.039 U	0.038 U	--	0.043 U	--	0.044 U	0.039 U	--
AROCLOR-1260	0.0069 J	--	0.41	0.99	--	0.0074 J	--	0.071	0.059	--
AROCLOR-1262	0.037 U	--	0.039 U	0.038 U	--	0.043 U	--	0.044 U	0.039 U	--
AROCLOR-1268	0.037 U	--	0.039 U	0.038 U	--	0.043 U	--	0.044 U	0.039 U	--
TOTAL AROCLOR	0.0069	--	0.41	0.99	--	0.0074	--	0.071	0.059	--
TOTAL AROCLOR HALFND	0.1549	--	0.566	1.142	--	0.1794	--	0.247	0.215	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)										
AROCLOR-1016	--	0.278 U	--	0.291 U	--	--	0.309 U	--	0.294 U	0.291 U
AROCLOR-1221	--	0.556 U	--	0.581 U	--	--	0.617 U	--	0.588 U	0.581 U
AROCLOR-1232	--	0.278 U	--	0.291 U	--	--	0.309 U	--	0.294 U	0.291 U
AROCLOR-1242	--	0.278 U	--	0.291 U	--	--	0.309 U	--	0.294 U	0.291 U
AROCLOR-1248	--	0.278 U	--	0.291 U	--	--	0.309 U	--	0.294 U	0.291 U
AROCLOR-1254	--	0.278 U	--	0.291 U	--	--	0.309 U	--	0.294 U	0.291 U
AROCLOR-1260	--	0.077 J	--	2.28	--	--	0.309 U	--	0.139 J	0.291 U
AROCLOR-1262	--	0.278 U	--	0.291 U	--	--	0.309 U	--	0.294 U	0.291 U
AROCLOR-1268	--	0.278 U	--	0.291 U	--	--	0.309 U	--	0.294 U	0.291 U
TOTAL AROCLOR	--	0.077	--	2.28	--	--	0 U	--	0.139	0 U
TOTAL AROCLOR HALFND	--	1.328	--	3.589	--	--	1.5445	--	1.462	1.4545
PCB CONGENERS (MG/KG)										
DICHLOROBIPHENYLS	0.000024 J	--	0.0014 J	0.00061 J	--	0.000066 J	--	0.0024 J	0.00019 J	--
HEPTACHLOROBIPHENYLS	0.0022 J	--	0.83 J	0.83 J	--	0.02 J	--	0.82 J	0.047 J	--
HEXACHLOROBIPHENYLS	0.0024 J	--	0.95 J	0.92 J	--	0.022 J	--	0.93 J	0.055 J	--
MONOCHLOROBIPHENYLS	0.00000053 J	--	0.000095 J	0 UJ	--	0.0000092 J	--	0.000055 J	0.000019 J	--
NONACHLOROBIPHENYLS	0.00005 J	--	0.016 J	0.017 J	--	0.0011 J	--	0.016 J	0.0022 J	--
OCTACHLOROBIPHENYLS	0.00062 J	--	0.2 J	0.19 J	--	0.0054 J	--	0.19 J	0.012 J	--
PCB-1	0.00000053 J	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.0000053 J	--
PCB-10	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-100	--	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--	--
PCB-103	0.000002 U	--	0.000075 J	0.000074 J	--	0.000002 U	--	0.00018 J	0.000007	--
PCB-104	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-105	0.000023	--	0.0043	0.0021	--	0.00015	--	0.008	0.00061	--
PCB-106	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-107	0.0000033	--	0.00068	0.00032	--	0.000023	--	0.0011	0.000095	--
PCB-108/107	--	--	--	--	--	--	--	--	--	--
PCB-108/124	0.0000023 J	--	0.00058	0.0005 U	--	0.00002	--	0.00085	0.000064	--
PCB-109	--	--	--	--	--	--	--	--	--	--
PCB-11	0.0000035	--	0.00022 U	0.00025 U	--	0.000011	--	0.00028 U	0.000024	--
PCB-110	--	--	--	--	--	--	--	--	--	--
PCB-110/115	0.000099	--	0.028	0.019	--	0.0008	--	0.031	0.0023	--
PCB-111	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-111/115	--	--	--	--	--	--	--	--	--	--
PCB-112	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-113	--	--	--	--	--	--	--	--	--	--
PCB-114	0.0000014 J	--	0.00021 J	0.00014 J	--	0.0000079	--	0.00044 Z	0.000027	--
PCB-118	0.000063	--	0.013	0.0078	--	0.00045	--	0.02	0.0018	--
PCB-118/106	--	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--	--
PCB-12/13	0.0000039 U	--	0.00043 U	0.0005 U	--	0.0000046	--	0.00056 U	0.000011	--
PCB-120	0.000002 U	--	0.000083 J	0.00025 U	--	0.000002 U	--	0.00012 J	0.0000053	--
PCB-121	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-122	0.000002 U	--	0.00022 U	0.000083 J	--	0.0000049	--	0.00028 U	0.000002 U	--
PCB-123	0.00000051 U	--	0.00014 J	0.000099 Z	--	0.0000058	--	0.00035	0.000021	--
PCB-124	--	--	--	--	--	--	--	--	--	--
PCB-126	0.0000018 J	--	0.00065	0.00059	--	0.0000011 U	--	0.00003 U	0.0000018 U	--
PCB-127	0.000002 U	--	0.00022 U	0.00025 U	--	0.00000093 J	--	0.00028 U	0.000002 U	--
PCB-128/162	--	--	--	--	--	--	--	--	--	--
PCB-128/166	0.000032	--	0.011	0.01	--	0.00028	--	0.011	0.0008	--
PCB-129	--	--	--	--	--	--	--	--	--	--
PCB-129/138/163	0.00054	--	0.2	0.19	--	0.0048	--	0.2	0.012	--
PCB-13	--	--	--	--	--	--	--	--	--	--
PCB-130	0.000017	--	0.0064	0.0064	--	0.00016	--	0.007	0.00039	--
PCB-131	0.000002 U	--	0.00087	0.00088	--	0.000022	--	0.00082	0.000051	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-322	SB-322	SB-323	SB-323	SB-323	SB-323	SB-323	SB-324	SB-324	SB-324
SAMPLE ID	SB322-20191122-2448	SB322-20191122-4872	SB323-20191122-0006	SB323-20191122-0624	SB323-20191122-0624-RE	SB323-20191122-4872	SB323-20191122-7296	SB324-20191122-0006	SB324-20191122-0624	SB324-20191122-2448
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	4	0	0.5	0.5	4	6	0	0.5	2
BOTTOM DEPTH	4	6	0.5	2	2	6	8	0.5	2	4
PCB-131/133	--	--	--	--	--	--	--	--	--	--
PCB-132	0.00013	--	0.05	0.051	--	0.0012	--	0.048	0.0025	--
PCB-132/161	--	--	--	--	--	--	--	--	--	--
PCB-133	0.0000056	--	0.0023	0.0022	--	0.000052	--	0.0024	0.00013	--
PCB-134	0.00002	--	0.0086	0.0092	--	0.00021	--	0.0091	0.00043	--
PCB-134/143	--	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--	--
PCB-135/151	0.00023	--	0.097	0.097	--	0.0022	--	0.095	0.0048 J	--
PCB-136	0.000061	--	0.023	0.027	--	0.00058	--	0.024	0.00095	--
PCB-137	0.0000043	--	0.00078	0.00051	--	0.000028	--	0.00076	0.00009	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--	--
PCB-139/140	0.0000011 J	--	0.00042 J	0.0004 J	--	0.000011	--	0.00059	0.000035	--
PCB-139/149	--	--	--	--	--	--	--	--	--	--
PCB-14	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-140	--	--	--	--	--	--	--	--	--	--
PCB-141	0.00013	--	0.05	0.049	--	0.0012	--	0.047	0.0028	--
PCB-142	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-143	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-144	0.000029	--	0.011	0.012	--	0.00027	--	0.011	0.00054	--
PCB-145	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-146	0.000069	--	0.031	0.029	--	0.00072	--	0.03	0.0016	--
PCB-146/165	--	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--	--
PCB-147/149	0.00045	--	0.2	0.19	--	0.0044	--	0.19	0.0096	--
PCB-148	0.000002 U	--	0.00022 U	0.00025 U	--	0.000001 J	--	0.000057 J	0.0000038	--
PCB-15	0.000015	--	0.00088	0.00035	--	0.000032	--	0.0016	0.00012 J	--
PCB-150	0.000002 U	--	0.000052 J	0.000044 J	--	0.0000012 J	--	0.00007 J	0.0000027	--
PCB-151	--	--	--	--	--	--	--	--	--	--
PCB-152	0.000002 U	--	0.00022 U	0.00025 U	--	0.00000057 J	--	0.000032 J	0.0000011 J	--
PCB-153	--	--	--	--	--	--	--	--	--	--
PCB-153/168	0.00055	--	0.22	0.2	--	0.0052	--	0.21	0.013	--
PCB-154	0.0000011 J	--	0.00044	0.00045	--	0.000011	--	0.00065	0.000032	--
PCB-155	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-156	--	--	--	--	--	--	--	--	--	--
PCB-156/157	0.000032	--	0.0084	0.0065	--	0.00023	--	0.0088	0.00074	--
PCB-157	--	--	--	--	--	--	--	--	--	--
PCB-158	0.000041	--	0.015	0.013	--	0.00035	--	0.014	0.00096	--
PCB-158/160	--	--	--	--	--	--	--	--	--	--
PCB-159	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-16	0.0000021	--	0.00024	0.00011 J	--	0.0000074	--	0.00041	0.000023	--
PCB-160	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-161	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-162	0.000002 U	--	0.00022 U	0.00025 U	--	0.0000037	--	0.00028 U	0.000021	--
PCB-164	0.000036	--	0.014	0.014	--	0.00034	--	0.014	0.0008	--
PCB-165	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-166	--	--	--	--	--	--	--	--	--	--
PCB-167	0.000015	--	0.0052	0.0051	--	0.00014	--	0.0054	0.00034	--
PCB-168	--	--	--	--	--	--	--	--	--	--
PCB-169	0.00000077 U	--	0.00055 Z	0.00052 Z	--	0.0000024 Z	--	0.000016 U	0.0000044 Z	--
PCB-17	0.0000031	--	0.00031	0.00011 J	--	0.000013	--	0.00067	0.000044	--
PCB-170	0.00028	--	0.09	0.089	--	0.0024	--	0.089	0.0054	--
PCB-171	--	--	--	--	--	--	--	--	--	--
PCB-171/173	0.000076	--	0.029	0.029	--	0.00069	--	0.029	0.0015	--
PCB-172	0.000049	--	0.017	0.017	--	0.00043	--	0.017	0.00095	--
PCB-173	--	--	--	--	--	--	--	--	--	--
PCB-174	0.00027	--	0.11	0.11	--	0.0025	--	0.11	0.0058	--
PCB-175	0.00001	--	0.0039	0.0043	--	0.000096	--	0.0039	0.00019	--
PCB-176	0.000029	--	0.012	0.014	--	0.0003	--	0.013	0.00054	--
PCB-177	0.00015	--	0.06	0.06	--	0.0014	--	0.06	0.0033	--
PCB-178	0.000053	--	0.021	0.021	--	0.00052	--	0.022	0.0012	--
PCB-179	0.0001	--	0.044	0.046	--	0.0011	--	0.045	0.0022	--
PCB-18	--	--	--	--	--	--	--	--	--	--
PCB-18/30	0.000005	--	0.00039 J	0.00017 J	--	0.000017	--	0.00084	0.000046	--
PCB-180	--	--	--	--	--	--	--	--	--	--
PCB-180/193	0.00065	--	0.22	0.22	--	0.0057	--	0.22	0.013	--
PCB-181	0.00000091 J	--	0.00026	0.00024 J	--	0.0000062	--	0.00026 J	0.000014	--
PCB-182	0.000002 U	--	0.00022 U	0.00025 U	--	0.0000038	--	0.00028 U	0.0000078 J	--
PCB-182/187	--	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--	--
PCB-183/185	0.00018	--	0.071	0.073	--	0.0017	--	0.07	0.0035	--
PCB-184	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.00000073 J	--
PCB-185	--	--	--	--	--	--	--	--	--	--
PCB-186	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.00000091 J	--
PCB-187	0.00031	--	0.13	0.12	--	0.0031	--	0.12	0.0074	--
PCB-188	0.000002 U	--	0.00022 U	0.00025 U	--	0.0000011 J	--	0.00028 U	0.0000024	--
PCB-189	0.00001	--	0.0032	0.0032	--	0.000086	--	0.0032	0.00021	--
PCB-19	0.000002 U	--	0.000073 J	0.00025 U	--	0.0000038	--	0.00028 U	0.000012	--
PCB-190	0.000058	--	0.019	0.018	--	0.00047	--	0.019	0.0012	--
PCB-191	0.000011	--	0.0035	0.0037	--	0.00009	--	0.0035	0.0002	--
PCB-192	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-193	--	--	--	--	--	--	--	--	--	--

LOCATION	SB-322	SB-322	SB-323	SB-323	SB-323	SB-323	SB-323	SB-324	SB-324	SB-324
SAMPLE ID	SB322-20191122-2448	SB322-20191122-4872	SB323-20191122-0006	SB323-20191122-0624	SB323-20191122-0624-RE	SB323-20191122-4872	SB323-20191122-7296	SB324-20191122-0006	SB324-20191122-0624	SB324-20191122-2448
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	4	0	0.5	0.5	4	6	0	0.5	2
BOTTOM DEPTH	4	6	0.5	2	2	6	8	0.5	2	4
PCB-194	0.00016	--	0.045	0.046	--	0.0012	--	0.044	0.0027	--
PCB-195	0.000067	--	0.02	0.021	--	0.00055	--	0.02	0.0012	--
PCB-196	0.000074	--	0.023	0.024	--	0.00063	--	0.023	0.0013	--
PCB-196/203	--	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--	--
PCB-197/200	0.000022	--	0.008	0.0083	--	0.0002	--	0.0079	0.00041	--
PCB-198	--	--	--	--	--	--	--	--	--	--
PCB-198/199	0.00015	--	0.051	0.049	--	0.0015	--	0.049	0.0033	--
PCB-199	--	--	--	--	--	--	--	--	--	--
PCB-2	0.000002 U	--	0.00022 U	0.00025 U	--	0.0000036	--	0.00028 U	0.000005	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--	--
PCB-20/28	0.000049	--	0.0025	0.00077	--	0.00014	--	0.0084	0.00044	--
PCB-200	--	--	--	--	--	--	--	--	--	--
PCB-201	0.000015	--	0.0056	0.006	--	0.00015	--	0.0055	0.00028	--
PCB-202	0.000023	--	0.0089	0.0082	--	0.00025	--	0.0085	0.00054	--
PCB-203	0.000095	--	0.031	0.03	--	0.00085	--	0.029	0.0019	--
PCB-204	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.00000069 J	--
PCB-205	0.0000088	--	0.0024	0.0025	--	0.000067	--	0.0024	0.00015	--
PCB-206	0.000037	--	0.012	0.012	--	0.00072	--	0.012	0.0015	--
PCB-207	0.0000048	--	0.0015	0.0016	--	0.000064	--	0.0015	0.00015	--
PCB-208	0.0000082	--	0.0028	0.0034	--	0.00028	--	0.0032	0.00056	--
PCB-209	0.0000091	--	0.0034	0.0073	--	0.00076	--	0.0059	0.0021	--
PCB-21/33	0.0000069	--	0.00064	0.0003 J	--	0.000024	--	0.001	0.00007	--
PCB-22	0.000018	--	0.0011	0.00026	--	0.000046	--	0.0034	0.00014 J	--
PCB-23	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-24	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00007 J	0.0000033	--
PCB-25	0.0000023	--	0.00015 J	0.000069 J	--	0.0000066	--	0.0004	0.00002	--
PCB-26	--	--	--	--	--	--	--	--	--	--
PCB-26/29	0.0000046	--	0.00027 J	0.0005 U	--	0.000014	--	0.00076	0.000046	--
PCB-27	0.0000011 J	--	0.000091 J	0.00025 U	--	0.0000044	--	0.00028	0.000012	--
PCB-28	--	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--	--
PCB-3	0.000002 U	--	0.000095 J	0.00025 U	--	0.0000055	--	0.000055 J	0.0000085	--
PCB-30	--	--	--	--	--	--	--	--	--	--
PCB-31	0.000026	--	0.0016	0.00053	--	0.000081	--	0.0046	0.00026	--
PCB-32	0.0000053	--	0.0004	0.00025 U	--	0.000019	--	0.0012	0.000055	--
PCB-34	0.000002 U	--	0.00022 U	0.00025 U	--	0.00000041 J	--	0.00028 U	0.00000088 J	--
PCB-35	0.0000011 J	--	0.00022 U	0.00025 U	--	0.0000028	--	0.00015 J	0.0000082	--
PCB-36	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-37	0.000018	--	0.0014	0.00037	--	0.000052	--	0.0034	0.00021	--
PCB-38	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-39	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.0000014 J	--
PCB-4	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00024 J	0.000002 UJ	--
PCB-40	--	--	--	--	--	--	--	--	--	--
PCB-40/71	0.000012	--	0.0014	0.00032 J	--	0.000051	--	0.0032	0.00012	--
PCB-41	0.000002 U	--	0.00022 U	0.00025 U	--	0.0000063	--	0.00064	0.000026	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--	--
PCB-42	0.0000098	--	0.0011	0.00025 U	--	0.000039	--	0.0026	0.00011	--
PCB-42/59	--	--	--	--	--	--	--	--	--	--
PCB-43	0.0000014 J	--	0.00022 U	0.00025 U	--	0.000005	--	0.00033	0.000012	--
PCB-43/49	--	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--	--
PCB-44/47/65	0.000033	--	0.0038	0.00063 J	--	0.00013	--	0.0089	0.00039	--
PCB-45	--	--	--	--	--	--	--	--	--	--
PCB-45/51	0.0000079	--	0.00048	0.00015 J	--	0.000017	--	0.0012	0.000038	--
PCB-46	0.00000098 J	--	0.00011 J	0.000044 J	--	0.0000037	--	0.00025 J	0.0000074	--
PCB-47	--	--	--	--	--	--	--	--	--	--
PCB-48	0.0000049	--	0.00022 U	0.00024 J	--	0.000018	--	0.0012	0.000047	--
PCB-48/75	--	--	--	--	--	--	--	--	--	--
PCB-49/69	0.000023	--	0.0029	0.0004 J	--	0.000096	--	0.0067	0.0003	--
PCB-5	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-50	--	--	--	--	--	--	--	--	--	--
PCB-50/53	0.0000027 J	--	0.00028 J	0.000073 J	--	0.00001	--	0.00067	0.000019	--
PCB-51	--	--	--	--	--	--	--	--	--	--
PCB-52	0.00004	--	0.0051	0.0013	--	0.00019	--	0.012	0.00059	--
PCB-52/69	--	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--	--
PCB-54	0.000002 U	--	0.00022 U	0.00025 U	--	0.00000031 J	--	0.000016 J	0.000002 UJ	--
PCB-55	0.000002 U	--	0.00022 U	0.00025 U	--	0.0000022	--	0.00028	0.0000078	--
PCB-56	0.000026	--	0.0019	0.00042	--	0.000068	--	0.0058	0.00024	--
PCB-56/60	--	--	--	--	--	--	--	--	--	--
PCB-57	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-58	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-59/62/75	0.0000035 J	--	0.00065 U	0.00076 U	--	0.000014	--	0.001	0.000037	--
PCB-6	0.0000013 J	--	0.00022 U	0.00025 U	--	0.0000044	--	0.00028 U	0.00001	--
PCB-60	0.000016	--	0.001	0.00021 J	--	0.000038	--	0.0037	0.00013	--
PCB-61/70	--	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	0.000068	--	0.0062	0.0016	--	0.00024	--	0.015	0.00077	--
PCB-62	--	--	--	--	--	--	--	--	--	--
PCB-63	0.0000021	--	0.00019 J	0.00025 U	--	0.0000066	--	0.00051	0.00002	--
PCB-64	0.00002	--	0.0024	0.00033	--	0.000085	--	0.0058	0.00022	--

LOCATION	SB-322	SB-322	SB-323	SB-323	SB-323	SB-323	SB-323	SB-324	SB-324	SB-324
SAMPLE ID	SB322-20191122-2448	SB322-20191122-4872	SB323-20191122-0006	SB323-20191122-0624	SB323-20191122-0624-RE	SB323-20191122-4872	SB323-20191122-7296	SB324-20191122-0006	SB324-20191122-0624	SB324-20191122-2448
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	4	0	0.5	0.5	4	6	0	0.5	2
BOTTOM DEPTH	4	6	0.5	2	2	6	8	0.5	2	4
PCB-65	--	--	--	--	--	--	--	--	--	--
PCB-66	0.000051	--	0.0038	0.00083	--	0.00015	--	0.011	0.00055	--
PCB-66/76	--	--	--	--	--	--	--	--	--	--
PCB-67	0.0000016 J	--	0.00012 J	0.00025 U	--	0.0000046	--	0.00036	0.000015	--
PCB-68	0.000002 U	--	0.00022 U	0.00025 U	--	0.00000067 J	--	0.00028 U	0.000002 U	--
PCB-7	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-72	0.000002 U	--	0.00022 U	0.00025 U	--	0.00000098 J	--	0.00028 U	0.0000031	--
PCB-73	0.000002 U	--	0.00022 U	0.00025 U	--	0.0000014 J	--	0.00028 U	0.0000064	--
PCB-74	--	--	--	--	--	--	--	--	--	--
PCB-77	0.0000053	--	0.00054	0.00016 J	--	0.00002	--	0.0015	0.000075	--
PCB-78	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-79	0.00000063 J	--	0.00022 U	0.00025 U	--	0.0000023	--	0.00028 U	0.00001	--
PCB-8	0.0000043	--	0.0005	0.00027	--	0.000013	--	0.00057	0.00002	--
PCB-80	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002 U	--
PCB-81	0.00000043 U	--	0.000015 U	0.000017 U	--	0.000001 J	--	0.000019 U	0.000004	--
PCB-82	0.0000055	--	0.00096	0.00042	--	0.0000033	--	0.0017	0.00011	--
PCB-83	0.0000032	--	0.00088	0.00079	--	0.000025	--	0.0012	0.000048	--
PCB-83/112	--	--	--	--	--	--	--	--	--	--
PCB-84	0.000009	--	0.0018	0.0012	--	0.000064	--	0.003	0.00016	--
PCB-84/92	--	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--	--
PCB-85/116/117	0.0000078	--	0.0014	0.00054 J	--	0.000056	--	0.0027	0.00021	--
PCB-86	--	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	0.00004	--	0.0083	0.0037	--	0.00027	--	0.012	0.00096	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--	--
PCB-88/91	0.0000053	--	0.0011	0.00058	--	0.000041	--	0.0019	0.00011	--
PCB-89	0.000002 U	--	0.00022 U	0.00025 U	--	0.0000024	--	0.00016 J	0.0000037	--
PCB-9	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.0000024	--
PCB-90/101/113	0.00015	--	0.037	0.021	--	0.001	--	0.037	0.0033	--
PCB-92	0.000019	--	0.0056	0.004	--	0.00015	--	0.0069	0.00044	--
PCB-93	--	--	--	--	--	--	--	--	--	--
PCB-93/100	0.00000056 J	--	0.00043 U	0.0005 U	--	0.0000039 U	--	0.00014 J	0.0000039 U	--
PCB-94	0.000002 U	--	0.00022 U	0.00025 U	--	0.000002 U	--	0.00028 U	0.000002	--
PCB-95	0.000092	--	0.028	0.027	--	0.00077	--	0.029	0.0017	--
PCB-96	0.00000035 J	--	0.00022 U	0.00025 U	--	0.0000014 J	--	0.000075 J	0.0000019 J	--
PCB-97	--	--	--	--	--	--	--	--	--	--
PCB-98/102	0.0000039 U	--	0.00029 J	0.00021 J	--	0.0000087	--	0.00045 J	0.000017	--
PCB-99	0.000019	--	0.0041	0.0018	--	0.00015	--	0.0075	0.00063	--
PENTACHLOROBIPHENYLS	0.00054 J	--	0.14 J	0.091 J	--	0.004 J	--	0.17 J	0.013 J	--
TEQ DIOXIN-LIKE PCBs (BIRD)	4.5152E-07	--	9.40564E-05	6.8556E-05	--	1.14801E-06	--	7.70135E-05	4.31581E-06	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	4.73407E-07	--	9.48064E-05	6.9406E-05	--	1.20301E-06	--	7.94715E-05	4.40581E-06	--
TEQ DIOXIN-LIKE PCBs (FISH)	1.0252E-08	--	3.50375E-06	3.1167E-06	--	7.968E-09	--	3.8095E-07	2.846E-08	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	1.0379E-08	--	3.5075E-06	3.12095E-06	--	1.0718E-08	--	4.611E-07	3.296E-08	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.84862E-07	--	8.25875E-05	7.53642E-05	--	1.06391E-07	--	1.5357E-06	2.5314E-07	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	1.96483E-07	--	8.25898E-05	7.53667E-05	--	1.61391E-07	--	3.27855E-06	3.4314E-07	--
TETRACHLOROBIPHENYLS	0.00033 J	--	0.031 J	0.0067 J	--	0.0012 J	--	0.083 J	0.0037 J	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0001515	--	0.03619	0.026209	--	0.0010931	--	0.04769	0.0038314	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00619586	--	2.147389	2.037197	--	0.05487447	--	2.195215	0.12946371	--
TOTAL PCB CONGENERS ZEROND	0.00634736	--	2.183579	2.063406	--	0.05596757	--	2.242905	0.13329511	--
TOTAL PCB CONGENERS-NOAA	0.0028934	--	0.97679	0.90417	--	0.02575	--	0.99461	0.064146	--
TOTAL PCB CONGENERS-NOAA HALFND	0.006407115	--	2.1906115	2.0726695	--	0.05600607	--	2.2496575	0.13332796	--
TOTAL PCB CONGENERS-NOAA X2	0.0057868	--	1.95358	1.80834	--	0.0515	--	1.98922	0.128292	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0057868	--	1.95358	1.80834	--	0.0515	--	1.98922	0.128292	--
TRICHLOROBIPHENYLS	0.00014 J	--	0.0091 J	0.0027 J	--	0.00043 J	--	0.026 J	0.0014 J	--
DIOXINS/FURANS (NG/KG)										
1,2,3,4,6,7,8,9-OCDD	180	--	370	370	--	430	--	1100	200	--
1,2,3,4,6,7,8,9-OCDF	1.7 U	--	35	19	--	1.8 U	--	59	5.6 J	--
1,2,3,4,6,7,8-HPCDD	7.7	--	22	15	--	5.5	--	31	7.6	--
1,2,3,4,6,7,8-HPCDF	2 U	--	24	13	--	2.2 U	--	19	6.2	--
1,2,3,4,7,8,9-HPCDF	2 U	--	3.1 J	2.1 U	--	2.2 U	--	3.3 J	2.2 U	--
1,2,3,4,7,8-HXCDD	1.3 U	--	1 J	1.4 U	--	1.5 U	--	1.4 U	1.4 U	--
1,2,3,4,7,8-HXCDF	1.4 U	--	5.2	36	--	1.6 U	--	46	9.3	--
1,2,3,6,7,8-HXCDD	1.1 U	--	2.1 J	1.2 U	--	1.2 U	--	1.3 J	1.2 U	--
1,2,3,6,7,8-HXCDF	1.7 U	--	3.5 J	1.8 U	--	1.9 U	--	2.4 J	1.8 U	--
1,2,3,7,8,9-HXCDD	2.2 U	--	1.4 J	2.3 U	--	2.4 U	--	2.3 U	2.3 U	--
1,2,3,7,8,9-HXCDF	1.3 U	--	0.9 U	1.4 U	--	1.5 U	--	1.4 U	1.4 U	--
1,2,3,7,8-PECDD	1.7 U	--	1.4 J	1.8 U	--	1.9 U	--	4.2 Z	1.8 U	--
1,2,3,7,8-PECDF	1.5 U	--	110	62	--	2.8 J	--	88	19	--
2,3,4,6,7,8-HXCDF	0.87 U	--	3.1 J	1.6 J	--	0.95 U	--	2.3 J	0.93 U	--
2,3,4,7,8-PECDF	0.81 U	--	4.8 J	2.1 J	--	0.89 U	--	3.1 J	0.87 U	--
2,3,7,8-TCDD	0.29 U	--	0.54 J	0.26 U	--	0.2 U	--	0.27 U	0.3 U	--
2,3,7,8-TCDF	0.47 J	--	4.5	2.6	--	0.5 Z	--	5	1.6	--
TEQ DIOXINS (BIRD)	0.4957	--	23.9645	14.8439	--	0.8285	--	26.5529	4.52016	--
TEQ DIOXINS (BIRD) HALFND	2.402285	--	24.0095	16.2004	--	2.80659	--	26.9079	6.37866	--
TEQ DIOXINS (FISH)	0.0492	--	12.1135	8.2239	--	0.2135	--	15.8529	2.05016	--
TEQ DIOXINS (FISH) HALFND	1.909285	--	12.1585	9.7919	--	2.19859	--	16.4194	3.90266	--
TEQ DIOXINS (HUMANS/MAMMALS)	0.178	--	9.3725	6.9067	--	0.318	--	14.3507	1.85968	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	1.830755	--	9.4175	8.3522	--	2.07627	--	14.7407	3.50268	--
TOTAL HPCDD	19 J	--	43 J	30 J	--	11 J	--	60 J	16 J	--
TOTAL HPCDF	2 UJ	--	40 J	24 J	--	2.2 UJ	--	51 J	10 J	--
TOTAL HXCDD	2.2 J	--	22 J	5.2 J	--	1.2 UJ	--	11 J	3.1 J	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-322	SB-322	SB-323	SB-323	SB-323	SB-323	SB-323	SB-324	SB-324	SB-324
SAMPLE ID	SB322-20191122-2448	SB322-20191122-4872	SB323-20191122-0006	SB323-20191122-0624	SB323-20191122-0624-RE	SB323-20191122-4872	SB323-20191122-7296	SB324-20191122-0006	SB324-20191122-0624	SB324-20191122-2448
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122	20191122
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	4	0	0.5	0.5	4	6	0	0.5	2
BOTTOM DEPTH	4	6	0.5	2	2	6	8	0.5	2	4
TOTAL HXCDF	0.87 UJ	--	130 J	62 J	--	0.95 UJ	--	96 J	15 J	--
TOTAL PECDD	1.7 UJ	--	9.7 J	1.8 UJ	--	1.9 UJ	--	1.8 UJ	1.8 UJ	--
TOTAL PECDF	0.81 UJ	--	360 J	200 J	--	4.8 J	--	280 J	48 J	--
TOTAL TCDD	0.29 UJ	--	11 J	1.4 J	--	0.54 J	--	2.7 J	2.3 J	--
TOTAL TCDF	0.23 UJ	--	110 J	43 J	--	0.33 J	--	97 J	21 J	--
METALS (MG/KG)										
ALUMINUM	7950	--	6090	7270	--	10000	--	9190	9230	--
ANTIMONY	1.1 U	--	1.1 U	1.1 U	--	1.2 U	--	1.3 U	1.7	--
ARSENIC	2.3	--	4.5	11.5	--	9.2	--	10.3	17.3	--
BARIUM	39.6	--	37.1	72.1	--	119	--	80.1	139	--
BERYLLIUM	0.25 J	--	0.51 J	0.59	--	0.95	--	0.88	1.4	--
CADMIUM	0.53 U	--	0.56 U	0.31 J	--	0.25 J	--	0.24 J	0.41 J	--
CALCIUM	321 J	--	1060	1200	--	1030	--	951	1410	--
CHROMIUM	4	--	9.4	8.6	--	13.1	--	14.3	25.2	--
COBALT	3.6	--	3.9	6.5	--	10.8	--	10.9	18.8	--
COPPER	3.6	--	7.4	76.1	--	36.8	--	48.4	62.6	--
CYANIDE	0.56 R	--	0.58 R	0.55 R	--	0.59 R	--	0.67 R	0.58 R	--
IRON	9010	--	22300	20800	--	20900	--	31500	31300	--
LEAD	5.4	--	9.3	52.7	--	46.7	--	44.5	89.3	--
MAGNESIUM	583	--	789	786	--	1330	--	871	1110	--
MANGANESE	149	--	147	332	--	503	--	380	848	--
MERCURY	0.11 UJ	--	0.12 UJ	0.11 UJ	--	0.11 UJ	--	0.13 UJ	0.11 UJ	--
NICKEL	3.9	--	10.4	11	--	15.3	--	15.3	30.3	--
POTASSIUM	739	--	1290	1140	--	1350	--	1740	1570	--
SELENIUM	0.17 J	--	0.34 J	0.87 J	--	0.93 J	--	0.79 J	0.86 J	--
SILVER	0.53 U	--	0.56 U	0.062 J	--	0.061 J	--	0.09 J	0.07 J	--
SODIUM	517 UJ	--	598 UJ	542 UJ	--	599 UJ	--	670 UJ	555 UJ	--
THALLIUM	0.53 U	--	0.057 J	0.12 J	--	0.091 J	--	0.082 J	0.14 J	--
VANADIUM	6.4	--	13.5	10.4	--	16.2	--	15.1	24.7	--
ZINC	9.9	--	26	61	--	58.2	--	79.7	131	--
MISCELLANEOUS (%)										
TOTAL SOLIDS	--	--	--	--	--	--	--	--	84	--
MISCELLANEOUS (MG/KG)										
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	64600	--
MOBILE LAB MISCELLANEOUS (%)										
PERCENT SOLIDS	--	90	--	86	--	--	81	--	85	86

LOCATION	SB-324	SB-325	SB-325	SB-325	SB-325	SB-325	SB-326	SB-326	SB-326	SB-326
SAMPLE ID	SB324-20191122-6084	SB325-20191122-0006	SB325-20191122-0006-D	SB325-20191122-0624	SB325-20191122-6084	SB325-20191122-84106	SB326-20191115-0006	SB326-20191115-0624	SB326-20191115-2448	SB326-20191115-4872
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191115	20191115	20191115	20191115
DUPLICATE			SB325-20191122-0006							
SAMPLE CODE	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	5	0	0	0.5	5	7	0	0.5	2	4
BOTTOM DEPTH	7	0.5	0.5	2	7	8.8	0.5	2	4	6
VOLATILES (MG/KG)										
1,1,1-TRICHLOROETHANE	0.0052 U	0.0058 U	0.0062 UJ	0.0016 J	--	0.037 J+	0.0062 UJ	0.0053 UJ	--	0.0047 U
1,1,2,2-TETRACHLOROETHANE	0.0052 UJ	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
1,1,2-TRICHLOROETHANE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 UJ	--	0.0047 U
1,1-DICHLOROETHANE	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 U	--	0.0047 U
1,1-DICHLOROETHENE	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 U	--	0.0047 U
1,2,3-TRICHLOROBENZENE	0.0052 U	0.0058 U	0.0062 R	0.0064 R	--	0.0082 R	0.0062 R	0.0053 R	--	0.0047 U
1,2,4-TRICHLOROBENZENE	0.0052 U	0.0058 U	0.0062 R	0.0064 R	--	0.0082 R	0.0062 R	0.0053 R	--	0.0047 U
1,2-DIBROMO-3-CHLOROPROPANE	0.0052 U	0.0058 U	0.0062 R	0.0064 R	--	0.0082 R	0.0062 R	0.0053 R	--	0.0047 U
1,2-DIBROMOETHANE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
1,2-DICHLOROBENZENE	0.0052 U	0.0058 U	0.0062 R	0.0064 R	--	0.0082 R	0.0062 R	0.0053 R	--	0.0047 U
1,2-DICHLOROETHANE	0.0052 UJ	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 UJ	--	0.0047 U
1,2-DICHLOROPROPANE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
1,3-DICHLOROBENZENE	0.0052 U	0.0058 U	0.0062 R	0.0064 R	--	0.0082 R	0.0062 R	0.0053 R	--	0.0047 U
1,4-DICHLOROBENZENE	0.0052 U	0.0058 U	0.0062 R	0.0064 R	--	0.0082 R	0.0062 R	0.0053 R	--	0.0047 U
2-BUTANONE	0.01 U	0.012 U	0.012 U	0.013 U	--	0.016 UJ	0.012 UJ	0.011 U	--	0.0094 U
2-HEXANONE	0.01 U	0.012 U	0.012 UJ	0.013 UJ	--	0.016 R	0.012 UJ	0.011 UJ	--	0.0094 U
4-METHYL-2-PENTANONE	0.01 U	0.012 U	0.012 UJ	0.013 UJ	--	0.016 R	0.012 UJ	0.011 UJ	--	0.0094 U
ACETONE	0.01 U	0.021	0.013	0.013 U	--	0.058 J+	0.0091 J	0.013	--	0.0094 U
BENZENE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
BROMOCHLOROMETHANE	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 U	--	0.0047 U
BROMODICHLOROMETHANE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
BROMOFORM	0.0052 U	0.0058 U	0.0062 R	0.0064 R	--	0.0082 R	0.0062 R	0.0053 R	--	0.0047 U
BROMOMETHANE	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 U	--	0.0047 U
CARBON DISULFIDE	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 U	--	0.0047 U
CARBON TETRACHLORIDE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
CHLOROBENZENE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
CHLORODIBROMOMETHANE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
CHLOROETHANE	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 U	--	0.0047 U
CHLOROFORM	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 U	--	0.0047 U
CHLOROMETHANE	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 U	--	0.0047 U
CIS-1,2-DICHLOROETHENE	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 U	--	0.0047 U
CIS-1,3-DICHLOROPROPENE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
CYCLOHEXANE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0044 J	0.0062 UJ	0.0053 UJ	--	0.0047 U
DICHLORODIFLUOROMETHANE	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 U	--	0.0047 U
ETHYLBENZENE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
ISOPROPYLBENZENE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
M+P-XYLENES	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0019 J	0.0062 UJ	0.0053 UJ	--	0.0047 U
METHYL ACETATE	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 UJ	--	0.0047 U
METHYL CYCLOHEXANE	0.0052 U	0.0058 U	0.0015 J	0.0026 J	--	0.0097 J+	0.0062 UJ	0.0053 UJ	--	0.0047 U
METHYL TERT-BUTYL ETHER	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 UJ	--	0.0047 U
METHYLENE CHLORIDE	0.0054	0.0058 U	0.0062 U	0.0064 U	--	0.0055 J	0.0062 UJ	0.0053 UJ	--	0.0047 U
O-XYLENE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
STYRENE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
TETRACHLOROETHENE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
TOLUENE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0019 J	0.0062 UJ	0.0053 UJ	--	0.0047 U
TRANS-1,2-DICHLOROETHENE	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 U	--	0.0047 U
TRANS-1,3-DICHLOROPROPENE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
TRICHLOROETHENE	0.0052 U	0.0058 U	0.0062 UJ	0.0064 UJ	--	0.0082 R	0.0062 UJ	0.0053 UJ	--	0.0047 U
TRICHLOROFLUOROMETHANE	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 UJ	--	0.0047 U
VINYL CHLORIDE	0.0052 U	0.0058 U	0.0062 U	0.0064 U	--	0.0082 UJ	0.0062 UJ	0.0053 U	--	0.0047 U
SEMIVOLATILES (MG/KG)										
1,1-BIPHENYL	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.023 J	--	0.18 U
1,2,4,5-TETRACHLOROBENZENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
1,4-DIOXANE	0.083 U	0.085 U	0.081 U	0.075 U	--	0.071 U	0.085 U	0.075 U	--	0.073 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
2,3,4,6-TETRACHLOROPHENOL	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
2,4,5-TRICHLOROPHENOL	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
2,4,6-TRICHLOROPHENOL	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
2,4-DICHLOROPHENOL	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
2,4-DIMETHYLPHENOL	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
2,4-DINITROPHENOL	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
2,4-DINITROTOLUENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
2,6-DINITROTOLUENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
2-CHLORONAPHTHALENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
2-CHLOROPHENOL	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
2-METHYLNAPHTHALENE	0.21 U	0.22 U	0.2 U	0.055 J	--	0.089 J	0.041 J	0.03 J	--	0.18 U
2-METHYLPHENOL	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
2-NITROANILINE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 UJ
2-NITROPHENOL	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
3&4-METHYLPHENOL	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
3,3'-DICHLOROBENZIDINE	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
3-NITROANILINE	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
4,6-DINITRO-2-METHYLPHENOL	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
4-BROMOPHENYL PHENYL ETHER	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
4-CHLORO-3-METHYLPHENOL	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
4-CHLOROANILINE	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
4-CHLOROPHENYL PHENYL ETHER	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
4-NITROANILINE	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
4-NITROPHENOL	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-324	SB-325	SB-325	SB-325	SB-325	SB-325	SB-326	SB-326	SB-326	SB-326
SAMPLE ID	SB324-20191122-6084	SB325-20191122-0006	SB325-20191122-0006-D	SB325-20191122-0624	SB325-20191122-6084	SB325-20191122-84106	SB326-20191115-0006	SB326-20191115-0624	SB326-20191115-2448	SB326-20191115-4872
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191115	20191115	20191115	20191115
DUPLICATE			SB325-20191122-0006							
SAMPLE CODE	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	5	0	0	0.5	5	7	0	0.5	2	4
BOTTOM DEPTH	7	0.5	0.5	2	7	8.8	0.5	2	4	6
ACENAPHTHENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.029 J	0.19 U	--	0.18 U
ACENAPHTHYLENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
ACETOPHENONE	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
ANTHRACENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.066 J	0.19 U	--	0.18 U
ATRAZINE	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
BAP EQUIVALENT-HALFND	0.21 U	0.22 U	0.2 U	0.21949	--	0.18 U	0.261	0.216131	--	0.18 U
BAP EQUIVALENT-POS	0.21 U	0.22 U	0.2 U	0.00004	--	0.18 U	0.156	0.006181	--	0.18 U
BENZALDEHYDE	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
BENZO(A)ANTHRACENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.15 J	0.19 U	--	0.18 U
BENZO(A)PYRENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.11 J	0.19 U	--	0.18 U
BENZO(B)FLUORANTHENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.23	0.061 J	--	0.18 U
BENZO(G,H,I)PERYLENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.028 J	0.19 U	--	0.18 U
BENZO(K)FLUORANTHENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.072 J	0.19 U	--	0.18 U
BIS(2-CHLOROETHOXY)METHANE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
BIS(2-CHLOROETHYL)ETHER	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
BUTYL BENZYL PHTHALATE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
CAPROLACTAM	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
CARBAZOLE	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.047 J	0.37 U	--	0.36 U
CHRYSENE	0.21 U	0.22 U	0.2 U	0.04 J	--	0.18 U	0.28	0.081 J	--	0.18 U
DIBENZO(A,H)ANTHRACENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
DIBENZOFURAN	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.038 J	0.19 U	--	0.18 U
DIETHYL PHTHALATE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
DIMETHYL PHTHALATE	0.3	0.18 J	0.17 J	0.22	--	0.18	0.21 U	0.19 U	--	0.18 U
DI-N-BUTYL PHTHALATE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
DI-N-OCTYL PHTHALATE	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
FLUORANTHENE	0.41 U	0.42 U	0.4 U	0.051 J	--	0.35 U	0.36 J	0.13 J	--	0.36 U
FLUORENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.033 J	0.19 U	--	0.18 U
HEXACHLOROBENZENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
HEXACHLOROBUTADIENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
HEXACHLOROCYCLOPENTADIENE	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
HEXACHLOROETHANE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
HIGH MOLECULAR WEIGHT PAHS	0 U	0 U	0 U	0.086	--	0 U	1.29	0.225	--	0 U
INDENO(1,2,3-CD)PYRENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.07 J	0.19 U	--	0.18 U
ISOPHORONE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
LOW MOLECULAR WEIGHT PAHS	0 U	0 U	0 U	0.148	--	0.059	0.958	0.28	--	0 U
NAPHTHALENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.03 J	0.19 U	--	0.18 U
NITROBENZENE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 UJ
N-NITROSO-DI-N-PROPYLAMINE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
N-NITROSODIPHENYLAMINE	0.21 U	0.22 U	0.2 U	0.19 U	--	0.18 U	0.21 U	0.19 U	--	0.18 U
PENTACHLOROPHENOL	0.41 U	0.42 U	0.4 U	0.37 U	--	0.35 U	0.42 U	0.37 U	--	0.36 U
PHENANTHRENE	0.21 U	0.22 U	0.2 U	0.097 J	--	0.059 J	0.44	0.15 J	--	0.18 U
PHENOL	0.05 J	0.064 J	0.072 J	0.056 J	--	0.045 J	0.42 U	0.37 U	--	0.36 U
PYRENE	0.21 U	0.22 U	0.2 U	0.046 J	--	0.18 U	0.35	0.083 J	--	0.18 U
TOTAL PAHS	0 U	0 U	0 U	0.234	--	0.059	2.248	0.505	--	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K										
1,4-DIOXANE	--	--	--	--	--	--	0.0085 U	0.0076 U	--	0.0074 U
2-METHYLNAPHTHALENE	0.0041 U	0.0024 J	0.0029 J	0.048	--	0.097	0.052	0.039	--	0.0029 J
ACENAPHTHENE	0.0041 U	0.0042 U	0.004 U	0.003 J	--	0.0035 U	0.021	0.0042 J-	--	0.0036 U
ACENAPHTHYLENE	0.0041 U	0.0042 U	0.001 J	0.0014 J	--	0.0035 U	0.0069	0.0013 J	--	0.0036 U
ANTHRACENE	0.0041 U	0.0042 U	0.0014 J	0.0081	--	0.0035 U	0.079	0.0085 J-	--	0.0036 U
BAP EQUIVALENT-HALFND	0.0041 U	0.004987	0.006842	0.021356	--	0.004212	0.17015	0.021375	--	0.004026
BAP EQUIVALENT-POS	0.0041 U	0.002887	0.006842	0.021356	--	0.004212	0.16805	0.021375	--	0.000228
BENZO(A)ANTHRACENE	0.0041 U	0.0027 J	0.0057	0.019	--	0.0017 J	0.16	0.019	--	0.00067 J
BENZO(A)PYRENE	0.0041 U	0.0021 J	0.0043	0.013	--	0.0015 J	0.12	0.0068	--	0.0036 U
BENZO(B)FLUORANTHENE	0.0041 U	0.0036 J	0.0068	0.023	--	0.0089	0.25	0.045	--	0.0016 J
BENZO(G,H,I)PERYLENE	0.0041 U	0.0015 J	0.0028 J	0.0088	--	0.0041	0.023	0.0044	--	0.0036 U
BENZO(K)FLUORANTHENE	0.0041 U	0.0014 J	0.0026 J	0.0073	--	0.00082 J	0.08	0.0065	--	0.0036 U
CHRYSENE	0.0041 U	0.0037 J	0.0065	0.033	--	0.014	0.25	0.12 J+	--	0.0018 J
DIBENZO(A,H)ANTHRACENE	0.0041 U	0.0042 U	0.001 J	0.0033 J	--	0.0015 J	0.0042 U	0.0073	--	0.0036 U
FLUORANTHENE	0.0041 U	0.0053	0.01	0.043	--	0.0066	0.39 J	0.083 J+	--	0.0013 J
FLUORENE	0.0041 U	0.0042 U	0.004 U	0.006	--	0.0082	0.035	0.0073 J-	--	0.00081 J
HIGH MOLECULAR WEIGHT PAHS	0 U	0.0226	0.0418	0.1539	--	0.04482	1.233	0.2589	--	0.00547
INDENO(1,2,3-CD)PYRENE	0.0041 U	0.0014 J	0.0026 J	0.0075	--	0.0013 J	0.06	0.0069	--	0.0036 U
LOW MOLECULAR WEIGHT PAHS	0 U	0.011	0.0224	0.1635	--	0.0828	1.0209	0.2753	--	0.00491
NAPHTHALENE	0.0041 U	0.0014 J	0.0016 J	0.02	--	0.018	0.039	0.011	--	0.0036 U
PENTACHLOROPHENOL	0.0083 U	0.0085 U	0.0081 U	0.0075 U	--	0.0071 U	0.0085 U	0.0075 U	--	0.0073 U
PHENANTHRENE	0.0041 U	0.0043	0.0084	0.082	--	0.05	0.45 J	0.16	--	0.0028 J
PYRENE	0.0041 U	0.0062	0.0095	0.039	--	0.011	0.29	0.043	--	0.0014 J
TOTAL PAHS	0.0041	0.0037	0.0065	0.033	--	0.014	0.25	0.12	--	0.0018
PESTICIDES (MG/KG)										
4,4'-DDD	0.0041 U	0.0042 U	0.004 U	0.0037 U	--	0.002 J	0.0029 J	0.0025 J	--	0.0036 U
4,4'-DDE	0.0041 U	0.0042 U	0.004 U	0.0037 U	--	0.0035 U	0.003 J	0.0037 U	--	0.0036 U
4,4'-DDT	0.0041 U	0.0014 J	0.004 U	0.0037 U	--	0.0035 U	0.012	0.0023 J	--	0.0036 U
ALDRIN	0.0021 U	0.0022 U	0.0021 U	0.0019 U	--	0.0018 U	0.00024 J	0.00022 J	--	0.0019 U
ALPHA-BHC	0.0021 U	0.0022 U	0.0021 U	0.0019 U	--	0.0018 U	0.0022 U	0.0019 U	--	0.0019 U
ALPHA-CHLORDANE	0.0021 U	0.0022 U	0.0021 U	0.0019 U	--	0.0018 U	0.0011 J	0.0012 J	--	0.0019 U
BETA-BHC	0.0021 U	0.0022 U	0.0021 U	0.0019 U	--	0.0018 U	0.0022 U	0.00054 J	--	0.0019 U
DELTA-BHC	0.0021 U	0.0022 U	0.0021 U	0.0019 U	--	0.0018 U	0.0022 U	0.0019 U	--	0.0019 U
DIELDRIN	0.0041 U	0.0042 U	0.004 U	0.0037 U	--	0.0035 U	0.0042 U	0.00052 J	--	0.0036 U
ENDOSULFAN I	0.0021 U	0.0022 U	0.0021 U	0.0019 U	--	0.0018 U	0.0022 U	0.00083 J	--	0.0019 U

LOCATION	SB-324	SB-325	SB-325	SB-325	SB-325	SB-325	SB-326	SB-326	SB-326	SB-326
SAMPLE ID	SB324-20191122-6084	SB325-20191122-0006	SB325-20191122-0006-D	SB325-20191122-0624	SB325-20191122-6084	SB325-20191122-84106	SB326-20191115-0006	SB326-20191115-0624	SB326-20191115-2448	SB326-20191115-4872
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191115	20191115	20191115	20191115
DUPLICATE			SB325-20191122-0006							
SAMPLE CODE	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	5	0	0	0.5	5	7	0	0.5	2	4
BOTTOM DEPTH	7	0.5	0.5	2	7	8.8	0.5	2	4	6
ENDOSULFAN II	0.0041 U	0.0042 U	0.004 U	0.0037 U	--	0.0035 U	0.0042 U	0.0037 U	--	0.0036 U
ENDOSULFAN SULFATE	0.0041 U	0.0042 U	0.004 U	0.0037 U	--	0.0035 U	0.0041 J	0.001 J	--	0.0036 U
ENDRIN	0.0041 U	0.0042 U	0.004 U	0.0037 U	--	0.00048 J	0.0042 U	0.0013 J	--	0.0036 U
ENDRIN ALDEHYDE	0.0041 U	0.0042 U	0.004 U	0.0037 U	--	0.0035 U	0.0011 J	0.0012 J	--	0.0036 U
ENDRIN KETONE	0.0041 U	0.0042 U	0.004 U	0.0037 U	--	0.0035 U	0.0042 U	0.003 J	--	0.0036 U
GAMMA-BHC (LINDANE)	0.0021 U	0.00038 J	0.0021 U	0.0022	--	0.0022 J	0.0024 J	0.0019 U	--	0.0019 U
GAMMA-CHLORDANE	0.0021 U	0.0022 U	0.0021 U	0.0019 U	--	0.0018 U	0.0022 U	0.0019 U	--	0.0019 U
HEPTACHLOR	0.0021 U	0.0022 U	0.0021 U	0.0019 U	--	0.0018 U	0.00045 J	0.00037 J	--	0.0019 U
HEPTACHLOR EPOXIDE	0.0021 U	0.0022 U	0.0021 U	0.0019 U	--	0.0018 U	0.00053 J	0.0019 U	--	0.0019 U
METHOXYCHLOR	0.021 U	0.022 U	0.021 U	0.019 U	--	0.018 U	0.003 J	0.015 J	--	0.019 U
TOXAPHENE	0.21 U	0.22 U	0.21 U	0.19 U	--	0.18 U	0.22 U	0.19 U	--	0.19 U
PCBS (MG/KG)										
AROCLOR-1016	0.041 U	0.042 U	0.04 U	0.037 U	--	0.035 U	--	--	--	--
AROCLOR-1221	0.041 U	0.042 U	0.04 U	0.037 U	--	0.035 U	--	--	--	--
AROCLOR-1232	0.041 U	0.042 U	0.04 U	0.037 U	--	0.035 U	--	--	--	--
AROCLOR-1242	0.041 U	0.042 U	0.04 U	0.037 U	--	0.035 U	--	--	--	--
AROCLOR-1248	0.041 U	0.042 U	0.04 U	0.037 U	--	0.035 U	--	--	--	--
AROCLOR-1254	0.041 U	0.042 U	0.04 U	0.037 U	--	0.035 U	--	--	--	--
AROCLOR-1260	0.041 U	0.033 J	0.058	0.37	--	0.017 J	--	--	--	--
AROCLOR-1262	0.041 U	0.042 U	0.04 U	0.037 U	--	0.035 U	--	--	--	--
AROCLOR-1268	0.041 U	0.042 U	0.04 U	0.037 U	--	0.035 U	--	--	--	--
TOTAL AROCLOR	0 U	0.033	0.058	0.37	--	0.017	--	--	--	--
TOTAL AROCLOR HALFND	0.1845	0.201	0.218	0.518	--	0.157	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)										
AROCLOR-1016	--	--	--	0.275 U	0.263 U	--	--	0.287 U	0.281 U	--
AROCLOR-1221	--	--	--	0.549 U	0.526 U	--	--	0.575 U	0.562 U	--
AROCLOR-1232	--	--	--	0.275 U	0.263 U	--	--	0.287 U	0.281 U	--
AROCLOR-1242	--	--	--	0.275 U	0.263 U	--	--	0.287 U	0.281 U	--
AROCLOR-1248	--	--	--	0.275 U	0.263 U	--	--	0.287 U	0.281 U	--
AROCLOR-1254	--	--	--	0.275 U	0.263 U	--	--	0.287 U	0.281 U	--
AROCLOR-1260	--	--	--	0.313	0.263 U	--	--	0.287 U	0.281 U	--
AROCLOR-1262	--	--	--	0.275 U	0.263 U	--	--	0.287 U	0.281 U	--
AROCLOR-1268	--	--	--	0.275 U	0.263 U	--	--	0.287 U	0.281 U	--
TOTAL AROCLOR	--	--	--	0.313	0 U	--	--	0 U	0 U	--
TOTAL AROCLOR HALFND	--	--	--	1.55	1.315	--	--	1.4355	1.405	--
PCB CONGENERS (MG/KG)										
DICHLOROBIPHENYLS	0.0000042 J	0.0019 J	0 UJ	0 UJ	--	0.000004 J	0.0003 J	0.000042 J	--	0.0000033 J
HEPTACHLOROBIPHENYLS	0.0018 J	1.9 J	0.38 J	0.28 J	--	0.0025 J	0.069 J	0.0075 J	--	0.00046 J
HEXACHLOROBIPHENYLS	0.0021 J	2.5 J	0.46 J	0.35 J	--	0.0031 J	0.071 J	0.008 J	--	0.00054 J
MONOCHLOROBIPHENYLS	0 UJ	0.00023 J	0 UJ	0 UJ	--	0.000016 J	0.000033 J	0.000012 J	--	0 UJ
NONACHLOROBIPHENYLS	0.000039 J	0.054 J	0.0057 J	0.0039 J	--	0.000033 J	0.0017 J	0.00016 J	--	0.000009 J
OCTACHLOROBIPHENYLS	0.00043 J	0.4 J	0.083 J	0.061 J	--	0.00056 J	0.015 J	0.0018 J	--	0.00011 J
PCB-1	0.000002 U	0.00013 J	0.00025 U	0.00021 U	--	0.0000082 J	0.000009	0.0000025	--	0.000002 U
PCB-10	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.0000014 J	0.00000075 J	--	0.000002 U
PCB-100	--	--	--	--	--	--	0.0000024	0.000002 U	--	0.000002 U
PCB-101/90	--	--	--	--	--	--	0.0047	0.00057	--	0.000041
PCB-103	0.000002 U	0.000073 J	0.00025 U	0.00021 U	--	0.0000019 U	0.0000083	0.0000031	--	0.000002 U
PCB-104	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-105	0.000017	0.0088	0.0029	0.0012	--	0.00001	0.00052	0.000063	--	0.0000037
PCB-106	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	--	--	--	--
PCB-107	0.000002 U	0.0013	0.00047	0.0002 J	--	0.0000015 J	--	--	--	--
PCB-108/107	--	--	--	--	--	--	0.00016	0.000012	--	0.000004 U
PCB-108/124	0.0000019 J	0.0011	0.00049 U	0.00019 J	--	0.0000014 J	--	--	--	--
PCB-109	--	--	--	--	--	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-11	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.000004	0.000045	0.0000042	--	0.0000014 J
PCB-110	--	--	--	--	--	--	0.0023	0.00033	--	0.000021
PCB-110/115	0.000075	0.092	0.017	0.011	--	0.00011	--	--	--	--
PCB-111	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	--	--	--	--
PCB-111/115	--	--	--	--	--	--	0.00001	0.0000039 J	--	0.000004 U
PCB-112	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	--	--	--	--
PCB-113	--	--	--	--	--	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-114	0.00000089 U	0.00052 Z	0.00015 J	0.000014 U	--	0.00000044 U	0.000038	0.0000034	--	0.00000082 U
PCB-118	0.000048	0.042	0.0092	0.0052	--	0.000054	--	--	--	--
PCB-118/106	--	--	--	--	--	--	0.0019	0.0002	--	0.000011
PCB-119	--	--	--	--	--	--	0.000015	0.0000055	--	0.0000015 J
PCB-12	--	--	--	--	--	--	0.0000034	0.0000014 J	--	0.000002 U
PCB-12/13	0.0000039 U	0.00022 J	0.00049 U	0.00043 U	--	0.0000039 U	--	--	--	--
PCB-120	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.0000024	--	0.000002 U
PCB-121	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-122	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000025	0.0000013 J	--	0.000002 U
PCB-123	0.00000085 U	0.00021 Z	0.000098 Z	0.000015 U	--	0.00000043 U	0.000012	0.0000031	--	0.0000005 U
PCB-124	--	--	--	--	--	--	0.00014	0.000011	--	0.000002 U
PCB-126	0.0000011 U	0.000027 U	0.000026 U	0.000023 U	--	0.00000048 U	0.000054	0.0000032	--	0.00000066 U
PCB-127	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-128/162	--	--	--	--	--	--	0.00094	0.00011	--	0.0000074
PCB-128/166	0.0000039 U	0.04	0.0055	0.0039	--	0.000043	--	--	--	--
PCB-129	--	--	--	--	--	--	0.00023	0.000026	--	0.0000018 J
PCB-129/138/163	0.00048	0.58	0.1	0.083	--	0.00077	--	--	--	--
PCB-13	--	--	--	--	--	--	0.000014	0.0000019 J	--	0.000002 U
PCB-130	0.000015	0.015	0.0032	0.0023	--	0.000022	0.00076	0.000069	--	0.0000048
PCB-131	0.0000022	0.0028	0.00048	0.00032	--	0.0000034	--	--	--	--

LOCATION	SB-324	SB-325	SB-325	SB-325	SB-325	SB-325	SB-326	SB-326	SB-326	SB-326
SAMPLE ID	SB324-20191122-6084	SB325-20191122-0006	SB325-20191122-0006-D	SB325-20191122-0624	SB325-20191122-6084	SB325-20191122-84106	SB326-20191115-0006	SB326-20191115-0624	SB326-20191115-2448	SB326-20191115-4872
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191115	20191115	20191115	20191115
DUPLICATE			SB325-20191122-0006							
SAMPLE CODE	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	5	0	0	0.5	5	7	0	0.5	2	4
BOTTOM DEPTH	7	0.5	0.5	2	7	8.8	0.5	2	4	6
PCB-131/133	--	--	--	--	--	--	0.00027	0.000033	--	0.0000045
PCB-132	0.0001	0.13	0.025	0.016	--	0.00016	--	--	--	--
PCB-132/161	--	--	--	--	--	--	0.0025	0.00032	--	0.000025
PCB-133	0.0000052	0.0049	0.0011	0.00078	--	0.000002	--	--	--	--
PCB-134	0.000018	0.018	0.0046	0.0026	--	0.000024	--	--	--	--
PCB-134/143	--	--	--	--	--	--	0.00043	0.000051	--	0.000004
PCB-135	--	--	--	--	--	--	0.0016	0.00022	--	0.000017
PCB-135/151	0.0002	0.21	0.042	0.028	--	0.00024	--	--	--	--
PCB-136	0.000044	0.054	0.011	0.0053	--	0.00006	0.0012	0.00022	--	0.000015
PCB-137	0.0000024	0.0043	0.00025 U	0.00021	--	0.000002	0.00012	0.000018	--	0.0000014 J
PCB-138/163/164	--	--	--	--	--	--	0.014	0.0015	--	0.0001
PCB-139/140	0.0000014 J	0.00062	0.0003 J	0.00043 U	--	0.0000039 U	--	--	--	--
PCB-139/149	--	--	--	--	--	--	0.013	0.0015	--	0.000093
PCB-14	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-140	--	--	--	--	--	--	0.000002 U	0.0000047	--	0.0000015 J
PCB-141	0.00012	0.13	0.024	0.019	--	0.00017	0.0047	0.00051	--	0.000031
PCB-142	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-143	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	--	--	--	--
PCB-144	0.000024	0.032	0.0053	0.0036	--	0.000035	0.00048	0.000049	--	0.0000059
PCB-145	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-146	0.000075	0.068	0.014	0.011	--	0.000072	--	--	--	--
PCB-146/165	--	--	--	--	--	--	0.0025	0.00026	--	0.000027
PCB-147	--	--	--	--	--	--	0.000037	0.0000046	--	0.000002 U
PCB-147/149	0.00041	0.46	0.088	0.062	--	0.00052	--	--	--	--
PCB-148	0.000002 U	0.000035 J	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-15	0.0000042	0.00094	0.00025 U	0.00021 U	--	0.0000019 U	0.00012	0.000018	--	0.00000096 J
PCB-150	0.000002 U	0.00005 J	0.00025 U	0.00021 U	--	0.0000019 U	0.0000077	0.0000019 J	--	0.000002 U
PCB-151	--	--	--	--	--	--	0.0048	0.00062	--	0.000039
PCB-152	0.000002 U	0.000041 J	0.00025 U	0.00021 U	--	0.0000019 U	0.0000027	0.000002 U	--	0.000002 U
PCB-153	--	--	--	--	--	--	0.02	0.0021	--	0.00014
PCB-153/168	0.00051	0.6	0.11	0.088	--	0.00076	--	--	--	--
PCB-154	0.0000015 J	0.00057	0.00036	0.000089 J	--	0.00000061 J	0.000053	0.000011	--	0.0000035
PCB-155	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-156	--	--	--	--	--	--	0.00099	0.000099	--	0.0000066
PCB-156/157	0.000025	0.038	0.0057	0.0054	--	0.000049	--	--	--	--
PCB-157	--	--	--	--	--	--	0.0001	0.0000093	--	0.00000063 U
PCB-158	0.000036	0.046	0.0078	0.0064	--	0.00006	--	--	--	--
PCB-158/160	--	--	--	--	--	--	0.0014	0.00016	--	0.00001
PCB-159	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.00022	0.000023	--	0.0000023
PCB-16	0.00000083 J	0.00037	0.00017 J	0.0001 J	--	0.0000019 U	0.00004	0.000017	--	0.000002 U
PCB-160	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	--	--	--	--
PCB-161	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	--	--	--	--
PCB-162	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	--	--	--	--
PCB-164	0.000032	0.035	0.007	0.0054	--	0.000045	--	--	--	--
PCB-165	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	--	--	--	--
PCB-166	--	--	--	--	--	--	0.0000031	0.000002 U	--	0.000002 U
PCB-167	0.000013	0.015	0.0027	0.0022	--	0.00002	0.00056	0.000055	--	0.000004
PCB-168	--	--	--	--	--	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-169	0.00000061 U	0.00098 Z	0.000014 U	0.000012 U	--	0.00000083 U	0.0000093	0.0000011 U	--	0.00000068 U
PCB-17	0.0000015 J	0.00034	0.00021 J	0.0001 J	--	0.0000019 U	0.000041	0.000011	--	0.000002 U
PCB-170	0.00021	0.25	0.044	0.034	--	0.00034	0.0078	0.00095	--	0.000048
PCB-171	--	--	--	--	--	--	0.0024	0.00024	--	0.000016
PCB-171/173	0.000061	0.076	0.014	0.01	--	0.000096	--	--	--	--
PCB-172	0.000041	0.039	0.0078	0.006	--	0.000049 J	0.0016	0.00016	--	0.0000094
PCB-173	--	--	--	--	--	--	0.00017	0.000019	--	0.000002 U
PCB-174	0.00022	0.24	0.048	0.035	--	0.00029	0.0079	0.00088	--	0.000051
PCB-175	0.0000078	0.0091	0.0017	0.0012	--	0.000012	0.00034	0.000035	--	0.0000027
PCB-176	0.000024	0.027	0.0054	0.0034	--	0.000034	0.00089	0.00012	--	0.0000079
PCB-177	0.00013	0.14	0.028	0.02	--	0.00018	0.0056	0.00063	--	0.000034
PCB-178	0.000047	0.043	0.0093	0.007	--	0.000059	0.0022	0.00022	--	0.000015
PCB-179	0.000089	0.086	0.019	0.012	--	0.00011	0.0031	0.00036	--	0.000025
PCB-18	--	--	--	--	--	--	0.000058	0.000014	--	0.000002 U
PCB-18/30	0.0000023 J	0.00051	0.00049 U	0.00016 J	--	0.0000011 J	--	--	--	--
PCB-180	--	--	--	--	--	--	0.016	0.0018	--	0.00011
PCB-180/193	0.0005	0.54	0.1	0.076	--	0.00073	--	--	--	--
PCB-181	0.000002 U	0.00076	0.00025 U	0.00012 J	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-182	0.00000061 J	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	--	--	--	--
PCB-182/187	--	--	--	--	--	--	0.012	0.0011	--	0.000074
PCB-183	--	--	--	--	--	--	0.005	0.00056	--	0.000031
PCB-183/185	0.00015	0.17	0.032	0.023	--	0.00021	--	--	--	--
PCB-184	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.0000046	0.000002 U	--	0.000002 U
PCB-185	--	--	--	--	--	--	0.00076	0.000087	--	0.0000074
PCB-186	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-187	0.00028	0.26	0.054	0.04	--	0.00033	--	--	--	--
PCB-188	0.000002 U	0.000046 J	0.00025 U	0.00021 U	--	0.0000019 U	0.0000076	0.000002 U	--	0.000002 U
PCB-189	0.000008	0.0097	0.0017	0.0014	--	0.000014	0.00025	0.000032	--	0.000002
PCB-19	0.000002 U	0.000091 J	0.00025 U	0.00021 U	--	0.0000019 U	0.000008	0.0000066	--	0.000002 U
PCB-190	0.000045	0.053	0.0093	0.0076	--	0.000066	0.0018	0.00019	--	0.000013
PCB-191	0.0000081	0.0092	0.0018	0.0013	--	0.000013	0.00035	0.000038	--	0.0000022
PCB-192	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-193	--	--	--	--	--	--	0.001	0.00011	--	0.0000065

LOCATION	SB-324	SB-325	SB-325	SB-325	SB-325	SB-325	SB-326	SB-326	SB-326	SB-326
SAMPLE ID	SB324-20191122-6084	SB325-20191122-0006	SB325-20191122-0006-D	SB325-20191122-0624	SB325-20191122-6084	SB325-20191122-84106	SB326-20191115-0006	SB326-20191115-0624	SB326-20191115-2448	SB326-20191115-4872
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191115	20191115	20191115	20191115
DUPLICATE			SB325-20191122-0006							
SAMPLE CODE	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	5	0	0	0.5	5	7	0	0.5	2	4
BOTTOM DEPTH	7	0.5	0.5	2	7	8.8	0.5	2	4	6
PCB-194	0.0001	0.098	0.02	0.015	--	0.00014	0.0035	0.00045	--	0.000031
PCB-195	0.000046	0.047	0.0093	0.0072	--	0.000065	0.0018	0.0002	--	0.000012
PCB-196	0.000048	0.052	0.0099	0.0069	--	0.000072	--	--	--	--
PCB-196/203	--	--	--	--	--	--	0.0042	0.00048	--	0.000028
PCB-197	--	--	--	--	--	--	0.00012	0.000015	--	0.000002 U
PCB-197/200	0.000017	0.016	0.0034	0.0022	--	0.000022	--	--	--	--
PCB-198	--	--	--	--	--	--	0.00016	0.000022	--	0.0000019 J
PCB-198/199	0.00011	0.096	0.021	0.015	--	0.00013	--	--	--	--
PCB-199	--	--	--	--	--	--	0.0037	0.00041	--	0.000026
PCB-2	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000021	0.0000093	0.0000047	--	0.000002 U
PCB-20/21/33	--	--	--	--	--	--	0.00011	0.00002	--	0.00000083 J
PCB-20/28	0.000018	0.0029	0.0022	0.00036 J	--	0.0000044	--	--	--	--
PCB-200	--	--	--	--	--	--	0.00051	0.000058	--	0.0000035
PCB-201	0.000011	0.011	0.0023	0.0015	--	0.000015	0.00042	0.000052	--	0.0000037
PCB-202	0.000018	0.015	0.0034	0.0024	--	0.00002	0.00076	0.000079	--	0.0000049
PCB-203	0.000067	0.064	0.013	0.0096	--	0.000087	--	--	--	--
PCB-204	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-205	0.0000061	0.0055	0.0011	0.00088	--	0.0000082	0.0002	0.000026	--	0.0000023
PCB-206	0.000029	0.038	0.0042	0.003	--	0.000025	0.0012	0.00012	--	0.0000073
PCB-207	0.0000032	0.0036	0.00057	0.00034	--	0.0000033	0.00018	0.000016	--	0.000002 U
PCB-208	0.0000072	0.013	0.00087	0.00059	--	0.0000045	0.0003	0.000027	--	0.0000017 J
PCB-209	0.000018	0.039	0.00082	0.0003	--	0.0000023	0.00036	0.000034	--	0.0000018 J
PCB-21/33	0.0000039 U	0.00079	0.0004 J	0.00017 J	--	0.0000039 U	--	--	--	--
PCB-22	0.0000065	0.0011	0.00091	0.00013 J	--	0.00000094 J	0.000083	0.000044	--	0.0000017 J
PCB-23	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-24	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.0000068	0.0000045	--	0.000002 U
PCB-25	0.00000082 J	0.00016 J	0.00025 U	0.00021 U	--	0.0000019 U	0.000017	0.0000034	--	0.000002 U
PCB-26	--	--	--	--	--	--	0.000043	0.000013	--	0.000002 U
PCB-26/29	0.0000018 J	0.00033 J	0.00024 J	0.000068 J	--	0.00000069 J	--	--	--	--
PCB-27	0.000002 U	0.00012 J	0.00025 U	0.00021 U	--	0.0000019 U	0.0000069	0.0000033	--	0.000002 U
PCB-28	--	--	--	--	--	--	0.00024	0.00016	--	0.0000035
PCB-29	--	--	--	--	--	--	0.0000023	0.000002 U	--	0.000002 U
PCB-3	0.000002 U	0.0001 J	0.00025 U	0.00021 U	--	0.0000059	0.000015	0.0000047	--	0.000002 U
PCB-30	--	--	--	--	--	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-31	0.00001	0.0018	0.0013	0.00029	--	0.0000032	0.00027	0.000069	--	0.0000025
PCB-32	0.0000024	0.00038	0.00035	0.000068 J	--	0.0000019 U	0.000039	0.000018	--	0.000002 U
PCB-34	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-35	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.0000092	0.000002 U	--	0.000002 U
PCB-36	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-37	0.0000061	0.0011	0.00087	0.00015 J	--	0.0000019 U	0.00015	0.000037	--	0.0000013 J
PCB-38	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-39	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-4	0.000002 U	0.00015 J	0.00025 U	0.00021 U	--	0.0000019 UJ	0.000016	0.0000029	--	0.000002 U
PCB-40	--	--	--	--	--	--	0.000039	0.000015	--	0.000002 U
PCB-40/71	0.0000052	0.0013	0.00098	0.00015 J	--	0.0000014 J	--	--	--	--
PCB-41	0.0000015 J	0.00025 U	0.00024 J	0.000057 J	--	0.0000019 U	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	0.00025	0.000086	--	0.0000032 J
PCB-42	0.0000041	0.00088	0.00066	0.00009 J	--	0.0000019 U	--	--	--	--
PCB-42/59	--	--	--	--	--	--	0.000094	0.000036	--	0.0000016 J
PCB-43	0.000002 U	0.0003	0.00025 U	0.00021 U	--	0.0000019 U	--	--	--	--
PCB-43/49	--	--	--	--	--	--	0.0003	0.000096	--	0.0000041
PCB-44	--	--	--	--	--	--	0.00024	0.000088	--	0.0000031
PCB-44/47/65	0.000015	0.0039	0.0025	0.00037 J	--	0.0000058 U	--	--	--	--
PCB-45	--	--	--	--	--	--	0.000027	0.000019	--	0.000002 U
PCB-45/51	0.0000023 J	0.00053	0.00037 J	0.00043 U	--	0.0000039 U	--	--	--	--
PCB-46	0.00000049 J	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.0000067	0.0000037	--	0.000002 U
PCB-47	--	--	--	--	--	--	0.000093	0.000036	--	0.0000016 J
PCB-48	0.0000022	0.00098	0.00044	0.00013 J	--	0.0000019 U	--	--	--	--
PCB-48/75	--	--	--	--	--	--	0.000039	0.0000097	--	0.000004 U
PCB-49/69	0.000011	0.0027	0.0019	0.00029 J	--	0.0000025 J	--	--	--	--
PCB-5	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-50	--	--	--	--	--	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-50/53	0.0000013 J	0.00029 J	0.0002 J	0.00003 J	--	0.0000005 J	--	--	--	--
PCB-51	--	--	--	--	--	--	0.0000036	0.0000029	--	0.000002 U
PCB-52	0.000022	0.013	0.0042	0.00096	--	0.000014	--	--	--	--
PCB-52/69	--	--	--	--	--	--	0.00029	0.0001	--	0.0000046
PCB-53	--	--	--	--	--	--	0.000019	0.0000092	--	0.000002 U
PCB-54	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 UJ	0.000002 U	0.000002 U	--	0.000002 U
PCB-55	0.00000063 J	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000009	0.0000031	--	0.000002 U
PCB-56	0.0000096	0.0021	0.0015	0.0002 J	--	0.0000022	--	--	--	--
PCB-56/60	--	--	--	--	--	--	0.00024	0.000099	--	0.0000003 J
PCB-57	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.0000031	0.00000099 J	--	0.000002 U
PCB-58	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000028	0.0000014 J	0.000002 U	--	0.000002 U
PCB-59/62/75	0.0000059 U	0.00034 J	0.00074 U	0.000033 J	--	0.0000058 U	--	--	--	--
PCB-6	0.000002 U	0.00013 J	0.00025 U	0.00021 U	--	0.0000019 U	0.000017	0.0000027	--	0.000002 U
PCB-60	0.0000062	0.0011	0.00088	0.00011 J	--	0.00000099 J	--	--	--	--
PCB-61/70	--	--	--	--	--	--	0.00045	0.000094	--	0.0000035 J
PCB-61/70/74/76	0.000029	0.0077	0.0043	0.00085	--	0.000008	--	--	--	--
PCB-62	--	--	--	--	--	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-63	0.00000088 J	0.00015 J	0.00012 J	0.00021 U	--	0.0000019 U	0.000018	0.0000054	--	0.000002 U
PCB-64	0.0000087	0.0019	0.0014	0.00017 J	--	0.0000019	--	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-324	SB-325	SB-325	SB-325	SB-325	SB-325	SB-326	SB-326	SB-326	SB-326
SAMPLE ID	SB324-20191122-6084	SB325-20191122-0006	SB325-20191122-0006-D	SB325-20191122-0624	SB325-20191122-6084	SB325-20191122-84106	SB326-20191115-0006	SB326-20191115-0624	SB326-20191115-2448	SB326-20191115-4872
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191115	20191115	20191115	20191115
DUPLICATE			SB325-20191122-0006							
SAMPLE CODE	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	5	0	0	0.5	5	7	0	0.5	2	4
BOTTOM DEPTH	7	0.5	0.5	2	7	8.8	0.5	2	4	6
PCB-65	--	--	--	--	--	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-66	0.00002	0.0041	0.0029	0.00033	--	0.0000045	--	--	--	--
PCB-66/76	--	--	--	--	--	--	0.0004	0.00013	--	0.0000045
PCB-67	0.00000069 J	0.00014 J	0.00025 U	0.00021 U	--	0.0000019 U	0.000012	0.0000051	--	0.000002 U
PCB-68	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.0000033	0.000002 U	--	0.000002 U
PCB-7	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.0000035	0.00000089 J	--	0.000002 U
PCB-72	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	--	--	--	--
PCB-73	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-74	--	--	--	--	--	--	0.00014	0.000062	--	0.0000023
PCB-77	0.0000023	0.00048	0.00033	0.000073 J	--	0.00000067 J	0.000095	0.000013	--	0.00000073 J
PCB-78	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-79	0.000002 U	0.00025 U	0.000073 J	0.0001 J	--	0.0000019 U	0.000013	0.0000012 J	--	0.000002 U
PCB-8	0.000002 U	0.0005	0.00025 U	0.00021 U	--	0.0000019 U	0.000072	0.000008	--	0.00000094 J
PCB-80	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-81	0.00000043 U	0.000017 U	0.000017 U	0.000014 U	--	0.0000004 U	0.000022	0.0000028	--	0.00000039 U
PCB-82	0.0000031	0.0017	0.00067	0.00014 J	--	0.0000016 J	0.000026	0.000012	--	0.000002 U
PCB-83	0.0000022	0.0019	0.00046	0.00019 J	--	0.000002	--	--	--	--
PCB-83/112	--	--	--	--	--	--	0.000034	0.0000063	--	0.000004 U
PCB-84	0.0000059	0.0043	0.0012	0.00035	--	0.0000038	--	--	--	--
PCB-84/92	--	--	--	--	--	--	0.00068	0.0001	--	0.0000094
PCB-85/116	--	--	--	--	--	--	0.00015	0.000025	--	0.0000017 J
PCB-85/116/117	0.0000059	0.0035	0.00097	0.00027 J	--	0.0000058 U	--	--	--	--
PCB-86	--	--	--	--	--	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-86/87/97/109/119/125	0.000029	0.028	0.006	0.0032	--	0.000031	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	0.00057	0.000087	--	0.0000047 J
PCB-88/91	0.0000036 J	0.0015	0.00062	0.00017 J	--	0.0000011 J	0.00009	0.000016	--	0.000004 U
PCB-89	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-9	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000005	0.00000084 J	--	0.000002 U
PCB-90/101/113	0.00012	0.16	0.025	0.018	--	0.00019	--	--	--	--
PCB-92	0.000016	0.017	0.0032	0.002	--	0.00002	--	--	--	--
PCB-93	--	--	--	--	--	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-93/100	0.0000039 U	0.00051 U	0.00011 J	0.00043 U	--	0.0000039 U	--	--	--	--
PCB-94	0.000002 U	0.00025 U	0.00025 U	0.00021 U	--	0.0000019 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-95	0.000069	0.095	0.015	0.0081	--	0.000075	0.0018	0.0003	--	0.000022
PCB-96	0.00000015 J	0.000062 J	0.00025 U	0.00021 U	--	0.0000019 U	0.0000029	0.000002 U	--	0.000002 U
PCB-97	--	--	--	--	--	--	0.00025	0.000041	--	0.0000025
PCB-98/102	0.0000039 U	0.00051 U	0.00019 J	0.00043 U	--	0.0000039 U	0.000004 U	0.000004 U	--	0.000004 U
PCB-99	0.000017	0.0062	0.0028	0.00087	--	0.0000069	0.00034	0.000058	--	0.0000086
PENTACHLOROBIPHENYLS	0.00041 J	0.47 J	0.086 J	0.051 J	--	0.0005 J	0.014 J	0.0019 J	--	0.00013 J
TEQ DIOXIN-LIKE PCBs (BIRD)	1.19899E-07	3.03811E-05	1.7512E-05	0.000004398	--	4.028E-08	1.25323E-05	1.26837E-06	--	3.759E-08
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.96743E-07	3.25811E-05	1.9669E-05	6.25478E-06	--	8.4719E-08	1.25323E-05	1.26892E-06	--	9.0504E-08
TEQ DIOXIN-LIKE PCBs (FISH)	7.85E-10	6.6815E-07	1.4524E-07	8.43E-08	--	8.02E-10	3.03315E-07	2.0023E-08	--	1.54E-10
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	3.661E-09	7.399E-07	2.1484E-07	1.45672E-07	--	2.124E-09	3.03315E-07	2.005E-08	--	1.922E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	3.56E-09	3.28749E-05	7.0644E-07	4.693E-07	--	4.477E-09	5.7692E-06	3.30084E-07	--	5.62E-10
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	6.77799E-08	3.42275E-05	2.21899E-06	1.80184E-06	--	4.0999E-08	5.7692E-06	3.46584E-07	--	4.3848E-08
TETRACHLOROBIPHENYLS	0.00014 J	0.042 J	0.023 J	0.0039 J	--	0.000043 J	0.0028 J	0.00092 J	--	0.000032 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0001133	0.11569	0.022778	0.015473	--	0.00014767	0.0026503	0.0002838	--	0.00001703
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.0049147	5.339728	1.016803	0.729575	--	0.00661593	0.1729352	0.02046027	--	0.00127933
TOTAL PCB CONGENERS ZEROND	0.005028	5.455418	1.039581	0.745048	--	0.0067636	0.1755855	0.02074407	--	0.00129636
TOTAL PCB CONGENERS-NOAA	0.0023353	2.62971	0.47672	0.36198	--	0.0033433	0.08252	0.009247	--	0.00057284
TOTAL PCB CONGENERS-NOAA HALFND	0.00510364	5.4622	1.0490895	0.753092	--	0.00685179	0.1756225	0.02078962	--	0.0013922
TOTAL PCB CONGENERS-NOAA X2	0.0046706	5.25942	0.95344	0.72396	--	0.0066866	0.16504	0.018494	--	0.00114568
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0046765	5.25942	0.95418	0.72417	--	0.0066943	0.16504	0.018494	--	0.00114768
TRICHLOROBIPHENYLS	0.000053 J	0.01 J	0.0067 J	0.0016 J	--	0.000012 J	0.0011 J	0.00042 J	--	0.0000098 J
DIOXINS/FURANS (NG/KG)										
1,2,3,4,6,7,8,9-OCDD	130	520	850	33	--	2.6 J	480	430	--	310
1,2,3,4,6,7,8,9-OCDF	1.8 U	32	12	7.8 J	--	1.7 U	10	0.54 JZ	--	0.31 U
1,2,3,4,6,7,8-HPCDD	1.8 J	9.8	11	2.4 J	--	1.1 U	16	3.6 J	--	2.8 J
1,2,3,4,6,7,8-HPCDF	2.1 U	10	5.2	3.2 J	--	2.1 U	5.3	0.32 JZ	--	0.18 U
1,2,3,4,7,8,9-HPCDF	2.1 U	4.5 J	2.2 U	2.1 U	--	2.1 U	0.47 J	0.18 U	--	0.18 U
1,2,3,4,7,8-HXCDD	1.4 U	1.4 U	1.4 U	1.4 U	--	1.4 U	0.29 JZ	0.14 U	--	0.14 U
1,2,3,4,7,8-HXCDF	1.5 U	61	17	25	--	1.5 U	1.2 J	0.13 U	--	0.13 U
1,2,3,6,7,8-HXCDD	1.2 U	1.2 U	1.2 U	1.2 U	--	1.2 U	0.74 J	0.14 U	--	0.14 U
1,2,3,6,7,8-HXCDF	1.8 U	1.9 J	1.8 U	1.8 U	--	1.8 U	0.78 JZ	0.093 U	--	0.093 U
1,2,3,7,8,9-HXCDD	2.3 U	2.3 U	2.3 U	2.2 U	--	2.2 U	0.55 JZ	0.15 U	--	0.21 JZ
1,2,3,7,8,9-HXCDF	1.4 U	1.4 U	1.4 U	1.4 U	--	1.4 U	0.21 U	0.21 U	--	0.21 U
1,2,3,7,8-PECDD	1.8 U	2.4 Z	1.8 U	1.8 U	--	1.8 U	0.18 U	0.18 U	--	0.18 U
1,2,3,7,8-PECDF	1.6 U	150	38	62	--	1.6 U	0.37 U	0.2 U	--	0.17 U
2,3,4,6,7,8-HXCDF	0.91 U	1.7 J	0.93 U	0.89 U	--	0.9 U	0.9 J	0.093 U	--	0.091 U
2,3,4,7,8-PECDF	0.85 U	2.1 J	0.99 U	0.83 U	--	0.84 U	10	0.25 JZ	--	0.16 U
2,3,7,8-TCDD	0.19 U	0.24 U	0.23 U	0.22 U	--	0.19 U	0.14 U	0.14 U	--	0.14 U
2,3,7,8-TCDF	0.45 Z	3.3	1.8	1.8	--	0.23 U	1.8	0.2 U	--	0.15 U
TEQ DIOXINS (BIRD)	0.4648	29.47	7.4492	10.53848	--	0.00026	12.2876	0.299854	--	0.0548
TEQ DIOXINS (BIRD) HALFND	2.42239	29.816	9.3327	12.32948	--	2.062895	12.4766	0.608754	--	0.4105155
TEQ DIOXINS (FISH)	0.0373	17.785	3.8392	5.72848	--	0.00026	5.6586	0.174854	--	0.0359
TEQ DIOXINS (FISH) HALFND	1.95389	18.3425	5.6867	7.52798	--	1.919645	5.83835	0.408504	--	0.3076155
TEQ DIOXINS (HUMANS/MAMMALS)	0.102	14.7286	3.4406	4.60824	--	0.00078	3.9907	0.243362	--	0.142
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	1.79527	15.1636	5.0666	6.19774	--	1.704035	4.16675	0.465062	--	0.3780965
TOTAL HPCDD	1.8 J	19 J	20 J	4.7 J	--	1.1 UJ	32 J	6.4 J	--	5.2 J
TOTAL HPCDF	2.1 UJ	26 J	11 J	6.1 J	--	2.1 UJ	11 J	0 UJ	--	0 UJ
TOTAL HXCDD	1.2 UJ	4.4 J	1.4 J	1.2 UJ	--	1.2 UJ	5.5 J	0.56 J	--	0 UJ

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-324	SB-325	SB-325	SB-325	SB-325	SB-325	SB-326	SB-326	SB-326	SB-326
SAMPLE ID	SB324-20191122-6084	SB325-20191122-0006	SB325-20191122-0006-D	SB325-20191122-0624	SB325-20191122-6084	SB325-20191122-84106	SB326-20191115-0006	SB326-20191115-0624	SB326-20191115-2448	SB326-20191115-4872
SAMPLE DATE	20191122	20191122	20191122	20191122	20191122	20191122	20191115	20191115	20191115	20191115
DUPLICATE			SB325-20191122-0006							
SAMPLE CODE	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SS	SS	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	5	0	0	0.5	5	7	0	0.5	2	4
BOTTOM DEPTH	7	0.5	0.5	2	7	8.8	0.5	2	4	6
TOTAL HXCDF	0.91 UJ	130 J	32 J	44 J	--	0.9 UJ	36 J	0.2 J	--	0 UJ
TOTAL PECDD	1.8 UJ	1.8 UJ	1.8 UJ	1.8 UJ	--	1.8 UJ	2 J	0 UJ	--	0 UJ
TOTAL PECDF	0.85 UJ	470 J	110 J	160 J	--	0.84 UJ	150 J	3.8 J	--	0 UJ
TOTAL TCDD	0.19 UJ	2.3 J	1.2 J	0.55 J	--	0.19 UJ	1.9 J	0 UJ	--	0 UJ
TOTAL TCDF	0.26 J	140 J	32 J	33 J	--	0.23 UJ	60 J	3 J	--	0 UJ
METALS (MG/KG)										
ALUMINUM	13300	8540	8480	8810	--	9490	6530	7720	--	11600
ANTIMONY	1.2 U	1.2 U	1.1 U	1.1 U	--	1 U	1.2	0.72 J	--	1 U
ARSENIC	6.7	9.2	11.3	6	--	15.8 J	12.5	16.2	--	2.3
BARIUM	59.5	78.3	108	84.9	--	145 J	77	110	--	49.7
BERYLLIUM	0.95	0.72	0.87	0.69	--	2.4 J	0.91	1.5	--	0.82
CADMIUM	0.59 U	0.17 J	0.33 J	0.16 J	--	0.27 J	0.41 J	0.19 J	--	0.51 U
CALCIUM	330 J	1390	1270	1090	--	344 J	1710	1640	--	912
CHROMIUM	14.5	12.1	14.2	10.7	--	25.8 J	16.3	18.3	--	8.4
COBALT	6.2	9.2	12.6	12.2	--	28.9 J	14	28.1	--	10.6
COPPER	11.8	43.4	61.4	40.7	--	65.3 J	129	113	--	7.8
CYANIDE	0.59 R	0.61 R	0.6 R	0.52 R	--	0.53 R	0.049 J	0.58 R	--	0.14 J
IRON	29500	31400	36600	18500	--	12900	49500	60100	--	26900
LEAD	14.8	36.9	42.7	22.9	--	32.7 J	78.1	36	--	12.4
MAGNESIUM	1390	984	1100	2980	--	2440	822	1450	--	1390
MANGANESE	226	401	586	339	--	285 J	732	896	--	418
MERCURY	0.12 UJ	0.12 UJ	0.11 UJ	0.1 UJ	--	0.11 UJ	0.12 UJ	0.11 UJ	--	0.04 UJ
NICKEL	16.3	15.2	20.2	22.3	--	56.7 J	20.1	46.7	--	10.7
POTASSIUM	1290	1720	1700	1940	--	2070	1290	1620	--	1530
SELENIUM	0.62 J	0.61 J	0.64 J	1.1 J	--	2.4 J	0.81 J	0.63 J	--	0.28 J
SILVER	0.59 U	0.61 U	0.57 U	0.051 J	--	0.12 J	0.056 J	0.064 J	--	0.51 U
SODIUM	607 UJ	586 UJ	580 UJ	552 UJ	--	515 UJ	27.9 J	36.9 J	--	22.8 J
THALLIUM	0.13 J	0.1 J	0.14 J	0.065 J	--	0.42 J	0.16 J	0.18 J	--	0.06 J
VANADIUM	20.3	15.5	16	9.5	--	18.6 J	14.9	21.1	--	9.1
ZINC	41	61.2	74	70.7	--	144 J	95.2	85.2	--	22.2
MISCELLANEOUS (%)										
MISCELLANEOUS (MG/KG)										
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)										
PERCENT SOLIDS	--	--	--	91	95	--	--	87	89	--
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--	--

LOCATION	SB-327	SB-327	SB-327	SB-327	SB-328	SB-328	SB-328	SB-328	SB-366	SB-366
SAMPLE ID	SB327-20191115-0006	SB327-20191115-0624	SB327-20191115-2448	SB327-20191115-7296	SB328-20191115-0006	SB328-20191115-0624	SB328-20191115-2448	SB328-20191115-4872	SB366-20191115-0006	SB366-20191115-0624
SAMPLE DATE	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	6	0	0.5	2	4	0	0.5
BOTTOM DEPTH	0.5	2	4	8	0.5	2	4	6	0.5	2
VOLATILES (MG/KG)										
1,1,1-TRICHLOROETHANE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.016 J+	--	0.0069 U	0.0059 R
1,1,2,2-TETRACHLOROETHANE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 U	0.007 R	--	0.0069 U	0.0059 R
1,1,2-TRICHLOROETHANE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0066 U	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
1,1-DICHLOROETHANE	0.0066 U	0.0081 U	--	0.0051 U	0.0061 U	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
1,1-DICHLOROETHENE	0.0066 U	0.0081 U	--	0.0051 U	0.0061 U	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
1,2,3-TRICHLOROBENZENE	0.0066 R	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 R	0.007 R	--	0.0069 UJ	0.0059 R
1,2,4-TRICHLOROBENZENE	0.0066 R	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 R	0.007 R	--	0.0069 UJ	0.0059 R
1,2-DIBROMO-3-CHLOROPROPANE	0.0066 R	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 R	0.007 R	--	0.0069 UJ	0.0059 R
1,2-DIBROMOETHANE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
1,2-DICHLOROBENZENE	0.0066 R	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 R	0.007 R	--	0.0069 UJ	0.0059 R
1,2-DICHLOROETHANE	0.0066 U	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
1,2-DICHLOROPROPANE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
1,3-DICHLOROBENZENE	0.0066 R	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 R	0.007 R	--	0.0069 UJ	0.0059 R
1,4-DICHLOROBENZENE	0.0066 R	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 R	0.007 R	--	0.0069 UJ	0.0059 R
2-BUTANONE	0.013 U	0.016 U	--	0.01 U	0.012 U	0.01 U	0.014 UJ	--	0.014 U	0.012 UJ
2-HEXANONE	0.013 UJ	0.016 UJ	--	0.01 U	0.012 UJ	0.01 UJ	0.014 R	--	0.014 U	0.012 R
4-METHYL-2-PENTANONE	0.013 UJ	0.016 UJ	--	0.01 U	0.012 UJ	0.01 UJ	0.014 R	--	0.014 U	0.012 R
ACETONE	0.013 U	0.026	--	0.01 U	0.018	0.01 U	0.034 J+	--	0.014 U	0.017 J+
BENZENE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
BROMOCHLOROMETHANE	0.0066 U	0.0081 U	--	0.0051 U	0.0061 U	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
BROMODICHLOROMETHANE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
BROMOFORM	0.0066 R	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 R	0.007 R	--	0.0069 UJ	0.0059 R
BROMOMETHANE	0.0066 U	0.0081 U	--	0.0051 U	0.0061 U	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
CARBON DISULFIDE	0.0066 U	0.0081 U	--	0.0051 U	0.0061 U	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
CARBON TETRACHLORIDE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
CHLOROBENZENE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
CHLORODIBROMOMETHANE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
CHLOROETHANE	0.0066 U	0.0081 U	--	0.0051 U	0.0061 U	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
CHLOROFORM	0.0066 U	0.0081 U	--	0.0051 U	0.0061 U	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
CHLOROMETHANE	0.0066 U	0.0081 U	--	0.0051 U	0.0061 U	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
CIS-1,2-DICHLOROETHENE	0.0066 U	0.0081 U	--	0.0051 U	0.0061 U	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
CIS-1,3-DICHLOROPROPENE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
CYCLOHEXANE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
DICHLORODIFLUOROMETHANE	0.0066 U	0.0081 U	--	0.0051 U	0.0061 UJ	0.0052 U	0.007 UJ	--	0.0069 UJ	0.0059 UJ
ETHYLBENZENE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
ISOPROPYLBENZENE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 U	0.007 R	--	0.0069 U	0.0059 R
M+P-XYLENES	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
METHYL ACETATE	0.0066 U	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
METHYL CYCLOHEXANE	0.004 J	0.0081 UJ	--	0.0051 U	0.0038 J	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
METHYL TERT-BUTYL ETHER	0.0066 U	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
METHYLENE CHLORIDE	0.0066 U	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
O-XYLENE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
STYRENE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
TETRACHLOROETHENE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
TOLUENE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
TRANS-1,2-DICHLOROETHENE	0.0066 U	0.0081 U	--	0.0051 U	0.0061 U	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
TRANS-1,3-DICHLOROPROPENE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
TRICHLOROETHENE	0.0066 UJ	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 UJ	0.007 R	--	0.0069 U	0.0059 R
TRICHLOROFLUOROMETHANE	0.0066 U	0.0081 UJ	--	0.0051 U	0.0061 UJ	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
VINYL CHLORIDE	0.0066 U	0.0081 U	--	0.0051 U	0.0061 U	0.0052 U	0.007 UJ	--	0.0069 U	0.0059 UJ
SEMIVOLATILES (MG/KG)										
1,1-BIPHENYL	0.024 J	0.2	--	0.2 U	0.23 U	0.19 U	0.038 J	--	0.23 U	0.2 U
1,2,4,5-TETRACHLOROBENZENE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
1,4-DIOXANE	0.089 U	0.077 U	--	0.079 U	0.09 U	0.074 U	0.074 U	--	0.09 U	0.079 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
2,3,4,6-TETRACHLOROPHENOL	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
2,4,5-TRICHLOROPHENOL	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
2,4,6-TRICHLOROPHENOL	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
2,4-DICHLOROPHENOL	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
2,4-DIMETHYLPHENOL	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
2,4-DINITROPHENOL	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
2,4-DINITROTOLUENE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
2,6-DINITROTOLUENE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
2-CHLORONAPHTHALENE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
2-CHLOROPHENOL	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
2-METHYLNAPHTHALENE	0.08 J	0.48	--	0.2 U	0.053 J	0.057 J	0.16 J	--	0.23 U	0.057 J
2-METHYLPHENOL	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
2-NITROANILINE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
2-NITROPHENOL	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
3&4-METHYLPHENOL	0.068 J	0.38 U	--	0.39 U	0.068 J	0.36 U	0.36 U	--	0.44 U	0.39 U
3,3'-DICHLOROBENZIDINE	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
3-NITROANILINE	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
4,6-DINITRO-2-METHYLPHENOL	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
4-BROMOPHENYL PHENYL ETHER	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
4-CHLORO-3-METHYLPHENOL	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
4-CHLOROANILINE	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
4-CHLOROPHENYL PHENYL ETHER	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
4-NITROANILINE	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
4-NITROPHENOL	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-327	SB-327	SB-327	SB-327	SB-328	SB-328	SB-328	SB-328	SB-366	SB-366
SAMPLE ID	SB327-20191115-0006	SB327-20191115-0624	SB327-20191115-2448	SB327-20191115-7296	SB328-20191115-0006	SB328-20191115-0624	SB328-20191115-2448	SB328-20191115-4872	SB366-20191115-0006	SB366-20191115-0624
SAMPLE DATE	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	6	0	0.5	2	4	0	0.5
BOTTOM DEPTH	0.5	2	4	8	0.5	2	4	6	0.5	2
ACENAPHTHENE	0.22 U	2.4	--	0.038 J	0.23 U	0.19 U	0.2	--	0.23 U	0.028 J
ACENAPHTHYLENE	0.086 J	0.34	--	0.2 U	0.048 J	0.032 J	0.36	--	0.043 J	0.024 J
ACETOPHENONE	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
ANTHRACENE	0.079 J	0.81	--	0.041 J	0.056 J	0.044 J	0.4	--	0.059 J	0.12 J
ATRAZINE	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
BAP EQUIVALENT-HALFND	0.40465	1.4006	--	0.17975	0.31982	0.24804	1.3379	--	0.46769	0.29282
BAP EQUIVALENT-POS	0.29465	1.3006	--	0.07975	0.20482	0.15304	1.2429	--	0.35269	0.19282
BENZALDEHYDE	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
BENZO(A)ANTHRACENE	0.28	1.3	--	0.083 J	0.19 J	0.15 J	1.1	--	0.29	0.17 J
BENZO(A)PYRENE	0.21 J	0.9	--	0.058 J	0.15 J	0.11 J	0.93	--	0.27	0.14 J
BENZO(B)FLUORANTHENE	0.41	2	--	0.1 J	0.25	0.21	1.5	--	0.36	0.27
BENZO(G,H,I)PERYLENE	0.058 J	0.2	--	0.2 U	0.036 J	0.02 J	0.13 J	--	0.1 J	0.058 J
BENZO(K)FLUORANTHENE	0.13 J	0.6	--	0.044 J	0.11 J	0.055 J	0.66	--	0.14 J	0.085 J
BIS(2-CHLOROETHOXY)METHANE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
BIS(2-CHLOROETHYL)ETHER	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.07 J	0.034 J	--	0.2 U	0.026 J	0.02 J	0.19 U	--	0.23 U	0.2 U
BUTYL BENZYL PHTHALATE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
CAPROLACTAM	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
CARBAZOLE	0.44 U	0.24 J	--	0.39 U	0.44 U	0.36 U	0.083 J	--	0.44 U	0.39 U
CHRYSENE	0.35	1.6	--	0.11 J	0.22 J	0.19	1.3	--	0.29	0.47
DIBENZO(A,H)ANTHRACENE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
DIBENZOFURAN	0.039 J	0.98	--	0.2 U	0.026 J	0.021 J	0.24	--	0.23 U	0.036 J
DIETHYL PHTHALATE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
DIMETHYL PHTHALATE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
DI-N-BUTYL PHTHALATE	0.22 U	0.025 J	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
DI-N-OCTYL PHTHALATE	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
FLUORANTHENE	0.55	5.1	--	0.23 J	0.38 J	0.25 J	2.6	--	0.58	0.25 J
FLUORENE	0.031 J	3.5	--	0.057 J	0.028 J	0.19 U	0.25	--	0.23 U	0.061 J
HEXACHLOROBENZENE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
HEXACHLOROBUTADIENE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
HEXACHLOROCYCLOPENTADIENE	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
HEXACHLOROETHANE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
HIGH MOLECULAR WEIGHT PAHS	2.028	10.63	--	0.604	1.361	1.008	8.27	--	2.08	1.558
INDENO(1,2,3-CD)PYRENE	0.14 J	0.63	--	0.029 J	0.095 J	0.063 J	0.45	--	0.16 J	0.075 J
ISOPHORONE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
LOW MOLECULAR WEIGHT PAHS	1.113	15.14	--	0.417	0.852	0.499	5.14	--	0.912	0.857
NAPHTHALENE	0.057 J	0.99	--	0.2 U	0.11 J	0.033 J	0.23	--	0.23 U	0.044 J
NITROBENZENE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
N-NITROSO-DI-N-PROPYLAMINE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
N-NITROSODIPHENYLAMINE	0.22 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
PENTACHLOROPHENOL	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
PHENANTHRENE	0.31	2	--	0.051 J	0.23	0.14 J	1.1	--	0.23	0.33
PHENOL	0.44 U	0.38 U	--	0.39 U	0.44 U	0.36 U	0.36 U	--	0.44 U	0.39 U
PYRENE	0.45	3.4	--	0.18 J	0.31	0.21	2.2	--	0.47	0.29
TOTAL PAHS	3.141	25.77	--	1.021	2.213	1.507	13.41	--	2.992	2.415
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K										
1,4-DIOXANE	0.009 U	0.0078 U	--	0.0078 U	0.0092 U	0.0073 U	0.0076 U	--	0.009 U	0.0078 U
2-METHYLNAPHTHALENE	0.098	--	--	0.0056	0.071	0.06	--	--	0.023	0.064
ACENAPHTHENE	0.015	--	--	0.045	0.012 J-	0.012	--	--	0.0064	0.028
ACENAPHTHYLENE	0.1	--	--	0.014	0.044 J-	0.027	--	--	0.053	0.017
ANTHRACENE	0.079	--	--	0.041	0.051 J-	0.035	--	--	0.058	0.12
BAP EQUIVALENT-HALFND	0.32083	--	--	0.0892	0.22202	0.15623	--	--	0.34175	0.18244
BAP EQUIVALENT-POS	0.31863	--	--	0.08725	0.21982	0.15443	--	--	0.33955	0.18049
BENZO(A)ANTHRACENE	0.31	--	--	0.095	0.21	0.17	--	--	0.27	0.18
BENZO(A)PYRENE	0.23	--	--	0.062	0.16	0.11	--	--	0.26	0.13
BENZO(B)FLUORANTHENE	0.43 J	--	--	0.12	0.29	0.21	--	--	0.38 J	0.25
BENZO(G,H,I)PERYLENE	0.049	--	--	0.012	0.03	0.018	--	--	0.076	0.06
BENZO(K)FLUORANTHENE	0.13	--	--	0.044	0.1	0.084	--	--	0.13	0.072
CHRYSENE	0.33	--	--	0.11	0.22	0.19	--	--	0.25	0.37 J
DIBENZO(A,H)ANTHRACENE	0.0044 U	--	--	0.0039 U	0.0044 U	0.0036 U	--	--	0.0044 U	0.0039 U
FLUORANTHENE	0.57 J	--	--	0.24	0.35	0.26	--	--	0.54 J	0.21
FLUORENE	0.036	--	--	0.069	0.036 J-	0.019	--	--	0.019	0.067
HIGH MOLECULAR WEIGHT PAHS	2.059	--	--	0.715	1.426	1.076	--	--	1.966	1.366
INDENO(1,2,3-CD)PYRENE	0.13	--	--	0.032	0.086	0.054	--	--	0.13	0.064
LOW MOLECULAR WEIGHT PAHS	1.182	--	--	0.4683	0.863	0.53	--	--	0.9124	0.794
NAPHTHALENE	0.062	--	--	0.0093	0.13	0.037	--	--	0.016	0.052
PENTACHLOROPHENOL	0.012	--	--	0.0079 U	0.009 U	0.0074 U	--	--	0.009 U	0.0079 U
PHENANTHRENE	0.32	--	--	0.05	0.24	0.14	--	--	0.22	0.3
PYRENE	0.45 J	--	--	0.24	0.33	0.24	--	--	0.47 J	0.24
TOTAL PAHS	0.33	--	--	0.11	0.22	0.19	--	--	0.25	0.37
PESTICIDES (MG/KG)										
4,4'-DDD	0.00061 J	0.0029 J	--	0.0039 U	0.00045 J	0.00064 J	0.0022 J	--	0.00051 J	0.0013 J
4,4'-DDE	0.0034 J	0.0044	--	0.0039 U	0.0046	0.0019 J	0.00045 J	--	0.0065 J	0.0039 U
4,4'-DDT	0.13	0.13 J	--	0.0039 U	0.13	0.077	0.0089	--	0.52	0.0004 J
ALDRIN	0.00069 J	0.002 U	--	0.002 U	0.0023 U	0.0019 U	0.0019 U	--	0.0023 U	0.002 U
ALPHA-BHC	0.0023 U	0.002 U	--	0.002 U	0.0023 U	0.0019 U	0.0019 U	--	0.0023 U	0.002 U
ALPHA-CHLORDANE	0.00038 J	0.0016 J	--	0.002 U	0.00059 J	0.00084 J	0.00092 J	--	0.00041 J	0.00052 J
BETA-BHC	0.0023 U	0.002 U	--	0.00033 J	0.0023 U	0.0019 U	0.0019 U	--	0.0023 U	0.002 U
DELTA-BHC	0.0023 U	0.002 U	--	0.002 U	0.0023 U	0.00024 J	0.0019 U	--	0.0023 U	0.002 U
DIELDRIN	0.012 R	0.015 R	--	0.0039 U	0.014 R	0.0095 R	0.0037 U	--	0.04 R	0.0039 U
ENDOSULFAN I	0.00054 J	0.00034 J	--	0.002 U	0.00093 J	0.00039 J	0.00035 J	--	0.0011 J	0.00047 J

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-327	SB-327	SB-327	SB-327	SB-328	SB-328	SB-328	SB-328	SB-366	SB-366
SAMPLE ID	SB327-20191115-0006	SB327-20191115-0624	SB327-20191115-2448	SB327-20191115-7296	SB328-20191115-0006	SB328-20191115-0624	SB328-20191115-2448	SB328-20191115-4872	SB366-20191115-0006	SB366-20191115-0624
SAMPLE DATE	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	6	0	0.5	2	4	0	0.5
BOTTOM DEPTH	0.5	2	4	8	0.5	2	4	6	0.5	2
ENDOSULFAN II	0.0032 J	0.0076 J	--	0.0039 U	0.0045 U	0.0032 J	0.0037 U	--	0.0013 J	0.0039 U
ENDOSULFAN SULFATE	0.0045 U	0.0011 J	--	0.0039 U	0.0045 U	0.00083 J	0.00088 J	--	0.11 J	0.0039 U
ENDRIN	0.00047 J	0.0018 J	--	0.0039 U	0.00061 J	0.00036 J	0.0031 J	--	0.00096 J	0.0013 J
ENDRIN ALDEHYDE	0.00049 J	0.0039 U	--	0.0039 U	0.0052 R	0.0025 J	0.0011 J	--	0.022 R	0.001 J
ENDRIN KETONE	0.018 R	0.039 U	--	0.0039 U	0.018 R	0.0036 U	0.0037 U	--	0.068 R	0.0029 J
GAMMA-BHC (LINDANE)	0.0023 U	0.0018 J	--	0.002 U	0.0023 U	0.0019 U	0.0019 U	--	0.0023 U	0.002 U
GAMMA-CHLORDANE	0.0024 R	0.0078 R	--	0.002 U	0.0028 R	0.0029 R	0.0019 U	--	0.0038 R	0.002 U
HEPTACHLOR	0.00033 J	0.00048 J	--	0.002 U	0.0023 U	0.0019 U	0.00058 J	--	0.0023 U	0.00041 J
HEPTACHLOR EPOXIDE	0.00077 J	0.00072 J	--	0.002 U	0.0023 U	0.00087 J	0.00051 J	--	0.00038 J	0.00026 J
METHOXYCHLOR	0.014 J	0.028 J	--	0.02 U	0.0088 J	0.0068 J	0.026	--	0.0054 J	0.015 J
TOXAPHENE	0.23 U	0.2 U	--	0.2 U	0.23 U	0.19 U	0.19 U	--	0.23 U	0.2 U
PCBS (MG/KG)										
AROCLOR-1016	--	--	--	--	0.045 U	--	--	--	--	--
AROCLOR-1221	--	--	--	--	0.045 U	--	--	--	--	--
AROCLOR-1232	--	--	--	--	0.045 U	--	--	--	--	--
AROCLOR-1242	--	--	--	--	0.045 U	--	--	--	--	--
AROCLOR-1248	--	--	--	--	0.045 U	--	--	--	--	--
AROCLOR-1254	--	--	--	--	0.045 U	--	--	--	--	--
AROCLOR-1260	--	--	--	--	1.6	--	--	--	--	--
AROCLOR-1262	--	--	--	--	0.045 U	--	--	--	--	--
AROCLOR-1268	--	--	--	--	0.045 U	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	1.6	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	1.78	--	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)										
AROCLOR-1016	--	0.313 U	0.309 U	--	--	0.278 U	--	0.325 U	--	0.298 U
AROCLOR-1221	--	0.625 U	0.617 U	--	--	0.556 U	--	0.649 U	--	0.595 U
AROCLOR-1232	--	0.313 U	0.309 U	--	--	0.278 U	--	0.325 U	--	0.298 U
AROCLOR-1242	--	0.313 U	0.309 U	--	--	0.278 U	--	0.325 U	--	0.298 U
AROCLOR-1248	--	0.313 U	0.309 U	--	--	0.278 U	--	0.325 U	--	0.298 U
AROCLOR-1254	--	0.313 U	0.309 U	--	--	0.278 U	--	0.325 U	--	0.298 U
AROCLOR-1260	--	0.584	0.309 U	--	--	1.29	--	0.325 U	--	0.298 U
AROCLOR-1262	--	0.313 U	0.309 U	--	--	0.278 U	--	0.325 U	--	0.298 U
AROCLOR-1268	--	0.313 U	0.309 U	--	--	0.278 U	--	0.325 U	--	0.298 U
TOTAL AROCLOR	--	0.584	0 U	--	--	1.29	--	0 U	--	0 U
TOTAL AROCLOR HALFND	--	1.992	1.5445	--	--	2.541	--	1.6245	--	1.4895
PCB CONGENERS (MG/KG)										
DICHLOROBIPHENYLS	0.0035 J	0.00086 J	--	0.0000025 J	0.0016 J	0.0019 J	0.00015 J	--	0.0034 J	0.00016 J
HEPTACHLOROBIPHENYLS	1.2 J	0.9 J	--	0.0013 J	0.42 J	0.47 J	0.053 J	--	3.8 J	0.04 J
HEXACHLOROBIPHENYLS	1.2 J	0.95 J	--	0.0015 J	0.43 J	0.5 J	0.062 J	--	4 J	0.041 J
MONOCHLOROBIPHENYLS	0.00028 J	0.0002 J	--	0 UJ	0.00011 J	0.00016 J	0.000083 J	--	0.00041 J	0.000055 J
NONACHLOROBIPHENYLS	0.016 J	0.011 J	--	0.000023 J	0.0055 J	0.0069 J	0.00096 J	--	0.043 J	0.00059 J
OCTACHLOROBIPHENYLS	0.24 J	0.18 J	--	0.00027 J	0.096 J	0.1 J	0.01 J	--	0.81 J	0.008 J
PCB-1	0.0001	0.000066	--	0.000002 U	0.000059	0.000059	0.000022	--	0.0002	0.000014
PCB-10	0.00003	0.0000059	--	0.000002 U	0.000018	0.000014	0.0000025	--	0.000018	0.000002 U
PCB-100	0.00027	0.0002	--	0.000002 U	0.000036	0.000037	0.000002 U	--	0.00013	0.0000095
PCB-101/90	0.095 J	0.08 J	--	0.00013	0.038	0.042 J	0.0044	--	0.39	0.0039
PCB-103	0.00029	0.0014	--	0.0000052	0.000067	0.000065	0.000002 U	--	0.00025	0.000011
PCB-104	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-105	0.01	0.0079	--	0.00001	0.0049	0.0056	0.00032	--	0.021	0.00029
PCB-106	--	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--	--
PCB-108/107	0.0018	0.0014	--	0.0000026 J	0.00069	0.00089	0.000034	--	0.0025	0.000058
PCB-108/124	--	--	--	--	--	--	--	--	--	--
PCB-109	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-11	0.00011	0.000011	--	0.0000025	0.000038	0.000023	0.0000065	--	0.000039	0.0000061
PCB-110	0.049 J	0.041 J	--	0.000057	0.019	0.024 J	0.0022	--	0.15	0.0017
PCB-110/115	--	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--	--
PCB-111/115	0.00015	0.00023	--	0.000004 U	0.00019	0.00017	0.00001	--	0.000004 U	0.000024
PCB-112	--	--	--	--	--	--	--	--	--	--
PCB-113	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-114	0.00032	0.00024	--	0.00000092 U	0.00038	0.00036	0.0000043	--	0.0017	0.000016
PCB-118	--	--	--	--	--	--	--	--	--	--
PCB-118/106	0.039	0.029	--	0.00004	0.016	0.02	0.0015	--	0.11	0.001
PCB-119	0.00059	0.0015	--	0.0000043	0.00019	0.00019	0.0000059	--	0.00073	0.000024
PCB-12	0.000058	0.0000097	--	0.000002 U	0.000029	0.000021	0.0000064	--	0.000092	0.0000064
PCB-12/13	--	--	--	--	--	--	--	--	--	--
PCB-120	0.00028	0.00028	--	0.000002 U	0.00011	0.00014	0.000013	--	0.001	0.0000081
PCB-121	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-122	0.00039	0.00017	--	0.000002 U	0.00014	0.00019	0.000004	--	0.00066	0.0000086
PCB-123	0.0002	0.00012	--	0.00000075 U	0.000081	0.00012	0.000023	--	0.00054	0.00002
PCB-124	0.0022	0.0019	--	0.0000038	0.001	0.00097	0.000091	--	0.0058	0.000034
PCB-126	0.00034	0.00015	--	0.0000008 U	0.00012	0.00017	0.0000087	--	0.00057	0.000015
PCB-127	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-128/162	0.017	0.011	--	0.000018	0.0064	0.0075	0.00083	--	0.065	0.00054
PCB-128/166	--	--	--	--	--	--	--	--	--	--
PCB-129	0.0042	0.0028	--	0.0000041	0.0014	0.0019	0.00021	--	0.013	0.00012
PCB-129/138/163	--	--	--	--	--	--	--	--	--	--
PCB-13	0.000084	0.000038	--	0.000002 U	0.000033	0.000067	0.000011	--	0.000073	0.0000061
PCB-130	0.011	0.0081	--	0.000015	0.0033	0.0049	0.00045	--	0.03	0.0003
PCB-131	--	--	--	--	--	--	--	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-327	SB-327	SB-327	SB-327	SB-328	SB-328	SB-328	SB-328	SB-366	SB-366
SAMPLE ID	SB327-20191115-0006	SB327-20191115-0624	SB327-20191115-2448	SB327-20191115-7296	SB328-20191115-0006	SB328-20191115-0624	SB328-20191115-2448	SB328-20191115-4872	SB366-20191115-0006	SB366-20191115-0624
SAMPLE DATE	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	6	0	0.5	2	4	0	0.5
BOTTOM DEPTH	0.5	2	4	8	0.5	2	4	6	0.5	2
PCB-131/133	0.0042	0.0049	--	0.000013	0.0013	0.0017	0.00022	--	0.014	0.00014
PCB-132	--	--	--	--	--	--	--	--	--	--
PCB-132/161	0.067 J	0.057 J	--	0.00008	0.017	0.029 J	0.0022	--	0.21	0.0022
PCB-133	--	--	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--	--	--
PCB-134/143	0.0082	0.0069	--	0.000011	0.0027	0.0038	0.00055	--	0.03	0.00029
PCB-135	0.033 J	0.03 J	--	0.00006	0.011	0.013	0.0018	--	0.12	0.0011
PCB-135/151	--	--	--	--	--	--	--	--	--	--
PCB-136	0.031 J	0.032 J	--	0.000045	0.013	0.013	0.002	--	0.14	0.0011
PCB-137	0.0024	0.002	--	0.0000035	0.00068	0.001	0.00015	--	0.0098	0.00013
PCB-138/163/164	0.22 J	0.17 J	--	0.00025	0.084	0.097 J	0.012	--	0.98 J	0.008
PCB-139/140	--	--	--	--	--	--	--	--	--	--
PCB-139/149	0.2 J	0.18 J	--	0.00029	0.075	0.091 J	0.012	--	0.94 J	0.0075
PCB-14	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-140	0.000002 U	0.0015	--	0.000006	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-141	0.081 J	0.06 J	--	0.000081	0.024	0.036 J	0.0041	--	0.26 J	0.0024
PCB-142	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-143	--	--	--	--	--	--	--	--	--	--
PCB-144	0.013	0.0095	--	0.000016	0.0047	0.0052	0.0006	--	0.068	0.00029
PCB-145	0.0000062	0.000002 U	--	0.000002 U	0.000002 U	0.0000038	0.000002 U	--	0.000002 U	0.000002 U
PCB-146	--	--	--	--	--	--	--	--	--	--
PCB-146/165	0.039	0.037	--	0.000084	0.012	0.016	0.0017	--	0.13	0.0012
PCB-147	0.00073	0.00049	--	0.0000017 J	0.00031	0.00037	0.000021	--	0.003	0.000026
PCB-147/149	--	--	--	--	--	--	--	--	--	--
PCB-148	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-15	0.0018	0.00036	--	0.000002 U	0.00088	0.00085	0.000031	--	0.0017	0.000066
PCB-150	0.00012	0.00042	--	0.000002	0.00003	0.000029	0.000002 U	--	0.00012	0.000002 U
PCB-151	0.09 J	0.08 J	--	0.00012	0.038	0.037 J	0.0048	--	0.36 J	0.0037
PCB-152	0.000027	0.000019	--	0.000002 U	0.00001	0.000013	0.000002 U	--	0.000034	0.000002 U
PCB-153	0.28 J	0.22 J	--	0.00036	0.11	0.12 J	0.016	--	1.2 J	0.0097
PCB-153/168	--	--	--	--	--	--	--	--	--	--
PCB-154	0.001	0.0038	--	0.000014	0.00021	0.00021	0.0000091	--	0.00095	0.000038
PCB-155	0.0000066	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.0000063	0.000002 U
PCB-156	0.019	0.011	--	0.000017	0.007	0.0079	0.00086	--	0.075 J	0.0006
PCB-156/157	--	--	--	--	--	--	--	--	--	--
PCB-157	0.0015	0.00086	--	0.00000065 U	0.00063	0.00066	0.000059	--	0.0046	0.000056
PCB-158	--	--	--	--	--	--	--	--	--	--
PCB-158/160	0.026	0.017	--	0.000024	0.0084	0.011	0.0011	--	0.1	0.00069
PCB-159	0.0026	0.0024	--	0.000002 U	0.0011	0.0014	0.00012	--	0.0088	0.00011
PCB-16	0.00047	0.00015	--	0.000002 U	0.00039	0.00048	0.0000085	--	0.0003	0.000025
PCB-160	--	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--	--
PCB-166	0.000092	0.000057	--	0.000002 U	0.000022	0.000052	0.0000024	--	0.0019	0.000029
PCB-167	0.0085	0.0049	--	0.0000081	0.0029	0.0035	0.00038	--	0.027	0.00027
PCB-168	0.000002 U	0.000002 U	--	0.0000016 J	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-169	0.00005	0.000014	--	0.00000057 U	0.00000097 U	0.00002	0.0000015 U	--	0.000067	0.0000016 U
PCB-17	0.00046	0.00014	--	0.000002 U	0.00032	0.00039	0.000011	--	0.00032	0.000026
PCB-170	0.14 J	0.091 J	--	0.00013	0.055	0.053 J	0.0062	--	0.54 J	0.0048
PCB-171	0.046 J	0.032 J	--	0.000044	0.013	0.018	0.0022	--	0.14	0.0014
PCB-171/173	--	--	--	--	--	--	--	--	--	--
PCB-172	0.028 J	0.018	--	0.00003	0.0097	0.011	0.0011	--	0.083	0.00091
PCB-173	0.0035	0.0022	--	0.000002 U	0.00098	0.0014	0.00015	--	0.012	0.000096
PCB-174	0.14 J	0.11 J	--	0.00015	0.054	0.056 J	0.0062	--	0.49 J	0.0053
PCB-175	0.0058	0.0042	--	0.0000082	0.0015	0.0023	0.00011	--	0.018	0.000061
PCB-176	0.018	0.016	--	0.000023	0.0057	0.0074	0.00099	--	0.056	0.00059
PCB-177	0.11 J	0.078 J	--	0.00012	0.032	0.04 J	0.0042	--	0.31 J	0.0032
PCB-178	0.038 J	0.029 J	--	0.000047	0.01	0.014	0.0014	--	0.097	0.0011
PCB-179	0.059 J	0.052 J	--	0.000079	0.02	0.024 J	0.0025	--	0.2	0.002
PCB-18	0.00053	0.0002	--	0.000002 U	0.0005	0.00036	0.000013	--	0.00064	0.000052
PCB-18/30	--	--	--	--	--	--	--	--	--	--
PCB-180	0.24 J	0.19 J	--	0.00027	0.1	0.099 J	0.012	--	0.92 J	0.0097
PCB-180/193	--	--	--	--	--	--	--	--	--	--
PCB-181	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-182	--	--	--	--	--	--	--	--	--	--
PCB-182/187	0.18 J	0.15 J	--	0.00022	0.057	0.072 J	0.0079	--	0.55 J	0.006
PCB-183	0.086 J	0.067 J	--	0.000088	0.027	0.037 J	0.0044	--	0.26 J	0.0027
PCB-183/185	--	--	--	--	--	--	--	--	--	--
PCB-184	0.000036	0.000052	--	0.000002 U	0.000012	0.000002 U	0.000002 U	--	0.00017	0.000002 U
PCB-185	0.019	0.012	--	0.000021	0.0064	0.0065	0.00069	--	0.061	0.00052
PCB-186	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-187	--	--	--	--	--	--	--	--	--	--
PCB-188	0.000074	0.00011	--	0.000002 U	0.00002	0.000002 U	0.000002 U	--	0.00015	0.000002 U
PCB-189	0.0051	0.0031	--	0.0000048	0.0019	0.002	0.00023	--	0.019	0.00018
PCB-19	0.00013	0.00003	--	0.000002 U	0.0001	0.000095	0.0000041	--	0.000045	0.0000057
PCB-190	0.035 J	0.023 J	--	0.000031	0.013	0.014	0.0014	--	0.12	0.001
PCB-191	0.0062	0.0044	--	0.0000069	0.002	0.0025	0.00029	--	0.02	0.0002
PCB-192	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-193	0.018	0.013	--	0.00002	0.006	0.0067	0.00058	--	0.062	0.00055

LOCATION	SB-327	SB-327	SB-327	SB-327	SB-328	SB-328	SB-328	SB-328	SB-366	SB-366
SAMPLE ID	SB327-20191115-0006	SB327-20191115-0624	SB327-20191115-2448	SB327-20191115-7296	SB328-20191115-0006	SB328-20191115-0624	SB328-20191115-2448	SB328-20191115-4872	SB366-20191115-0006	SB366-20191115-0624
SAMPLE DATE	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	6	0	0.5	2	4	0	0.5
BOTTOM DEPTH	0.5	2	4	8	0.5	2	4	6	0.5	2
PCB-194	0.06 J	0.046 J	--	0.000068	0.024	0.026 J	0.0026	--	0.21 J	0.002
PCB-195	0.034 J	0.024 J	--	0.000037	0.011	0.014	0.0013	--	0.1	0.00094
PCB-196	--	--	--	--	--	--	--	--	--	--
PCB-196/203	0.064 J	0.048 J	--	0.000066	0.027	0.028	0.0028	--	0.23	0.0022
PCB-197	0.0021	0.0018	--	0.0000035	0.00075	0.00094	0.00011	--	0.0067	0.000068
PCB-197/200	--	--	--	--	--	--	--	--	--	--
PCB-198	0.0036	0.0023	--	0.0000046	0.0014	0.0015	0.000066	--	0.014	0.0001
PCB-198/199	--	--	--	--	--	--	--	--	--	--
PCB-199	0.051 J	0.038 J	--	0.000055	0.021	0.021 J	0.0021	--	0.19	0.0017
PCB-2	0.000068	0.000049	--	0.000002 U	0.000011	0.000036	0.000024	--	0.000036	0.000019
PCB-20/21/33	0.0012	0.00053	--	0.000006 U	0.00046	0.00094	0.00005	--	0.00067	0.000056
PCB-20/28	--	--	--	--	--	--	--	--	--	--
PCB-200	0.0092	0.0064	--	0.00001	0.0031	0.0036	0.00034	--	0.027	0.00026
PCB-201	0.0065	0.0059	--	0.0000086	0.0027	0.0032	0.00034	--	0.023	0.00026
PCB-202	0.01	0.0081	--	0.000013	0.0035	0.0042	0.00042	--	0.029	0.00036
PCB-203	--	--	--	--	--	--	--	--	--	--
PCB-204	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-205	0.0035	0.0024	--	0.0000043	0.0013	0.0014	0.00015	--	0.012	0.00012
PCB-206	0.012	0.0085	--	0.000016	0.0042	0.0051	0.00069	--	0.031	0.00044
PCB-207	0.0018	0.0014	--	0.0000027	0.00056	0.00082	0.00011	--	0.0046	0.000063
PCB-208	0.0021	0.0015	--	0.0000038	0.00072	0.00093	0.00016	--	0.0051	0.000091
PCB-209	0.00084	0.00073	--	0.0000079	0.00037	0.00026	0.0001	--	0.0011	0.000055
PCB-21/33	--	--	--	--	--	--	--	--	--	--
PCB-22	0.0017	0.00053	--	0.000002 U	0.001	0.0012	0.00002	--	0.00057	0.000049
PCB-23	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-24	0.000083	0.000017	--	0.000002 U	0.000088	0.000075	0.0000018 J	--	0.000044	0.0000043
PCB-25	0.00026	0.000091	--	0.000002 U	0.00011	0.00019	0.0000078	--	0.0001	0.0000087
PCB-26	0.00061	0.0003	--	0.000002 U	0.00028	0.00043	0.000013	--	0.00025	0.000022
PCB-26/29	--	--	--	--	--	--	--	--	--	--
PCB-27	0.000079	0.000021	--	0.000002 U	0.000089	0.000082	0.000002	--	0.00004	0.0000032
PCB-28	0.0049	0.0019	--	0.0000021	0.0022	0.0031	0.00005	--	0.0017	0.000099
PCB-29	0.000018	0.000013	--	0.000002 U	0.000008	0.000015	0.000002 U	--	0.0000094	0.000002 U
PCB-3	0.00011	0.000082	--	0.000002 U	0.00004	0.000067	0.000037	--	0.00017	0.000022
PCB-30	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-31	0.0035	0.0016	--	0.0000019 J	0.0016	0.0023	0.000099	--	0.0015	0.0001
PCB-32	0.00043	0.00014	--	0.000002 U	0.00043	0.00044	0.000013	--	0.00026	0.000022
PCB-34	0.000014	0.00001	--	0.000002 U	0.00001	0.000011	0.000002 U	--	0.0000061	0.000002 U
PCB-35	0.000093	0.000037	--	0.000002 U	0.000037	0.00005	0.000002 U	--	0.000054	0.000002 U
PCB-36	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-37	0.0019	0.00068	--	0.000002 U	0.001	0.0011	0.000024	--	0.001	0.000068
PCB-38	0.000002 U	0.000002 U	--	0.000002 U	0.0000066	0.00002	0.000002 U	--	0.000002 U	0.000002 U
PCB-39	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.0000019 J	0.000002 U
PCB-4	0.0002	0.000061	--	0.000002 U	0.000095	0.00013	0.0000087	--	0.0002	0.000011
PCB-40	0.00045	0.00013	--	0.000002 U	0.00037	0.00028	0.0000061	--	0.00024	0.000015
PCB-40/71	--	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	0.0033	0.0013	--	0.0000025 J	0.0028	0.0023	0.000031	--	0.0034	0.0001
PCB-42	--	--	--	--	--	--	--	--	--	--
PCB-42/59	0.0011	0.00028	--	0.000004 U	0.00095	0.00076	0.0000099	--	0.00064	0.000031
PCB-43	--	--	--	--	--	--	--	--	--	--
PCB-43/49	0.0044	0.0022	--	0.0000042	0.0029	0.0029	0.000046	--	0.0041	0.00012
PCB-44	0.0036	0.0015	--	0.0000029	0.0027	0.0024	0.00005	--	0.0027	0.00011
PCB-44/47/65	--	--	--	--	--	--	--	--	--	--
PCB-45	0.00049	0.00011	--	0.000002 U	0.00041	0.0003	0.000006	--	0.00017	0.000015
PCB-45/51	--	--	--	--	--	--	--	--	--	--
PCB-46	0.00013	0.000032	--	0.000002 U	0.000095	0.00008	0.0000026	--	0.000052	0.0000058
PCB-47	0.0017	0.00066	--	0.0000019 J	0.00084	0.00073	0.0000099	--	0.0014	0.000068
PCB-48	--	--	--	--	--	--	--	--	--	--
PCB-48/75	0.00029	0.00011	--	0.000004 U	0.00041	0.00033	0.0000047	--	0.00034	0.000015
PCB-49/69	--	--	--	--	--	--	--	--	--	--
PCB-5	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000043	0.000002 U
PCB-50	0.0000087	0.000002 U	--	0.000002 U	0.0000077	0.000006	0.000002 U	--	0.0000029	0.000002 U
PCB-50/53	--	--	--	--	--	--	--	--	--	--
PCB-51	0.00016	0.000016	--	0.000002 U	0.000089	0.00006	0.0000019 J	--	0.00011	0.00001
PCB-52	--	--	--	--	--	--	--	--	--	--
PCB-52/69	0.0096	0.006	--	0.0000083	0.005	0.0054	0.00024	--	0.019	0.00025
PCB-53	0.00042	0.00014	--	0.000002 U	0.00026	0.00024	0.000008	--	0.00022	0.000017
PCB-54	0.000012	0.000002 U	--	0.000002 U	0.0000071	0.0000054	0.000002 U	--	0.0000073	0.000002 U
PCB-55	0.00017	0.00011	--	0.000002 U	0.00012	0.00012	0.000002 U	--	0.00013	0.0000055
PCB-56	--	--	--	--	--	--	--	--	--	--
PCB-56/60	0.0044	0.0019	--	0.0000023 J	0.0029	0.0031	0.000058	--	0.0027	0.00011
PCB-57	0.000038	0.000036	--	0.000002 U	0.000016	0.000024	0.000002 U	--	0.000028	0.000002 U
PCB-58	0.000011	0.000002 U	--	0.000002 U	0.000002 U	0.000011	0.000002 U	--	0.000002 U	0.000002 U
PCB-59/62/75	--	--	--	--	--	--	--	--	--	--
PCB-6	0.00027	0.000054	--	0.000002 U	0.000089	0.00015	0.000015	--	0.00019	0.000011
PCB-60	--	--	--	--	--	--	--	--	--	--
PCB-61/70	0.0073	0.0038	--	0.0000066	0.0033	0.0036	0.000086	--	0.013	0.00025
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--	--
PCB-62	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-63	0.0003	0.00013	--	0.000002 U	0.00016	0.00019	0.0000028	--	0.00023	0.0000077
PCB-64	--	--	--	--	--	--	--	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-327	SB-327	SB-327	SB-327	SB-328	SB-328	SB-328	SB-328	SB-366	SB-366
SAMPLE ID	SB327-20191115-0006	SB327-20191115-0624	SB327-20191115-2448	SB327-20191115-7296	SB328-20191115-0006	SB328-20191115-0624	SB328-20191115-2448	SB328-20191115-4872	SB366-20191115-0006	SB366-20191115-0624
SAMPLE DATE	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	6	0	0.5	2	4	0	0.5
BOTTOM DEPTH	0.5	2	4	8	0.5	2	4	6	0.5	2
PCB-65	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-66	--	--	--	--	--	--	--	--	--	--
PCB-66/76	0.0095	0.0055	--	0.0000072	0.0045	0.0052	0.0002	--	0.01	0.00023
PCB-67	0.00022	0.000056	--	0.000002 U	0.00014	0.00012	0.0000021	--	0.00012	0.0000079
PCB-68	0.000032	0.000019	--	0.000002 U	0.000023	0.000012	0.000002 U	--	0.000046	0.000002 U
PCB-7	0.000041	0.000015	--	0.000002 U	0.000022	0.000028	0.0000043	--	0.000052	0.0000035
PCB-72	--	--	--	--	--	--	--	--	--	--
PCB-73	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-74	0.0033	0.0016	--	0.0000016 J	0.0021	0.002	0.000038	--	0.0031	0.000091
PCB-77	0.0011	0.00036	--	0.00000049 U	0.00054	0.00062	0.000023	--	0.0012	0.000037
PCB-78	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000019	0.000002 U	--	0.000002 U	0.000002 U
PCB-79	0.00012	0.00018	--	0.0000009 J	0.000053	0.000065	0.000002 U	--	0.00017	0.000002 U
PCB-8	0.00081	0.00027	--	0.000002 U	0.00039	0.00057	0.000061	--	0.00091	0.000051
PCB-80	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-81	0.00038	0.00032	--	0.00000048 U	0.0002	0.00021	0.000015	--	0.00097	0.00001
PCB-82	0.00016	0.000098	--	0.000002 U	0.00083	0.00062	0.000045	--	0.002	0.000061
PCB-83	--	--	--	--	--	--	--	--	--	--
PCB-83/112	0.00064	0.00071	--	0.000004 U	0.00035	0.00041	0.00002	--	0.0012	0.000028
PCB-84	--	--	--	--	--	--	--	--	--	--
PCB-84/92	0.015	0.00039	--	0.000034	0.0064	0.0071	0.00074	--	0.046	0.00063
PCB-85/116	0.0031	0.0026	--	0.0000037 J	0.0014	0.0017	0.000036	--	0.0054	0.000075
PCB-85/116/117	--	--	--	--	--	--	--	--	--	--
PCB-86	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--	--
PCB-87/117/125	0.012	0.0097	--	0.000013	0.006	0.0066	0.00049	--	0.048	0.00047
PCB-88/91	0.0023	0.0031	--	0.0000032 J	0.0011	0.0014	0.00002	--	0.0035	0.000081
PCB-89	0.000056	0.000077	--	0.000002 U	0.000042 U	0.000042	0.000002 U	--	0.000002 U	0.000002 U
PCB-9	0.000063	0.000031	--	0.000002 U	0.000017	0.000035	0.0000059	--	0.000041	0.0000026
PCB-90/101/113	--	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--	--
PCB-93	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-93/100	--	--	--	--	--	--	--	--	--	--
PCB-94	0.000092	0.000076	--	0.000002 U	0.000028	0.000041	0.000002 U	--	0.000084	0.000002 U
PCB-95	0.063 J	0.082 J	--	0.000083	0.022	0.03 J	0.0049	--	0.18	0.0019
PCB-96	0.000053	0.000051	--	0.000002 U	0.000029	0.000028	0.000002 U	--	0.000043	0.000002 U
PCB-97	0.005	0.0043	--	0.0000058	0.0026	0.0029	0.00017	--	0.012	0.00019
PCB-98/102	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U
PCB-99	0.0086	0.012	--	0.000036	0.0038	0.0039	0.0001	--	0.016	0.00025
PENTACHLOROBIPHENYLS	0.31 J	0.28 J	--	0.00043 J	0.13 J	0.15 J	0.015 J	--	1.1 J	0.011 J
TEQ DIOXIN-LIKE PCBs (BIRD)	0.00013027	6.70952E-05	--	2.829E-09	6.03398E-05	7.05282E-05	3.65066E-06	--	0.000224762	4.4509E-06
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	0.00013027	6.70952E-05	--	7.9445E-08	6.03403E-05	7.05282E-05	3.65141E-06	--	0.000224762	4.4517E-06
TEQ DIOXIN-LIKE PCBs (FISH)	2.2256E-06	1.0873E-06	--	1.99E-10	8.42955E-07	1.1187E-06	6.2681E-08	--	4.20255E-06	9.086E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	2.2256E-06	1.0873E-06	--	2.361E-09	8.42979E-07	1.1187E-06	6.2718E-08	--	4.20255E-06	9.09E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	3.70626E-05	1.63956E-05	--	1.197E-09	1.26477E-05	1.83292E-05	9.33089E-07	--	6.38862E-05	1.54966E-06
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	3.70626E-05	1.63956E-05	--	4.9876E-08	1.26623E-05	1.83292E-05	9.55589E-07	--	6.38862E-05	1.57366E-06
TETRACHLOROBIPHENYLS	0.053 J	0.026 J	--	0.000038 J	0.031 J	0.031 J	0.00084 J	--	0.064 J	0.0015 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.04649	0.028964	--	0.0000399	0.018651	0.02116	0.001923	--	0.151647	0.001494
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	2.9349755	2.3293106	--	0.0035549	1.0899344	1.2538012	0.1405929	--	10.5559079	0.1010677
TOTAL PCB CONGENERS ZEROND	2.9814655	2.3582746	--	0.0035948	1.1085854	1.2749612	0.1425159	--	10.7075549	0.1025617
TOTAL PCB CONGENERS-NOAA	1.29678	0.9975	--	0.0015094	0.50216	0.55249	0.063854	--	4.94305	0.046157
TOTAL PCB CONGENERS-NOAA HALFND	2.9814945	2.3583076	--	0.00368913	1.108617885	1.2749912	0.14256665	--	10.7075869	0.1026105
TOTAL PCB CONGENERS-NOAA X2	2.59356	1.995	--	0.0030188	1.00432	1.10498	0.127708	--	9.8861	0.092314
TOTAL PCB CONGENERS-NOAA X2 HALFND	2.59356	1.995	--	0.0030228	1.00432	1.10498	0.127708	--	9.8861	0.092314
TRICHLOROBIPHENYLS	0.016 J	0.0064 J	--	0.000004 J	0.0086 J	0.011 J	0.00032 J	--	0.0075 J	0.00054 J
DIOXINS/FURANS (NG/KG)										
1,2,3,4,6,7,8,9-OCDD	7100 J	170	--	98	1400	230	120	--	820	64
1,2,3,4,6,7,8,9-OCDF	770	54	--	0.91 J	120	21	9.6 J	--	120	4.3 J
1,2,3,4,6,7,8-HPCDD	640	36	--	2.5 J	84	13	11	--	57	5.8
1,2,3,4,6,7,8-HPCDF	120	21	--	0.18 U	23	13	5.5 J	--	35	3.5 JZ
1,2,3,4,7,8,9-HPCDF	12	4 J	--	0.18 U	4.5 J	2.1 J	0.79 JZ	--	15	0.39 JZ
1,2,3,4,7,8-HXCDD	5.5	0.61 JZ	--	0.14 U	0.88 J	0.47 JZ	0.28 U	--	1.1 J	0.3 U
1,2,3,4,7,8-HXCDF	11	5.8	--	0.13 U	6.5	5.6	2 J	--	22	1.5 J
1,2,3,6,7,8-HXCDD	16	20	--	0.14 U	2.6 J	1.2 J	1 J	--	4.7 JZ	0.55 J
1,2,3,6,7,8-HXCDF	6.3	3.3 J	--	0.093 U	2.2 J	2.3 J	0.88 JZ	--	5	0.9 JZ
1,2,3,7,8,9-HXCDD	11	7	--	0.15 U	1.8 JZ	0.84 J	0.75 J	--	2.2 J	0.48 J
1,2,3,7,8,9-HXCDF	12	1.2 J	--	0.21 U	0.84 J	0.89 J	0.42 U	--	3.3 J	0.21 U
1,2,3,7,8-PECDD	3.5 J	1.7 JZ	--	0.18 U	0.81 J	0.87 J	0.51 JZ	--	2 J	0.2 U
1,2,3,7,8-PECDF	0.98 J	1.4 J	--	0.18 U	0.21 U	2.9 J	1.8 JZ	--	50	1.6 JZ
2,3,4,6,7,8-HXCDF	6.7	2.5 J	--	0.091 U	2.6 J	2.6 J	0.87 JZ	--	4.9 J	0.76 JZ
2,3,4,7,8-PECDF	76	3 JZ	--	0.16 U	62	5.2	1.6 JZ	--	260	2.5 JZ
2,3,7,8-TCDD	0.64 J	0.29 U	--	0.14 U	0.32 JZ	0.14 U	0.28 U	--	0.34 U	0.39 U
2,3,7,8-TCDF	11	2.4	--	0.13 U	6.5 JZ	6.1	2.2	--	27	3.9
TEQ DIOXINS (BIRD)	99.12	9.7589	--	0.012391	71.605	13.9076	5.03686	--	298.493	6.98103
TEQ DIOXINS (BIRD) HALFND	99.12	9.9039	--	0.366091	71.6155	13.9776	5.20486	--	298.663	7.29403
TEQ DIOXINS (FISH)	52.106	5.5534	--	0.012391	34.664	5.5035	1.98936	--	140.64	1.90283
TEQ DIOXINS (FISH) HALFND	52.106	5.6984	--	0.284591	34.66925	5.5735	2.22036	--	140.81	2.28333
TEQ DIOXINS (HUMANS/MAMMALS)	45.0004	7.6002	--	0.054673	23.693	4.8733	2.02578	--	89.872	1.72439
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	45.0004	7.7452	--	0.297373	23.69615	4.9433	2.20078	--	90.042	2.04489
TOTAL HPCDD	910 J	70 J	--	2.5 J	130 J	25 J	27 J	--	110 J	10 J
TOTAL HPCDF	490 J	51 J	--	0 UJ	78 J	24 J	11 J	--	100 J	1.5 J
TOTAL HXCDD	80 J	140 J	--	0 UJ	12 J	13 J	12 J	--	21 J	5.9 J

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-327	SB-327	SB-327	SB-327	SB-328	SB-328	SB-328	SB-328	SB-366	SB-366
SAMPLE ID	SB327-20191115-0006	SB327-20191115-0624	SB327-20191115-2448	SB327-20191115-7296	SB328-20191115-0006	SB328-20191115-0624	SB328-20191115-2448	SB328-20191115-4872	SB366-20191115-0006	SB366-20191115-0624
SAMPLE DATE	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115	20191115
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	6	0	0.5	2	4	0	0.5
BOTTOM DEPTH	0.5	2	4	8	0.5	2	4	6	0.5	2
TOTAL HXCDF	420 J	85 J	--	0 UJ	200 J	66 J	7 J	--	650 J	6.9 J
TOTAL PECDD	9.5 J	6.5 J	--	0 UJ	4 J	4.8 J	4.1 J	--	4.9 J	1.1 J
TOTAL PECDF	1600 J	150 J	--	0 UJ	1200 J	330 J	4.9 J	--	6200 J	14 J
TOTAL TCDD	14 J	6.1 J	--	0 UJ	7.8 J	16 J	5.8 J	--	11 J	0.91 J
TOTAL TCDF	730 J	180 J	--	0 UJ	620 J	240 J	17 J	--	2700 J	20 J
METALS (MG/KG)										
ALUMINUM	7540	4620 J	--	10300	7580	12200	8390	--	6790	4060
ANTIMONY	0.58 J	4.4 J	--	1.2 U	0.23 J	0.32 J	1.2	--	0.6 J	0.36 J
ARSENIC	13.1	15.9 J	--	5.8	4.7	13.4	9.1	--	6.4	27.7
BARIUM	68.4	35.4 J	--	48.5	46.8	171	176	--	61.2	32.2
BERYLLIUM	0.62 J	0.29 J	--	0.66	0.43 J	0.92	1.5	--	0.57 J	0.36 J
CADMIUM	0.26 J	0.28 J	--	0.6 U	0.13 J	0.24 J	0.17 J	--	0.31 J	1.4
CALCIUM	4290	894	--	696	13300	2920	21000	--	1410	167000
CHROMIUM	11.8	10.2 J	--	15.1	6.6	12.6	7.7	--	11.2	6.8
COBALT	8.8	4.2 J	--	3.9	6.5	6.6	5	--	10.4	3.9
COPPER	40.3	40.1 J	--	12.7	16.9	95.9	31	--	24.7	15.9
CYANIDE	0.099 J	0.15 J	--	0.14 J	0.013 J	0.062 J	0.053 J	--	0.19 J	0.058 J
IRON	14600	115000 R	--	16300	21200	18400	20900	--	15100	34800
LEAD	48.6	57.4 J	--	17.3	19.1	40	63.1	--	52.1	9.1
MAGNESIUM	1040	1020 J	--	899	1310	2580	1420	--	732	5650
MANGANESE	279	92.4 J	--	154	214	202	267	--	537	314
MERCURY	0.13 UJ	0.12 UJ	--	0.11 U	0.12 UJ	0.11 UJ	0.11 UJ	--	0.13 UJ	0.1 UJ
NICKEL	15.8	10 J	--	9.6	13.5	16.9	13.2	--	12.7	13.6
POTASSIUM	1810	1230	--	1410	1610	3040	1660	--	1200	1040
SELENIUM	0.85 J	1.2 J	--	0.53 J	0.25 J	0.94 J	1.5 J	--	0.55 J	1.9 J
SILVER	0.088 J	0.61 U	--	0.6 U	0.63 U	0.068 J	0.55 U	--	0.16 J	0.55 U
SODIUM	56.3 J	46.6 J	--	24.1 J	50.5 J	210 J	120 J	--	36.5 J	107 J
THALLIUM	0.25 J	0.26 J	--	0.1 J	0.093 J	0.17 J	0.12 J	--	0.09 J	0.34 J
VANADIUM	11	4.2	--	20.6	6.6	17.1	6.8	--	11.5	4.5
ZINC	82.7	45.9 J	--	29.7	52.4	65.2	71.9	--	71.2	75.6
MISCELLANEOUS (%)										
MISCELLANEOUS (MG/KG)										
TOTAL SOLIDS	72	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)										
TOTAL ORGANIC CARBON	103000	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)										
PERCENT SOLIDS	--	80	81	--	--	90	--	77	--	84

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-366	SB-366	SB-369	SB-369	SB-369	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206	SS-206
SAMPLE ID	SB366-20191115-2448	SB366-20191115-4872	SB369-20191121-0006	SB369-20191121-0624	SB369-20191121-6084	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206	SS-206-B
SAMPLE DATE	20191115	20191115	20191121	20191121	20191121	20171213	20171213	20180320	20180320	20180320
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SB	SS	SS	SS	SS	SS
TOP DEPTH	2	4	0	0.5	5	0	0	0	0	0
BOTTOM DEPTH	4	6	0.5	2	7	6	6	6	6	6
VOLATILES (MG/KG)										
1,1,1-TRICHLOROETHANE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	0.0074 R	0.0056 UJ	0.0048 U	0.0054 U	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
1,1-DICHLOROETHANE	--	0.065 J+	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
1,1-DICHLOROETHENE	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 UJ	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 UJ	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 UJ	--	--	--	--	--
1,2-DIBROMOETHANE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
1,2-DICHLOROBENZENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 UJ	--	--	--	--	--
1,2-DICHLOROETHANE	--	0.0074 UJ	0.0056 UJ	0.0048 U	0.0054 U	--	--	--	--	--
1,2-DICHLOROPROPANE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
1,3-DICHLOROBENZENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 UJ	--	--	--	--	--
1,4-DICHLOROBENZENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 UJ	--	--	--	--	--
2-BUTANONE	--	0.015 UJ	0.011 U	0.0096 U	0.011 U	--	--	--	--	--
2-HEXANONE	--	0.015 R	0.011 U	0.0096 U	0.011 U	--	--	--	--	--
4-METHYL-2-PENTANONE	--	0.015 R	0.011 U	0.0096 U	0.011 U	--	--	--	--	--
ACETONE	--	0.029 J+	0.011 U	0.0096 U	0.013	--	--	--	--	--
BENZENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
BROMOCHLOROMETHANE	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
BROMODICHLOROMETHANE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
BROMOFORM	--	0.0074 R	0.0056 U	0.0048 U	0.0054 UJ	--	--	--	--	--
BROMOMETHANE	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
CARBON DISULFIDE	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
CARBON TETRACHLORIDE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
CHLOROBENZENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
CHLORODIBROMOMETHANE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
CHLOROETHANE	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
CHLOROFORM	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
CHLOROMETHANE	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
CYCLOHEXANE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
ETHYLBENZENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
ISOPROPYLBENZENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
M+P-XYLENES	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
METHYL ACETATE	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
METHYL CYCLOHEXANE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
METHYLENE CHLORIDE	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
O-XYLENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
STYRENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
TETRACHLOROETHENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
TOLUENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
TRICHLOROETHENE	--	0.0074 R	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
VINYL CHLORIDE	--	0.0074 UJ	0.0056 U	0.0048 U	0.0054 U	--	--	--	--	--
SEMIVOLATILES (MG/KG)										
1,1-BIPHENYL	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
1,4-DIOXANE	--	0.082 U	0.079 U	0.073 U	0.076 U	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
2,4-DICHLOROPHENOL	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
2,4-DINITROPHENOL	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
2,4-DINITROTOLUENE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
2,6-DINITROTOLUENE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
2-CHLORONAPHTHALENE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
2-CHLOROPHENOL	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
2-METHYLNAPHTHALENE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
2-METHYLPHENOL	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
2-NITROANILINE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
2-NITROPHENOL	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
3&4-METHYLPHENOL	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
3-NITROANILINE	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
4-CHLOROANILINE	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
4-NITROANILINE	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
4-NITROPHENOL	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-366	SB-366	SB-369	SB-369	SB-369	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206	SS-206
SAMPLE ID	SB366-20191115-2448	SB366-20191115-4872	SB369-20191121-0006	SB369-20191121-0624	SB369-20191121-6084	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206	SS-206-B
SAMPLE DATE	20191115	20191115	20191121	20191121	20191121	20171213	20171213	20180320	20180320	20180320
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SB	SS	SS	SS	SS	SS
TOP DEPTH	2	4	0	0.5	5	0	0	0	0	0
BOTTOM DEPTH	4	6	0.5	2	7	6	6	6	6	6
ACENAPHTHENE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
ACENAPHTHYLENE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
ACETOPHENONE	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
ANTHRACENE	--	0.21 U	0.2 U	0.19 U	0.067 J	--	--	--	--	--
ATRAZINE	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	0.144065	0.36122	0.18873	0.21623	--	--	--	--	--
BAP EQUIVALENT-POS	--	0.039065	0.26122	0.09278	0.12123	--	--	--	--	--
BENZALDEHYDE	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
BENZO(A)ANTHRACENE	--	0.037 J	0.16 J	0.083 J	0.11 J	--	--	--	--	--
BENZO(A)PYRENE	--	0.029 J	0.2	0.071 J	0.093 J	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	0.04 J	0.31	0.095 J	0.12 J	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	0.21 U	0.17 J	0.045 J	0.051 J	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	0.021 J	0.099 J	0.19 U	0.042 J	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
CAPROLACTAM	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
CARBAZOLE	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
CHRYSENE	--	0.055 J	0.23	0.08 J	0.11 J	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
DIBENZOFURAN	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
DIETHYL PHTHALATE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
DIMETHYL PHTHALATE	--	0.21 U	0.22	0.27	0.31	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
FLUORANTHENE	--	0.064 J	0.46	0.19 J	0.31 J	--	--	--	--	--
FLUORENE	--	0.21 U	0.2 U	0.19 U	0.052 J	--	--	--	--	--
HEXACHLOROBENZENE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
HEXACHLOROBUTADIENE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
HEXACHLOROETHANE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	0.264	1.649	0.563	0.803	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	0.021 J	0.13 J	0.039 J	0.047 J	--	--	--	--	--
ISOPHORONE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	0.119	0.6	0.3	0.709	--	--	--	--	--
NAPHTHALENE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
NITROBENZENE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
PENTACHLOROPHENOL	--	0.4 U	0.39 U	0.36 U	0.37 U	--	--	--	--	--
PHENANTHRENE	--	0.055 J	0.14 J	0.11 J	0.28	--	--	--	--	--
PHENOL	--	0.4 U	0.054 J	0.072 J	0.073 J	--	--	--	--	--
PYRENE	--	0.061 J	0.35	0.15 J	0.23	--	--	--	--	--
TOTAL PAHS	--	0.383	2.249	0.863	1.512	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K										
1,4-DIOXANE	--	0.0083 U	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	0.022	0.0056	0.0079	0.024	--	--	--	--	--
ACENAPHTHENE	--	0.0026 J	0.0026 J	0.0024 J	0.011	--	--	--	--	--
ACENAPHTHYLENE	--	0.0035 J	0.013	0.0068	0.012	--	--	--	--	--
ANTHRACENE	--	0.011	0.018	0.02	0.052	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	0.040396	0.21451	0.084072	0.13646	--	--	--	--	--
BAP EQUIVALENT-POS	--	0.038396	0.21451	0.084072	0.13646	--	--	--	--	--
BENZO(A)ANTHRACENE	--	0.037	0.12	0.082	0.12	--	--	--	--	--
BENZO(A)PYRENE	--	0.028	0.14	0.054	0.096	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	0.047	0.21	0.089	0.12	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	0.01	0.11	0.035	0.043	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	0.015	0.075	0.029	0.035	--	--	--	--	--
CHRYSENE	--	0.046	0.16	0.082	0.11	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	0.004 U	0.031	0.0095	0.012	--	--	--	--	--
FLUORANTHENE	--	0.063	0.29	0.16	0.27	--	--	--	--	--
FLUORENE	--	0.0076	0.005	0.01	0.039	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	0.261	1.222	0.5815	0.836	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	0.018	0.096	0.031	0.04	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	0.1451	0.4329	0.3026	0.668	--	--	--	--	--
NAPHTHALENE	--	0.0074	0.0043	0.0034 J	0.014	--	--	--	--	--
PENTACHLOROPHENOL	--	0.0082 U	0.0079 U	0.0073 U	0.0076 U	--	--	--	--	--
PHENANTHRENE	--	0.05	0.1	0.1	0.27	--	--	--	--	--
PYRENE	--	0.06	0.28	0.17	0.26	--	--	--	--	--
TOTAL PAHS	--	0.046	0.16	0.082	0.11	--	--	--	--	--
PESTICIDES (MG/KG)										
4,4'-DDD	--	0.00036 J	0.0016 J	0.00044 R	0.00073 J	--	--	--	--	--
4,4'-DDE	--	0.004 U	0.00028 J	0.0036 U	0.0037 U	--	--	--	--	--
4,4'-DDT	--	0.00038 J	0.0009 J	0.0036 U	0.0037 U	--	--	--	--	--
ALDRIN	--	0.0021 U	0.002 U	0.0019 U	0.0019 U	--	--	--	--	--
ALPHA-BHC	--	0.0021 U	0.002 U	0.0019 U	0.0019 U	--	--	--	--	--
ALPHA-CHLORDANE	--	0.0021 U	0.001 J	0.00072 J	0.00081 J	--	--	--	--	--
BETA-BHC	--	0.0021 U	0.002 U	0.0019 U	0.0019 U	--	--	--	--	--
DELTA-BHC	--	0.0021 U	0.002 U	0.0019 U	0.0019 U	--	--	--	--	--
DIELDRIN	--	0.004 U	0.0039 U	0.0036 U	0.0037 U	--	--	--	--	--
ENDOSULFAN I	--	0.0021 U	0.002 U	0.0019 U	0.0019 U	--	--	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-366	SB-366	SB-369	SB-369	SB-369	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206	SS-206
SAMPLE ID	SB366-20191115-2448	SB366-20191115-4872	SB369-20191121-0006	SB369-20191121-0624	SB369-20191121-6084	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206	SS-206-B
SAMPLE DATE	20191115	20191115	20191121	20191121	20191121	20171213	20171213	20180320	20180320	20180320
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SB	SS	SS	SS	SS	SS
TOP DEPTH	2	4	0	0.5	5	0	0	0	0	0
BOTTOM DEPTH	4	6	0.5	2	7	6	6	6	6	6
ENDOSULFAN II	--	0.004 U	0.0039 U	0.0036 U	0.0037 U	--	--	--	--	--
ENDOSULFAN SULFATE	--	0.004 U	0.0039 U	0.0036 U	0.0037 U	--	--	--	--	--
ENDRIN	--	0.004 U	0.00022 J	0.00033 J	0.00024 J	--	--	--	--	--
ENDRIN ALDEHYDE	--	0.004 U	0.0039 U	0.0036 U	0.0037 U	--	--	--	--	--
ENDRIN KETONE	--	0.004 U	0.0039 U	0.0036 U	0.0037 U	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	0.0021 U	0.0016 J	0.0005 J	0.0019 U	--	--	--	--	--
GAMMA-CHLORDANE	--	0.0021 U	0.00083 J	0.00053 R	0.00074 J	--	--	--	--	--
HEPTACHLOR	--	0.0021 U	0.002 U	0.0019 U	0.0019 U	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	0.0021 U	0.00043 J	0.0019 U	0.0019 U	--	--	--	--	--
METHOXYCHLOR	--	0.003 J	0.02 U	0.019 U	0.019 U	--	--	--	--	--
TOXAPHENE	--	0.21 U	0.2 U	0.19 U	0.19 U	--	--	--	--	--
PCBS (MG/KG)										
AROCLOR-1016	--	--	0.039 U	0.036 U	0.038 U	0.05 U	0.043 U	0.046 U	0.045 U	0.043 U
AROCLOR-1221	--	--	0.039 U	0.036 U	0.038 U	0.05 U	0.043 U	0.046 U	0.045 U	0.043 U
AROCLOR-1232	--	--	0.039 U	0.036 U	0.038 U	0.05 U	0.043 U	0.046 U	0.045 U	0.043 U
AROCLOR-1242	--	--	0.039 U	0.036 U	0.038 U	0.05 U	0.043 U	0.046 U	0.045 U	0.043 U
AROCLOR-1248	--	--	0.039 U	0.036 U	0.038 U	0.05 U	0.043 U	0.046 U	0.045 U	0.043 U
AROCLOR-1254	--	--	0.039 U	0.053 J+	0.032 J	0.05 U	0.043 U	0.046 U	0.045 U	0.043 U
AROCLOR-1260	--	--	0.039 U	0.036 U	0.038 U	23	0.14	0.046 U	0.045 U	0.043 U
AROCLOR-1262	--	--	0.039 U	0.036 U	0.038 U	0.05 U	0.043 U	0.046 U	0.045 U	0.043 U
AROCLOR-1268	--	--	0.039 U	0.036 U	0.038 U	0.05 U	0.043 U	0.046 U	0.045 U	0.043 U
TOTAL AROCLOR	--	--	0 U	0.053	0.032	23	0.14	0 U	0 U	0 U
TOTAL AROCLOR HALFND	--	--	0.1755	0.197	0.184	23.2	0.312	0.207	0.2025	0.1935
MOBILE LAB PESTICIDES/PCBS (MG/KG)										
AROCLOR-1016	0.329 U	--	--	0.281 U	0.294 U	--	--	--	--	--
AROCLOR-1221	0.658 U	--	--	0.562 U	0.588 U	--	--	--	--	--
AROCLOR-1232	0.329 U	--	--	0.281 U	0.294 U	--	--	--	--	--
AROCLOR-1242	0.329 U	--	--	0.281 U	0.294 U	--	--	--	--	--
AROCLOR-1248	0.329 U	--	--	0.281 U	0.294 U	--	--	--	--	--
AROCLOR-1254	0.329 U	--	--	0.281 U	0.294 U	--	--	--	--	--
AROCLOR-1260	0.329 U	--	--	0.281 U	0.294 U	--	--	--	--	--
AROCLOR-1262	0.329 U	--	--	0.281 U	0.294 U	--	--	--	--	--
AROCLOR-1268	0.329 U	--	--	0.281 U	0.294 U	--	--	--	--	--
TOTAL AROCLOR	0 U	--	--	0 U	0 U	--	--	--	--	--
TOTAL AROCLOR HALFND	1.645	--	--	1.405	1.47	--	--	--	--	--
PCB CONGENERS (MG/KG)										
DICHLOROBIPHENYLS	--	0.0000027 J	0.00021 J	0.00041 J	0.00031 J	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	0.0013 J	0.0094 J	0.011 J	0.0053 J	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	0.002 J	0.017 J	0.031 J	0.017 J	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	0.0000059 J	0.00006 J	0.00018 J	0.00028 J	--	--	--	--	--
NONACHLOROBIPHENYLS	--	0.000016 J	0.00051 J	0.0002 J	0.00022 J	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	0.00025 J	0.0025 J	0.0019 J	0.0011 J	--	--	--	--	--
PCB-1	--	0.0000014 J	0.000022 J	0.00011 J	0.00017 J	--	--	--	--	--
PCB-10	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-100	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-101/90	--	0.00025	--	--	--	--	--	--	--	--
PCB-103	--	0.000002 U	0.000011 J	0.000085 J	0.000064 J	--	--	--	--	--
PCB-104	--	0.000002 U	0.0000012 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-105	--	0.000009	0.00046 J	0.00029 J	0.0006 J	--	--	--	--	--
PCB-106	--	--	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-107	--	--	0.000072 J	0.000061 J	0.0001 J	--	--	--	--	--
PCB-108/107	--	0.000004 U	--	--	--	--	--	--	--	--
PCB-108/124	--	--	0.000044 J	0.000032 J	0.000061 J	--	--	--	--	--
PCB-109	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-11	--	0.000002 U	0.000038 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-110	--	0.000066	--	--	--	--	--	--	--	--
PCB-110/115	--	--	0.0014 J	0.0023 J	0.0024 J	--	--	--	--	--
PCB-111	--	--	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-111/115	--	0.000004 U	--	--	--	--	--	--	--	--
PCB-112	--	--	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-113	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-114	--	0.0000017 U	0.00002 J	0.000016 J	0.000031 J	--	--	--	--	--
PCB-118	--	--	0.0011 J	0.00093 J	0.0015 J	--	--	--	--	--
PCB-118/106	--	0.000032	--	--	--	--	--	--	--	--
PCB-119	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-12	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-12/13	--	--	0.000016 J	0.000042 UJ	0.000038 UJ	--	--	--	--	--
PCB-120	--	0.000002	0.000003 J	0.000013 J	0.000019 UJ	--	--	--	--	--
PCB-121	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-122	--	0.000002 U	0.000011 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-123	--	0.0000014 U	0.000016 J	0.000013 J	0.000016 J	--	--	--	--	--
PCB-124	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-126	--	0.0000018 U	0.000026 J	0.000013 J	0.000002 UJ	--	--	--	--	--
PCB-127	--	0.000002 U	0.0000022 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-128/162	--	0.000018	--	--	--	--	--	--	--	--
PCB-128/166	--	--	0.00044 J	0.00028 J	0.00033 J	--	--	--	--	--
PCB-129	--	0.0000051	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	0.0043 J	0.0048 J	0.0029 J	--	--	--	--	--
PCB-13	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-130	--	0.00001	0.00018 J	0.00021 J	0.00016 J	--	--	--	--	--
PCB-131	--	--	0.000031 J	0.000044 J	0.000041 J	--	--	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-366	SB-366	SB-369	SB-369	SB-369	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206	SS-206
SAMPLE ID	SB366-20191115-2448	SB366-20191115-4872	SB369-20191121-0006	SB369-20191121-0624	SB369-20191121-6084	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206	SS-206-B
SAMPLE DATE	20191115	20191115	20191121	20191121	20191121	20171213	20171213	20180320	20180320	20180320
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SB	SS	SS	SS	SS	SS
TOP DEPTH	2	4	0	0.5	5	0	0	0	0	0
BOTTOM DEPTH	4	6	0.5	2	7	6	6	6	6	6
PCB-131/133	--	0.000011	--	--	--	--	--	--	--	--
PCB-132	--	--	0.001 J	0.0021 J	0.0013 J	--	--	--	--	--
PCB-132/161	--	0.000093	--	--	--	--	--	--	--	--
PCB-133	--	--	0.000056 J	0.000087 J	0.000048 J	--	--	--	--	--
PCB-134	--	--	0.00019 J	0.00041 J	0.00024 J	--	--	--	--	--
PCB-134/143	--	0.000022	--	--	--	--	--	--	--	--
PCB-135	--	0.00009	--	--	--	--	--	--	--	--
PCB-135/151	--	--	0.0013 J	0.0045 J	0.002 J	--	--	--	--	--
PCB-136	--	0.00018	0.00039 J	0.0018 J	0.00088 J	--	--	--	--	--
PCB-137	--	0.0000051	0.000079 J	0.000047 J	0.000086 J	--	--	--	--	--
PCB-138/163/164	--	0.00023	--	--	--	--	--	--	--	--
PCB-139/140	--	--	0.000034 J	0.000041 J	0.000041 J	--	--	--	--	--
PCB-139/149	--	0.00048	--	--	--	--	--	--	--	--
PCB-14	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-140	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-141	--	0.000087	0.00076 J	0.0012 J	0.00069 J	--	--	--	--	--
PCB-142	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-143	--	--	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-144	--	0.000037	0.000074 J	0.00048 J	0.00023 J	--	--	--	--	--
PCB-145	--	0.000002 U	0.00000047 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-146	--	--	0.00043 J	0.00092 J	0.0005 J	--	--	--	--	--
PCB-146/165	--	0.000044	--	--	--	--	--	--	--	--
PCB-147	--	0.0000046	--	--	--	--	--	--	--	--
PCB-147/149	--	--	0.0029 J	0.0077 J	0.0038 J	--	--	--	--	--
PCB-148	--	0.000002 U	0.0000047 J	0.00001 J	0.000019 UJ	--	--	--	--	--
PCB-15	--	0.000002 U	0.000088 J	0.00012 J	0.000019 UJ	--	--	--	--	--
PCB-150	--	0.000002 U	0.0000063 J	0.0000092 J	0.000019 UJ	--	--	--	--	--
PCB-151	--	0.00031	--	--	--	--	--	--	--	--
PCB-152	--	0.000002 U	0.0000021 J	0.0000028 J	0.000019 UJ	--	--	--	--	--
PCB-153	--	0.00036	--	--	--	--	--	--	--	--
PCB-153/168	--	--	0.0039 J	0.0056 J	0.0029 J	--	--	--	--	--
PCB-154	--	0.000002 U	0.000035 J	0.000087 J	0.000045 J	--	--	--	--	--
PCB-155	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-156	--	0.000016	--	--	--	--	--	--	--	--
PCB-156/157	--	--	0.00032 J	0.00019 J	0.00023 J	--	--	--	--	--
PCB-157	--	0.0000014 U	--	--	--	--	--	--	--	--
PCB-158	--	--	0.00032 J	0.00033 J	0.00025 J	--	--	--	--	--
PCB-158/160	--	0.000024	--	--	--	--	--	--	--	--
PCB-159	--	0.0000053	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-16	--	0.0000058	0.000014 J	0.00006 J	0.000071 J	--	--	--	--	--
PCB-160	--	--	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-161	--	--	0.0000014 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-162	--	--	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-164	--	--	0.00028 J	0.00041 J	0.00025 J	--	--	--	--	--
PCB-165	--	--	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-166	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-167	--	0.0000064	0.00013 J	0.000079 J	0.000074 J	--	--	--	--	--
PCB-168	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-169	--	0.0000014 U	0.0000056 Z	0.0000063 UJ	0.0000011 UJ	--	--	--	--	--
PCB-17	--	0.0000068	0.000019 J	0.000065 J	0.000084 J	--	--	--	--	--
PCB-170	--	0.00012	0.0011 J	0.00095 J	0.00049 J	--	--	--	--	--
PCB-171	--	0.00004	--	--	--	--	--	--	--	--
PCB-171/173	--	--	0.00032 J	0.00037 J	0.00019 J	--	--	--	--	--
PCB-172	--	0.000035	0.00017 J	0.0002 J	0.0001 J	--	--	--	--	--
PCB-173	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-174	--	0.00018	0.0012 J	0.0016 J	0.00076 J	--	--	--	--	--
PCB-175	--	0.0000099	0.000038 J	0.000062 J	0.00003 J	--	--	--	--	--
PCB-176	--	0.000034	0.00013 J	0.00023 J	0.00011 J	--	--	--	--	--
PCB-177	--	0.000097	0.00076 J	0.00086 J	0.0004 J	--	--	--	--	--
PCB-178	--	0.000044	0.00029 J	0.00036 J	0.00016 J	--	--	--	--	--
PCB-179	--	0.00011	0.00058 J	0.00088 J	0.0004 J	--	--	--	--	--
PCB-18	--	0.000012	--	--	--	--	--	--	--	--
PCB-18/30	--	--	0.000034 J	0.00013 J	0.00018 J	--	--	--	--	--
PCB-180	--	0.00025	--	--	--	--	--	--	--	--
PCB-180/193	--	--	0.0024 J	0.0024 J	0.0012 J	--	--	--	--	--
PCB-181	--	0.000002 U	0.0000054 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-182	--	--	0.000002 UJ	0.0000061 J	0.000019 UJ	--	--	--	--	--
PCB-182/187	--	0.00019	--	--	--	--	--	--	--	--
PCB-183	--	0.000095	--	--	--	--	--	--	--	--
PCB-183/185	--	--	0.00063 J	0.00099 J	0.00048 J	--	--	--	--	--
PCB-184	--	0.000002 U	0.00000084 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-185	--	0.000027	--	--	--	--	--	--	--	--
PCB-186	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-187	--	--	0.0015 J	0.002 J	0.00085 J	--	--	--	--	--
PCB-188	--	0.000002 U	0.0000018 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-189	--	0.0000057	0.000041 J	0.000032 J	0.000018 J	--	--	--	--	--
PCB-19	--	0.0000048	0.0000051 J	0.000026 J	0.000028 J	--	--	--	--	--
PCB-190	--	0.000029	0.00025 J	0.00021 J	0.000091 J	--	--	--	--	--
PCB-191	--	0.000009	0.000036 J	0.000038 J	0.000022 J	--	--	--	--	--
PCB-192	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-193	--	0.000017	--	--	--	--	--	--	--	--

LOCATION	SB-366	SB-366	SB-369	SB-369	SB-369	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206	SS-206
SAMPLE ID	SB366-20191115-2448	SB366-20191115-4872	SB369-20191121-0006	SB369-20191121-0624	SB369-20191121-6084	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206	SS-206-B
SAMPLE DATE	20191115	20191115	20191121	20191121	20191121	20171213	20171213	20180320	20180320	20180320
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SB	SS	SS	SS	SS	SS
TOP DEPTH	2	4	0	0.5	5	0	0	0	0	0
BOTTOM DEPTH	4	6	0.5	2	7	6	6	6	6	6
PCB-194	--	0.000053	0.00052 J	0.00039 J	0.00021 J	--	--	--	--	--
PCB-195	--	0.000029	0.00024 J	0.00018 J	0.000087 J	--	--	--	--	--
PCB-196	--	--	0.00029 J	0.00022 J	0.00012 J	--	--	--	--	--
PCB-196/203	--	0.000069	--	--	--	--	--	--	--	--
PCB-197	--	0.0000035	--	--	--	--	--	--	--	--
PCB-197/200	--	--	0.000093 J	0.000089 J	0.000042 J	--	--	--	--	--
PCB-198	--	0.0000047	--	--	--	--	--	--	--	--
PCB-198/199	--	--	0.00071 J	0.00051 J	0.0003 J	--	--	--	--	--
PCB-199	--	0.000053	--	--	--	--	--	--	--	--
PCB-2	--	0.0000021	0.0000085 J	0.000017 J	0.000047 J	--	--	--	--	--
PCB-20/21/33	--	0.000006 U	--	--	--	--	--	--	--	--
PCB-20/28	--	--	0.00015 J	0.00032 J	0.00025 J	--	--	--	--	--
PCB-200	--	0.000011	--	--	--	--	--	--	--	--
PCB-201	--	0.0000089	0.000065 J	0.000062 J	0.000036 J	--	--	--	--	--
PCB-202	--	0.000014	0.00013 J	0.000099 J	0.000069 J	--	--	--	--	--
PCB-203	--	--	0.00042 J	0.00029 J	0.00018 J	--	--	--	--	--
PCB-204	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-205	--	0.0000046	0.000029 J	0.000026 J	0.000019 UJ	--	--	--	--	--
PCB-206	--	0.000011	0.00035 J	0.00014 J	0.00014 J	--	--	--	--	--
PCB-207	--	0.000002	0.000033 J	0.000017 J	0.000021 J	--	--	--	--	--
PCB-208	--	0.000003	0.00013 J	0.000042 J	0.000055 J	--	--	--	--	--
PCB-209	--	0.000002 U	0.00047 J	0.000071 J	0.00023 J	--	--	--	--	--
PCB-21/33	--	--	0.000044 J	0.00014 J	0.00015 J	--	--	--	--	--
PCB-22	--	0.0000026	0.000034 J	0.000092 J	0.000077 J	--	--	--	--	--
PCB-23	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-24	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-25	--	0.000002 U	0.0000081 J	0.000031 J	0.000023 J	--	--	--	--	--
PCB-26	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-26/29	--	--	0.000017 J	0.000044 J	0.000039 J	--	--	--	--	--
PCB-27	--	0.0000029	0.000004 J	0.000014 J	0.000015 J	--	--	--	--	--
PCB-28	--	0.000003	--	--	--	--	--	--	--	--
PCB-29	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-3	--	0.0000024	0.00003 J	0.000057 J	0.000058 J	--	--	--	--	--
PCB-30	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-31	--	0.0000043	0.0001 J	0.00022 J	0.00019 J	--	--	--	--	--
PCB-32	--	0.0000061	0.000013 J	0.000059 J	0.00006 J	--	--	--	--	--
PCB-34	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-35	--	0.000002 U	0.0000046 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-36	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-37	--	0.000002 U	0.000064 J	0.000086 J	0.000059 J	--	--	--	--	--
PCB-38	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-39	--	0.000002 U	0.00000075 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-4	--	0.000002 U	0.000016 J	0.000075 J	0.00012 J	--	--	--	--	--
PCB-40	--	0.0000042	--	--	--	--	--	--	--	--
PCB-40/71	--	--	0.000053 J	0.000099 J	0.00013 J	--	--	--	--	--
PCB-41	--	--	0.0000057 J	0.000021 UJ	0.000022 J	--	--	--	--	--
PCB-41/64/71/72	--	0.000012	--	--	--	--	--	--	--	--
PCB-42	--	--	0.000037 J	0.000061 J	0.000086 J	--	--	--	--	--
PCB-42/59	--	0.0000055	--	--	--	--	--	--	--	--
PCB-43	--	--	0.000005 J	0.000017 J	0.000033 J	--	--	--	--	--
PCB-43/49	--	0.000015	--	--	--	--	--	--	--	--
PCB-44	--	0.000023	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	0.00023 J	0.00038 J	0.00051 J	--	--	--	--	--
PCB-45	--	0.0000072	--	--	--	--	--	--	--	--
PCB-45/51	--	--	0.000027 J	0.000096 J	0.000078 J	--	--	--	--	--
PCB-46	--	0.0000036	0.0000046 J	0.000019 J	0.000024 J	--	--	--	--	--
PCB-47	--	0.0000049	--	--	--	--	--	--	--	--
PCB-48	--	--	0.000013 J	0.000037 J	0.000052 J	--	--	--	--	--
PCB-48/75	--	0.0000037 J	--	--	--	--	--	--	--	--
PCB-49/69	--	--	0.000095 J	0.0004 J	0.00045 J	--	--	--	--	--
PCB-5	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-50	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-50/53	--	--	0.000017 J	0.0001 J	0.000077 J	--	--	--	--	--
PCB-51	--	0.0000034	--	--	--	--	--	--	--	--
PCB-52	--	--	0.00029 J	0.00086 J	0.0012 J	--	--	--	--	--
PCB-52/69	--	0.000052	--	--	--	--	--	--	--	--
PCB-53	--	0.0000087	--	--	--	--	--	--	--	--
PCB-54	--	0.000002 U	0.0000028 J	0.000018 J	0.000019 UJ	--	--	--	--	--
PCB-55	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-56	--	--	0.000081 J	0.00011 J	0.00014 J	--	--	--	--	--
PCB-56/60	--	0.0000026 J	--	--	--	--	--	--	--	--
PCB-57	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-58	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-59/62/75	--	--	0.000014 J	0.000024 J	0.00003 J	--	--	--	--	--
PCB-6	--	0.000002 U	0.000013 J	0.000038 J	0.000019 UJ	--	--	--	--	--
PCB-60	--	--	0.000041 J	0.000049 J	0.000064 J	--	--	--	--	--
PCB-61/70	--	0.0000058	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	0.00041 J	0.00054 J	0.0009 J	--	--	--	--	--
PCB-62	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-63	--	0.000002 U	0.0000065 J	0.0000099 J	0.000017 J	--	--	--	--	--
PCB-64	--	--	0.0001 J	0.000096 J	0.00015 J	--	--	--	--	--

LOCATION	SB-366	SB-366	SB-369	SB-369	SB-369	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206	SS-206
SAMPLE ID	SB366-20191115-2448	SB366-20191115-4872	SB369-20191121-0006	SB369-20191121-0624	SB369-20191121-6084	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206	SS-206-B
SAMPLE DATE	20191115	20191115	20191121	20191121	20191121	20171213	20171213	20180320	20180320	20180320
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SB	SS	SS	SS	SS	SS
TOP DEPTH	2	4	0	0.5	5	0	0	0	0	0
BOTTOM DEPTH	4	6	0.5	2	7	6	6	6	6	6
PCB-65	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-66	--	--	0.00019 J	0.0003 J	0.00037 J	--	--	--	--	--
PCB-66/76	--	0.000015	--	--	--	--	--	--	--	--
PCB-67	--	0.000002 U	0.0000044 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-68	--	0.000002 U	0.0000026 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-7	--	0.000002 U	0.0000031 J	0.000012 J	0.000019 UJ	--	--	--	--	--
PCB-72	--	--	0.0000027 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-73	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-74	--	0.0000021	--	--	--	--	--	--	--	--
PCB-77	--	0.0000013 U	0.000031 J	0.000032 J	0.000036 J	--	--	--	--	--
PCB-78	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-79	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.00004 J	--	--	--	--	--
PCB-8	--	0.0000027	0.000031 J	0.00015 J	0.00019 J	--	--	--	--	--
PCB-80	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-81	--	0.0000012 U	0.0000016 J	0.0000052 UJ	0.0000013 UJ	--	--	--	--	--
PCB-82	--	0.0000039	0.000092 J	0.000095 J	0.00017 J	--	--	--	--	--
PCB-83	--	--	0.00004 J	0.000094 J	0.000088 J	--	--	--	--	--
PCB-83/112	--	0.000003 J	--	--	--	--	--	--	--	--
PCB-84	--	--	0.00015 J	0.00033 J	0.00049 J	--	--	--	--	--
PCB-84/92	--	0.000063	--	--	--	--	--	--	--	--
PCB-85/116	--	0.0000031 J	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	0.00016 J	0.00016 J	0.00025 J	--	--	--	--	--
PCB-86	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	0.00057 J	0.001 J	0.0013 J	--	--	--	--	--
PCB-87/117/125	--	0.000026	--	--	--	--	--	--	--	--
PCB-88/91	--	0.000013	0.00012 J	0.00014 J	0.00021 J	--	--	--	--	--
PCB-89	--	0.000002 U	0.000002 UJ	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-9	--	0.000002 U	0.0000033 J	0.000014 J	0.000019 UJ	--	--	--	--	--
PCB-90/101/113	--	--	0.0013 J	0.0042 J	0.0032 J	--	--	--	--	--
PCB-92	--	--	0.00021 J	0.00083 J	0.00063 J	--	--	--	--	--
PCB-93	--	0.000002 U	--	--	--	--	--	--	--	--
PCB-93/100	--	--	0.000019 J	0.000042 UJ	0.000038 UJ	--	--	--	--	--
PCB-94	--	0.000002 U	0.0000064 J	0.000021 UJ	0.000019 UJ	--	--	--	--	--
PCB-95	--	0.00044	0.00069 J	0.0037 J	0.0037 J	--	--	--	--	--
PCB-96	--	0.000002 U	0.0000048 J	0.000011 J	0.0000083 J	--	--	--	--	--
PCB-97	--	0.000013	--	--	--	--	--	--	--	--
PCB-98/102	--	0.000004 U	0.000019 J	0.000042 UJ	0.000042 J	--	--	--	--	--
PCB-99	--	0.000013	0.00042 J	0.00088 J	0.00094 J	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	0.00094 J	0.007 J	0.015 J	0.016 J	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	2.621E-09	4.40847E-06	2.96014E-06	1.90218E-06	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	1.85983E-07	4.40847E-06	3.22329E-06	2.06773E-06	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	1.85E-10	1.44615E-07	7.595E-08	1.5945E-08	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	5.095E-09	1.44615E-07	7.7407E-08	2.1297E-08	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	1.113E-09	2.83419E-06	1.3497E-06	7.767E-08	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	1.12425E-07	2.83419E-06	1.44498E-06	1.94365E-07	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	0.00017 J	0.0017 J	0.0032 J	0.0044 J	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	0.0000371	0.0021512	0.001595	0.002505	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	0.0047233	0.03736436	0.063387	0.0433013	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	0.0047604	0.03951556	0.064982	0.0458063	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	0.0016067	0.018485	0.023981	0.017127	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	0.0048445	0.03954656	0.06553375	0.046369	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	0.0032134	0.03697	0.047962	0.034254	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	0.0032154	0.03697	0.047962	0.034254	--	--	--	--	--
TRICHLOROBIPHENYLS	--	0.000048 J	0.00051 J	0.0013 J	0.0012 J	--	--	--	--	--
DIOXINS/FURANS (NG/KG)										
1,2,3,4,6,7,8,9-OCDD	--	220	690 J	140 J	100 J	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	0.31 U	59 J	6.9 J	6.5 J	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	3.8 J	64 J	10 J	6.8 J	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	0.18 U	31 J	4.5 J	4.9 J	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	0.18 U	2.2 UJ	2.1 UJ	2.1 UJ	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	0.14 U	1.5 UJ	1.4 UJ	1.4 UJ	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	0.13 U	3.1 J	1.5 UJ	1.5 UJ	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	0.14 U	2.8 J	1.2 UJ	1.2 UJ	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	0.093 U	1.9 UJ	1.8 UJ	1.8 UJ	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	0.15 U	2.6 J	2.2 UJ	2.3 UJ	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	0.21 U	1.5 UJ	1.4 UJ	1.4 UJ	--	--	--	--	--
1,2,3,7,8-PECDD	--	0.18 U	1.9 UJ	1.8 UJ	1.8 UJ	--	--	--	--	--
1,2,3,7,8-PECDF	--	0.2 U	2 J	1.6 UJ	1.6 UJ	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	0.091 U	1.8 J	0.89 UJ	0.92 UJ	--	--	--	--	--
2,3,4,7,8-PECDF	--	0.2 JZ	1.9 J	0.83 UJ	0.86 UJ	--	--	--	--	--
2,3,7,8-TCDD	--	0.18 U	0.45 Z	0.19 UJ	0.2 Z	--	--	--	--	--
2,3,7,8-TCDF	--	0.2 U	4.1 J	0.59 J	0.58 J	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	0.2258	7.8769	0.65969	0.84645	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	0.5555155	9.0454	2.59069	2.70395	--	--	--	--	--
TEQ DIOXINS (FISH)	--	0.1258	2.6979	0.09919	0.29545	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	0.3802655	4.2039	1.99869	2.10945	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	0.164	3.6947	0.24807	0.40695	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	0.4065465	4.9007	1.92157	1.99645	--	--	--	--	--
TOTAL HPCDD	--	7.5 J	120 J	22 J	14 J	--	--	--	--	--
TOTAL HPCDF	--	0 UJ	67 J	8.4 J	7.9 J	--	--	--	--	--
TOTAL HXCDD	--	0.48 J	45 J	11 J	4.2 J	--	--	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-366	SB-366	SB-369	SB-369	SB-369	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206	SS-206
SAMPLE ID	SB366-20191115-2448	SB366-20191115-4872	SB369-20191121-0006	SB369-20191121-0624	SB369-20191121-6084	SEC-SS-SE-01	SEC-SS-SE-02	SS-205	SS-206	SS-206-B
SAMPLE DATE	20191115	20191115	20191121	20191121	20191121	20171213	20171213	20180320	20180320	20180320
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SB	SB	SS	SS	SB	SS	SS	SS	SS	SS
TOP DEPTH	2	4	0	0.5	5	0	0	0	0	0
BOTTOM DEPTH	4	6	0.5	2	7	6	6	6	6	6
TOTAL HXCDF	--	0.34 J	33 J	3.8 J	3.1 J	--	--	--	--	--
TOTAL PECDD	--	0 UJ	8.4 J	1.8 UJ	1.8 UJ	--	--	--	--	--
TOTAL PECDF	--	0.68 J	25 J	5.1 J	5.3 J	--	--	--	--	--
TOTAL TCDD	--	1.2 J	4.7 J	1.3 J	1 J	--	--	--	--	--
TOTAL TCDF	--	0.55 J	15 J	4.6 J	5.9 J	--	--	--	--	--
METALS (MG/KG)										
ALUMINUM	--	6370	3830	3620	3710	--	--	--	--	--
ANTIMONY	--	1.2 U	1.2 U	1.1 U	1 U	--	--	--	--	--
ARSENIC	--	6.8	5.6	4.1	3.5	--	--	--	--	--
BARIUM	--	53.3	81.9	38.5	42	--	--	--	--	--
BERYLLIUM	--	0.6	0.56 J	0.3 J	0.33 J	--	--	--	--	--
CADMIUM	--	0.59 U	0.39 J	0.1 J	0.11 J	--	--	--	--	--
CALCIUM	--	1010	2650	4650	1470	--	--	--	--	--
CHROMIUM	--	12.2	10.6	41.1	10.3	--	--	--	--	--
COBALT	--	7.9	9.8	6	4.4	--	--	--	--	--
COPPER	--	15.7	23.7	17.5	31.9	--	--	--	--	--
CYANIDE	--	0.089 J	0.58 R	0.54 R	0.54 R	--	--	--	--	--
IRON	--	10100	10000	15200	18300	--	--	--	--	--
LEAD	--	12.7	86.3	14.9	15.1	--	--	--	--	--
MAGNESIUM	--	565 J	731	918	1200	--	--	--	--	--
MANGANESE	--	234	821	306	148	--	--	--	--	--
MERCURY	--	0.11 UJ	0.12 UJ	0.1 UJ	0.11 UJ	--	--	--	--	--
NICKEL	--	9.1	15.3	12.3	9.6	--	--	--	--	--
POTASSIUM	--	692	624	815	900	--	--	--	--	--
SELENIUM	--	0.65 J	0.77 J	2.7 U	0.2 J	--	--	--	--	--
SILVER	--	0.59 U	0.19 J	0.16 J	0.16 J	--	--	--	--	--
SODIUM	--	42.2 J	591 UJ	551 UJ	563 UJ	--	--	--	--	--
THALLIUM	--	0.11 J	0.055 J	0.54 U	0.52 U	--	--	--	--	--
VANADIUM	--	13.6	10.2	2.7 U	5.6	--	--	--	--	--
ZINC	--	21.9	161	76.1	54.1	--	--	--	--	--
MISCELLANEOUS (%)										
TOTAL SOLIDS	--	--	84	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)										
TOTAL ORGANIC CARBON	--	--	24900	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)										
PERCENT SOLIDS	76	--	--	89	85	--	--	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-207	SS-208	SS-209	SS-210	SS-211
SAMPLE ID	SS-207	SS-208	SS-209	SS-210	SS-211
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6
VOLATILES (MG/KG)					
1,1,1-TRICHLOROETHANE	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--
2-BUTANONE	--	--	--	--	--
2-HEXANONE	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--
ACETONE	--	--	--	--	--
BENZENE	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--
BROMOFORM	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--
CHLOROFORM	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--
O-XYLENE	--	--	--	--	--
STYRENE	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--
TOLUENE	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--
SEMIVOLATILES (MG/KG)					
1,1-BIPHENYL	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--
2,4-DINITROPHENOL	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--
2-CHLOROPHENOL	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--
2-METHYLPHENOL	--	--	--	--	--
2-NITROANILINE	--	--	--	--	--
2-NITROPHENOL	--	--	--	--	--
3&4-METHYLPHENOL	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--
3-NITROANILINE	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--
4-CHLOROANILINE	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--
4-NITROANILINE	--	--	--	--	--
4-NITROPHENOL	--	--	--	--	--

LOCATION	SS-207	SS-208	SS-209	SS-210	SS-211
SAMPLE ID	SS-207	SS-208	SS-209	SS-210	SS-211
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6
ACENAPHTHENE	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--
ACETOPHENONE	--	--	--	--	--
ANTHRACENE	--	--	--	--	--
ATRAZINE	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--
BENZALDEHYDE	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--
CAPROLACTAM	--	--	--	--	--
CARBAZOLE	--	--	--	--	--
CHRYSENE	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--
DIETHYL PHTHALATE	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--
FLUORENE	--	--	--	--	--
HEXACHLOROBENZENE	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--
HEXACHLOROETHANE	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--
ISOPHORONE	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--
NITROBENZENE	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--
PHENOL	--	--	--	--	--
PYRENE	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K					
1,4-DIOXANE	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--
ANTHRACENE	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--
CHRYSENE	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--
FLUORENE	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--
PYRENE	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--
PESTICIDES (MG/KG)					
4,4'-DDD	--	--	--	--	--
4,4'-DDE	--	--	--	--	--
4,4'-DDT	--	--	--	--	--
ALDRIN	--	--	--	--	--
ALPHA-BHC	--	--	--	--	--
ALPHA-CHLORDANE	--	--	--	--	--
BETA-BHC	--	--	--	--	--
DELTA-BHC	--	--	--	--	--
DIELDRIN	--	--	--	--	--
ENDOSULFAN I	--	--	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-207	SS-208	SS-209	SS-210	SS-211
SAMPLE ID	SS-207	SS-208	SS-209	SS-210	SS-211
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6
ENDOSULFAN II	--	--	--	--	--
ENDOSULFAN SULFATE	--	--	--	--	--
ENDRIN	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	--	--	--
ENDRIN KETONE	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--
GAMMA-CHLORDANE	--	--	--	--	--
HEPTACHLOR	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	--	--	--	--
METHOXYCHLOR	--	--	--	--	--
TOXAPHENE	--	--	--	--	--
PCBS (MG/KG)					
AROCLOR-1016	0.057 U	0.045 U	0.051 U	0.042 U	0.048 UJ
AROCLOR-1221	0.057 U	0.045 U	0.051 U	0.042 U	0.048 UJ
AROCLOR-1232	0.057 U	0.045 U	0.051 U	0.042 U	0.048 UJ
AROCLOR-1242	0.057 U	0.045 U	0.051 U	0.042 U	0.048 UJ
AROCLOR-1248	0.057 U	0.045 U	0.051 U	0.042 U	0.048 UJ
AROCLOR-1254	0.057 U	0.045 U	0.051 U	0.042 U	0.048 UJ
AROCLOR-1260	0.025 J	0.045 U	0.038 J	0.0063 J	0.022 J
AROCLOR-1262	0.057 U	0.045 U	0.051 U	0.042 U	0.048 UJ
AROCLOR-1268	0.057 U	0.045 U	0.051 U	0.042 U	0.048 UJ
TOTAL AROCLOR	0.025	0 U	0.038	0.0063	0.022
TOTAL AROCLOR HALFND	0.253	0.2025	0.242	0.1743	0.214
MOBILE LAB PESTICIDES/PCBS (MG/KG)					
AROCLOR-1016	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--
PCB CONGENERS (MG/KG)					
DICHLOROBIPHENYLS	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--
PCB-1	--	--	--	--	--
PCB-10	--	--	--	--	--
PCB-100	--	--	--	--	--
PCB-101/90	--	--	--	--	--
PCB-103	--	--	--	--	--
PCB-104	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-106	--	--	--	--	--
PCB-107	--	--	--	--	--
PCB-108/107	--	--	--	--	--
PCB-108/124	--	--	--	--	--
PCB-109	--	--	--	--	--
PCB-11	--	--	--	--	--
PCB-110	--	--	--	--	--
PCB-110/115	--	--	--	--	--
PCB-111	--	--	--	--	--
PCB-111/115	--	--	--	--	--
PCB-112	--	--	--	--	--
PCB-113	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-118/106	--	--	--	--	--
PCB-119	--	--	--	--	--
PCB-12	--	--	--	--	--
PCB-12/13	--	--	--	--	--
PCB-120	--	--	--	--	--
PCB-121	--	--	--	--	--
PCB-122	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-124	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-127	--	--	--	--	--
PCB-128/162	--	--	--	--	--
PCB-128/166	--	--	--	--	--
PCB-129	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--
PCB-13	--	--	--	--	--
PCB-130	--	--	--	--	--
PCB-131	--	--	--	--	--

LOCATION	SS-207	SS-208	SS-209	SS-210	SS-211
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SAMPLE DATE	20180320	20180320	20180320	20180320	20180320
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6
PCB-131/133	--	--	--	--	--
PCB-132	--	--	--	--	--
PCB-132/161	--	--	--	--	--
PCB-133	--	--	--	--	--
PCB-134	--	--	--	--	--
PCB-134/143	--	--	--	--	--
PCB-135	--	--	--	--	--
PCB-135/151	--	--	--	--	--
PCB-136	--	--	--	--	--
PCB-137	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--
PCB-139/140	--	--	--	--	--
PCB-139/149	--	--	--	--	--
PCB-14	--	--	--	--	--
PCB-140	--	--	--	--	--
PCB-141	--	--	--	--	--
PCB-142	--	--	--	--	--
PCB-143	--	--	--	--	--
PCB-144	--	--	--	--	--
PCB-145	--	--	--	--	--
PCB-146	--	--	--	--	--
PCB-146/165	--	--	--	--	--
PCB-147	--	--	--	--	--
PCB-147/149	--	--	--	--	--
PCB-148	--	--	--	--	--
PCB-15	--	--	--	--	--
PCB-150	--	--	--	--	--
PCB-151	--	--	--	--	--
PCB-152	--	--	--	--	--
PCB-153	--	--	--	--	--
PCB-153/168	--	--	--	--	--
PCB-154	--	--	--	--	--
PCB-155	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-156/157	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-158	--	--	--	--	--
PCB-158/160	--	--	--	--	--
PCB-159	--	--	--	--	--
PCB-16	--	--	--	--	--
PCB-160	--	--	--	--	--
PCB-161	--	--	--	--	--
PCB-162	--	--	--	--	--
PCB-164	--	--	--	--	--
PCB-165	--	--	--	--	--
PCB-166	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-168	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-17	--	--	--	--	--
PCB-170	--	--	--	--	--
PCB-171	--	--	--	--	--
PCB-171/173	--	--	--	--	--
PCB-172	--	--	--	--	--
PCB-173	--	--	--	--	--
PCB-174	--	--	--	--	--
PCB-175	--	--	--	--	--
PCB-176	--	--	--	--	--
PCB-177	--	--	--	--	--
PCB-178	--	--	--	--	--
PCB-179	--	--	--	--	--
PCB-18	--	--	--	--	--
PCB-18/30	--	--	--	--	--
PCB-180	--	--	--	--	--
PCB-180/193	--	--	--	--	--
PCB-181	--	--	--	--	--
PCB-182	--	--	--	--	--
PCB-182/187	--	--	--	--	--
PCB-183	--	--	--	--	--
PCB-183/185	--	--	--	--	--
PCB-184	--	--	--	--	--
PCB-185	--	--	--	--	--
PCB-186	--	--	--	--	--
PCB-187	--	--	--	--	--
PCB-188	--	--	--	--	--
PCB-189	--	--	--	--	--
PCB-19	--	--	--	--	--
PCB-190	--	--	--	--	--
PCB-191	--	--	--	--	--
PCB-192	--	--	--	--	--
PCB-193	--	--	--	--	--

TABLE 3

SOIL ANALYTICAL DATA - SHAFFER EQUIPMENT COMPANY PROPERTY
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

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EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6
PCB-194	--	--	--	--	--
PCB-195	--	--	--	--	--
PCB-196	--	--	--	--	--
PCB-196/203	--	--	--	--	--
PCB-197	--	--	--	--	--
PCB-197/200	--	--	--	--	--
PCB-198	--	--	--	--	--
PCB-198/199	--	--	--	--	--
PCB-199	--	--	--	--	--
PCB-2	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--
PCB-20/28	--	--	--	--	--
PCB-200	--	--	--	--	--
PCB-201	--	--	--	--	--
PCB-202	--	--	--	--	--
PCB-203	--	--	--	--	--
PCB-204	--	--	--	--	--
PCB-205	--	--	--	--	--
PCB-206	--	--	--	--	--
PCB-207	--	--	--	--	--
PCB-208	--	--	--	--	--
PCB-209	--	--	--	--	--
PCB-21/33	--	--	--	--	--
PCB-22	--	--	--	--	--
PCB-23	--	--	--	--	--
PCB-24	--	--	--	--	--
PCB-25	--	--	--	--	--
PCB-26	--	--	--	--	--
PCB-26/29	--	--	--	--	--
PCB-27	--	--	--	--	--
PCB-28	--	--	--	--	--
PCB-29	--	--	--	--	--
PCB-3	--	--	--	--	--
PCB-30	--	--	--	--	--
PCB-31	--	--	--	--	--
PCB-32	--	--	--	--	--
PCB-34	--	--	--	--	--
PCB-35	--	--	--	--	--
PCB-36	--	--	--	--	--
PCB-37	--	--	--	--	--
PCB-38	--	--	--	--	--
PCB-39	--	--	--	--	--
PCB-4	--	--	--	--	--
PCB-40	--	--	--	--	--
PCB-40/71	--	--	--	--	--
PCB-41	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--
PCB-42	--	--	--	--	--
PCB-42/59	--	--	--	--	--
PCB-43	--	--	--	--	--
PCB-43/49	--	--	--	--	--
PCB-44	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--
PCB-45	--	--	--	--	--
PCB-45/51	--	--	--	--	--
PCB-46	--	--	--	--	--
PCB-47	--	--	--	--	--
PCB-48	--	--	--	--	--
PCB-48/75	--	--	--	--	--
PCB-49/69	--	--	--	--	--
PCB-5	--	--	--	--	--
PCB-50	--	--	--	--	--
PCB-50/53	--	--	--	--	--
PCB-51	--	--	--	--	--
PCB-52	--	--	--	--	--
PCB-52/69	--	--	--	--	--
PCB-53	--	--	--	--	--
PCB-54	--	--	--	--	--
PCB-55	--	--	--	--	--
PCB-56	--	--	--	--	--
PCB-56/60	--	--	--	--	--
PCB-57	--	--	--	--	--
PCB-58	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--
PCB-6	--	--	--	--	--
PCB-60	--	--	--	--	--
PCB-61/70	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--
PCB-62	--	--	--	--	--
PCB-63	--	--	--	--	--
PCB-64	--	--	--	--	--

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MINDEN, WEST VIRGINIA

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MATRIX	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6
PCB-65	--	--	--	--	--
PCB-66	--	--	--	--	--
PCB-66/76	--	--	--	--	--
PCB-67	--	--	--	--	--
PCB-68	--	--	--	--	--
PCB-7	--	--	--	--	--
PCB-72	--	--	--	--	--
PCB-73	--	--	--	--	--
PCB-74	--	--	--	--	--
PCB-77	--	--	--	--	--
PCB-78	--	--	--	--	--
PCB-79	--	--	--	--	--
PCB-8	--	--	--	--	--
PCB-80	--	--	--	--	--
PCB-81	--	--	--	--	--
PCB-82	--	--	--	--	--
PCB-83	--	--	--	--	--
PCB-83/112	--	--	--	--	--
PCB-84	--	--	--	--	--
PCB-84/92	--	--	--	--	--
PCB-85/116	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--
PCB-86	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--
PCB-88/91	--	--	--	--	--
PCB-89	--	--	--	--	--
PCB-9	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--
PCB-92	--	--	--	--	--
PCB-93	--	--	--	--	--
PCB-93/100	--	--	--	--	--
PCB-94	--	--	--	--	--
PCB-95	--	--	--	--	--
PCB-96	--	--	--	--	--
PCB-97	--	--	--	--	--
PCB-98/102	--	--	--	--	--
PCB-99	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--
DIOXINS/FURANS (NG/KG)					
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--

LOCATION	SS-207	SS-208	SS-209	SS-210	SS-211
SAMPLE ID	SS-207	SS-208	SS-209	SS-210	SS-211
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	SEC	SEC	SEC	SEC	SEC
SUBMATRIX	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6
TOTAL HXCDF	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--
METALS (MG/KG)					
ALUMINUM	--	--	--	--	--
ANTIMONY	--	--	--	--	--
ARSENIC	--	--	--	--	--
BARIUM	--	--	--	--	--
BERYLLIUM	--	--	--	--	--
CADMIUM	--	--	--	--	--
CALCIUM	--	--	--	--	--
CHROMIUM	--	--	--	--	--
COBALT	--	--	--	--	--
COPPER	--	--	--	--	--
CYANIDE	--	--	--	--	--
IRON	--	--	--	--	--
LEAD	--	--	--	--	--
MAGNESIUM	--	--	--	--	--
MANGANESE	--	--	--	--	--
MERCURY	--	--	--	--	--
NICKEL	--	--	--	--	--
POTASSIUM	--	--	--	--	--
SELENIUM	--	--	--	--	--
SILVER	--	--	--	--	--
SODIUM	--	--	--	--	--
THALLIUM	--	--	--	--	--
VANADIUM	--	--	--	--	--
ZINC	--	--	--	--	--
MISCELLANEOUS (%)					
TOTAL SOLIDS	--	--	--	--	--
MISCELLANEOUS (MG/KG)					
TOTAL ORGANIC CARBON	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)					
PERCENT SOLIDS	--	--	--	--	--

APPENDIX G.3

POSSIBLE TRANSFORMER STORAGE AREA ANALYTICAL DATA

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-005	SB-007	SB-008	SB-329	SB-329	SB-329	SB-330	SB-330	SB-330
SAMPLE ID	SB-05	SB-07	SB-08	SB329-20191105-0006	SB329-20191105-0624	SB329-20191105-2448	SB330-20191111-0006	SB330-20191111-0624	SB330-20191111-0624-D
SAMPLE DATE	20170613	20170613	20170613	20191105	20191105	20191105	20191111	20191111	20191111
DUPLICATE									SB330-20191111-0624
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SS	SS	SS
TOP DEPTH	24	24	24	0	0.5	2	0	0.5	0.5
BOTTOM DEPTH	27.6	36	27	0.5	2	4	0.5	2	2
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
1,1,2,2-TETRACHLOROETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
1,1,2-TRICHLOROETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
1,1-DICHLOROETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
1,1-DICHLOROETHENE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
1,2,3-TRICHLOROBENZENE	--	--	--	0.0044 U	0.0049 UJ	0.0048 U	0.0059 R	0.0082 R	0.0053 UJ
1,2,4-TRICHLOROBENZENE	--	--	--	0.0044 U	0.0049 UJ	0.0048 U	0.0059 R	0.0082 R	0.0053 UJ
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 R	0.0082 R	0.0053 UJ
1,2-DIBROMOETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
1,2-DICHLOROBENZENE	--	--	--	0.0044 U	0.0049 UJ	0.0048 U	0.0059 R	0.0082 R	0.0053 UJ
1,2-DICHLOROETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
1,2-DICHLOROPROPANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
1,3-DICHLOROBENZENE	--	--	--	0.0044 U	0.0049 UJ	0.0048 U	0.0059 R	0.0082 R	0.0053 UJ
1,4-DICHLOROBENZENE	--	--	--	0.0044 U	0.0049 UJ	0.0048 U	0.0059 R	0.0082 R	0.0053 UJ
2-BUTANONE	--	--	--	0.0088 U	0.0098 U	0.0096 U	0.012 U	0.016 UJ	0.011 U
2-HEXANONE	--	--	--	0.0088 U	0.0098 U	0.0096 U	0.012 UJ	0.016 R	0.011 U
4-METHYL-2-PENTANONE	--	--	--	0.0088 U	0.0098 U	0.0096 U	0.012 UJ	0.016 R	0.011 U
ACETONE	--	--	--	0.0088 U	0.02	0.0096 U	0.012 U	0.033 J+	0.011 U
BENZENE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
BROMOCHLOROMETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
BROMODICHLOROMETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
BROMOFORM	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 R	0.0082 R	0.0053 UJ
BROMOMETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
CARBON DISULFIDE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
CARBON TETRACHLORIDE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
CHLOROBENZENE	--	--	--	0.0044 U	0.0049 UJ	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
CHLORODIBROMOMETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
CHLOROETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
CHLOROFORM	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
CHLOROMETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
CIS-1,2-DICHLOROETHENE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
CIS-1,3-DICHLOROPROPENE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
CYCLOHEXANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.012 J+	0.0053 U
DICHLORODIFLUOROMETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 UJ	0.0053 U
ETHYLBENZENE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
ISOPROPYLBENZENE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
M+P-XYLENES	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
METHYL ACETATE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
METHYL CYCLOHEXANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.018 J+	0.0053 U
METHYL TERT-BUTYL ETHER	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
METHYLENE CHLORIDE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
O-XYLENE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
STYRENE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
TETRACHLOROETHENE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
TOLUENE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
TRANS-1,2-DICHLOROETHENE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
TRANS-1,3-DICHLOROPROPENE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 UJ	0.0082 R	0.0053 U
TRICHLOROETHENE	--	--	--	0.0044 R	0.0049 R	0.0048 R	0.0059 UJ	0.0082 R	0.0053 U
TRICHLOROFLUOROMETHANE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
VINYL CHLORIDE	--	--	--	0.0044 U	0.0049 U	0.0048 U	0.0059 U	0.0082 UJ	0.0053 U
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.027 J	0.19 U
1,2,4,5-TETRACHLOROBENZENE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,4-DIOXANE	--	--	--	0.075 U	0.076 U	0.076 U	0.076 U	0.073 U	0.075 U
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
2,3,4,6-TETRACHLOROPHENOL	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
2,4,5-TRICHLOROPHENOL	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
2,4,6-TRICHLOROPHENOL	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
2,4-DICHLOROPHENOL	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
2,4-DIMETHYLPHENOL	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
2,4-DINITROPHENOL	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
2,4-DINITROTOLUENE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
2,6-DINITROTOLUENE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
2-CHLORONAPHTHALENE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
2-CHLOROPHENOL	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
2-METHYLNAPHTHALENE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.067 J	0.19 U
2-METHYLPHENOL	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
2-NITROANILINE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
2-NITROPHENOL	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
3&4-METHYLPHENOL	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
3,3'-DICHLOROBENZIDINE	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
3-NITROANILINE	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
4,6-DINITRO-2-METHYLPHENOL	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
4-BROMOPHENYL PHENYL ETHER	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
4-CHLORO-3-METHYLPHENOL	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
4-CHLOROANILINE	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
4-CHLOROPHENYL PHENYL ETHER	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
4-NITROANILINE	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
4-NITROPHENOL	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
ACENAPHTHENE	--	--	--	0.19 U	0.054 J	0.062 J	0.19 U	0.19 U	0.19 U
ACENAPHTHYLENE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-005	SB-007	SB-008	SB-329	SB-329	SB-329	SB-330	SB-330	SB-330
SAMPLE ID	SB-05	SB-07	SB-08	SB329-20191105-0006	SB329-20191105-0624	SB329-20191105-2448	SB330-20191111-0006	SB330-20191111-0624	SB330-20191111-0624-D
SAMPLE DATE	20170613	20170613	20170613	20191105	20191105	20191105	20191111	20191111	20191111
DUPLICATE									SB330-20191111-0624
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SS	SS	SS
TOP DEPTH	24	24	24	0	0.5	2	0	0.5	0.5
BOTTOM DEPTH	27.6	36	27	0.5	2	4	0.5	2	2
ACETOPHENONE	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
ANTHRACENE	--	--	--	0.19 U	0.13 J	0.2	0.026 J	0.19 U	0.19 U
ATRAZINE	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
BAP EQUIVALENT-HALFND	--	--	--	0.136972	0.46975	0.60136	0.191763	0.20818	0.144261
BAP EQUIVALENT-POS	--	--	--	0.022022	0.37475	0.50636	0.096763	0.00773	0.049261
BENZALDEHYDE	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
BENZO(A)ANTHRACENE	--	--	--	0.19 U	0.3	0.44	0.073 J	0.022 J	0.036 J
BENZO(A)PYRENE	--	--	--	0.019 J	0.29	0.39	0.074 J	0.19 U	0.037 J
BENZO(B)FLUORANTHENE	--	--	--	0.03 J	0.36	0.48	0.11 J	0.054 J	0.059 J
BENZO(G,H,I)PERYLENE	--	--	--	0.19 U	0.18 J	0.24	0.047 J	0.019 J	0.029 J
BENZO(K)FLUORANTHENE	--	--	--	0.19 U	0.14 J	0.19	0.037 J	0.19 U	0.02 J
BIS(2-CHLOROETHOXY)METHANE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
BIS(2-CHLOROETHYL)ETHER	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	0.19 U	0.043 J	0.19 U	0.19 U	0.19 U	0.19 U
BUTYL BENZYL PHTHALATE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
CAPROLACTAM	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
CARBAZOLE	--	--	--	0.37 U	0.078 J	0.11 J	0.017 J	0.36 U	0.37 U
CHRYSENE	--	--	--	0.022 J	0.35	0.46	0.093 J	0.13 J	0.061 J
DIBENZO(A,H)ANTHRACENE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
DIBENZOFURAN	--	--	--	0.19 U	0.038 J	0.04 J	0.19 U	0.19 U	0.19 U
DIETHYL PHTHALATE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
DIMETHYL PHTHALATE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
DI-N-BUTYL PHTHALATE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
DI-N-OCTYL PHTHALATE	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
FLUORANTHENE	--	--	--	0.035 J	0.85	1.2	0.18 J	0.049 J	0.085 J
FLUORENE	--	--	--	0.19 U	0.045 J	0.048 J	0.19 U	0.023 J	0.19 U
HEXACHLOROBENZENE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
HEXACHLOROBUTADIENE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
HEXACHLOROCYCLOPENTADIENE	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
HEXACHLOROETHANE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
HIGH MOLECULAR WEIGHT PAHS	--	--	--	0.107	2.49	3.39	0.644	0.279	0.349
INDENO(1,2,3-CD)PYRENE	--	--	--	0.19 U	0.17 J	0.22	0.04 J	0.19 U	0.025 J
ISOPHORONE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
LOW MOLECULAR WEIGHT PAHS	--	--	--	0.057	1.873	2.627	0.376	0.264	0.153
NAPHTHALENE	--	--	--	0.19 U	0.024 J	0.017 J	0.19 U	0.012 J	0.19 U
NITROBENZENE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
N-NITROSODIPHENYLAMINE	--	--	--	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
PENTACHLOROPHENOL	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
PHENANTHRENE	--	--	--	0.022 J	0.77	1.1	0.17 J	0.18 J	0.068 J
PHENOL	--	--	--	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U
PYRENE	--	--	--	0.036 J	0.7	0.97	0.17 J	0.054 J	0.082 J
TOTAL PAHS	--	--	--	0.164	4.363	6.017	1.02	0.543	0.502
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	--	--	0.0075 U	0.0074 U	0.0075 U	0.0077 U	0.0073 U	0.0075 U
2-METHYLNAPHTHALENE	--	--	--	0.0027 J	0.014	0.009	0.0099	0.079	0.0089
ACENAPHTHENE	--	--	--	0.0037 U	0.03	0.029	0.011	0.0091	0.0018 J
ACENAPHTHYLENE	--	--	--	0.00092 J	0.003 J	0.0033 J	0.0052	0.0024 J	0.005
ANTHRACENE	--	--	--	0.0012 J	0.079	0.1	0.02	0.016	0.006
BAP EQUIVALENT-HALFND	--	--	--	0.010382	0.21333	0.24106	0.072109	0.021238	0.040784
BAP EQUIVALENT-POS	--	--	--	0.008532	0.21148	0.23921	0.070259	0.02122	0.038934
BENZO(A)ANTHRACENE	--	--	--	0.0061	0.18	0.21	0.05	0.02	0.024
BENZO(A)PYRENE	--	--	--	0.0063	0.16	0.18	0.053	0.0094	0.03
BENZO(B)FLUORANTHENE	--	--	--	0.011	0.23	0.26	0.095	0.039	0.049
BENZO(G,H,I)PERYLENE	--	--	--	0.0051	0.09	0.1	0.023	0.0073	0.014
BENZO(K)FLUORANTHENE	--	--	--	0.0043	0.088	0.098	0.027	0.0036 U	0.019
CHRYSENE	--	--	--	0.0098	0.2	0.23	0.089	0.11	0.044
DIBENZO(A,H)ANTHRACENE	--	--	--	0.0037 U	0.0037 U	0.0037 U	0.0037 U	0.0054	0.0037 U
FLUORANTHENE	--	--	--	0.014	0.47 J	0.55 J	0.22	0.035	0.11
FLUORENE	--	--	--	0.00061 J	0.033	0.033	0.011	0.022	0.0044
HIGH MOLECULAR WEIGHT PAHS	--	--	--	0.0593	1.422	1.628	0.501	0.2272	0.25
INDENO(1,2,3-CD)PYRENE	--	--	--	0.0047	0.094	0.11	0.024	0.0041	0.014
LOW MOLECULAR WEIGHT PAHS	--	--	--	0.02673	1.064	1.2083	0.4536	0.2785	0.1849
NAPHTHALENE	--	--	--	0.0016 J	0.019	0.013	0.0064	0.014	0.0047
PENTACHLOROPHENOL	--	--	--	0.0075 U	0.0076 U	0.0076 U	0.0076 U	0.0073 U	0.0075 U
PHENANTHRENE	--	--	--	0.0084	0.43 J	0.48 J	0.18	0.18	0.053
PYRENE	--	--	--	0.012	0.38 J	0.44 J	0.14	0.032	0.056
TOTAL PAHS	--	--	--	0.0098	0.2	0.23	0.089	0.11	0.044
PESTICIDES (MG/KG)									
4,4'-DDD	--	--	--	0.00019 J	0.00044 J	0.00085 J	0.0039 U	0.0022 J	0.0039 U
4,4'-DDE	--	--	--	0.00026 J	0.0037 U	0.0037 U	0.0039 U	0.0036 U	0.0039 U
4,4'-DDT	--	--	--	0.00019 J	0.0037 U	0.0037 U	0.0039 U	0.0036 U	0.0039 U
ALDRIN	--	--	--	0.0019 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U
ALPHA-BHC	--	--	--	0.0019 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U
ALPHA-CHLORDANE	--	--	--	0.0019 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U
BETA-BHC	--	--	--	0.0019 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U
DELTA-BHC	--	--	--	0.0019 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U
DIELDRIN	--	--	--	0.0038 U	0.0037 U	0.0037 U	0.0039 U	0.0036 U	0.0039 U
ENDOSULFAN I	--	--	--	0.0019 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U
ENDOSULFAN II	--	--	--	0.0038 U	0.0037 U	0.00073 J	0.0039 U	0.00058 J	0.0039 U
ENDOSULFAN SULFATE	--	--	--	0.0038 U	0.00022 J	0.0037 U	0.0039 U	0.0036 U	0.0039 U
ENDRIN	--	--	--	0.0038 U	0.0037 U	0.0037 U	0.0039 U	0.00055 J	0.0039 U
ENDRIN ALDEHYDE	--	--	--	0.0038 U	0.0037 U	0.0037 U	0.0039 U	0.0011 J	0.0039 U

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-005	SB-007	SB-008	SB-329	SB-329	SB-329	SB-330	SB-330	SB-330
SAMPLE ID	SB-05	SB-07	SB-08	SB329-20191105-0006	SB329-20191105-0624	SB329-20191105-2448	SB330-20191111-0006	SB330-20191111-0624	SB330-20191111-0624-D
SAMPLE DATE	20170613	20170613	20170613	20191105	20191105	20191105	20191111	20191111	20191111
DUPLICATE									SB330-20191111-0624
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SS	SS	SS
TOP DEPTH	24	24	24	0	0.5	2	0	0.5	0.5
BOTTOM DEPTH	27.6	36	27	0.5	2	4	0.5	2	2
ENDRIN KETONE	--	--	--	0.0038 U	0.0037 U	0.0037 U	0.0039 U	0.0036 U	0.0039 U
GAMMA-BHC (LINDANE)	--	--	--	0.0019 U	0.0019 U	0.0015 J	0.00065 J	0.0017 J	0.00031 J
GAMMA-CHLORDANE	--	--	--	0.0019 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U
HEPTACHLOR	--	--	--	0.0019 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U
HEPTACHLOR EPOXIDE	--	--	--	0.0019 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U
METHOXYCHLOR	--	--	--	0.019 U	0.019 U	0.019 U	0.02 U	0.019 U	0.02 U
TOXAPHENE	--	--	--	0.19 U	0.19 U	0.19 U	0.2 U	0.19 U	0.2 U
PCBS (MG/KG)									
AROCLOR-1016	0.038 U	0.037 U	0.038 U	0.038 U	--	--	--	--	0.039 U
AROCLOR-1221	0.038 U	0.037 U	0.038 U	0.038 U	--	--	--	--	0.039 U
AROCLOR-1232	0.038 U	0.037 U	0.038 U	0.038 U	--	--	--	--	0.039 U
AROCLOR-1242	0.038 U	0.037 U	0.038 U	0.038 U	--	--	--	--	0.039 U
AROCLOR-1248	0.038 U	0.037 U	0.038 U	0.038 U	--	--	--	--	0.039 U
AROCLOR-1254	0.038 U	0.037 U	0.038 U	0.038 U	--	--	--	--	0.039 U
AROCLOR-1260	0.038 U	0.037 U	0.038 U	0.038 U	--	--	--	--	0.039 U
AROCLOR-1262	0.038 U	0.037 U	0.038 U	0.038 U	--	--	--	--	0.039 U
AROCLOR-1268	0.038 U	0.037 U	0.038 U	0.038 U	--	--	--	--	0.039 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U	--	--	--	--	0 U
TOTAL AROCLOR HALFND	0.171	0.1665	0.171	0.171	--	--	--	--	0.1755
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	0.263 U	--
AROCLOR-1221	--	--	--	--	--	--	--	0.526 U	--
AROCLOR-1232	--	--	--	--	--	--	--	0.263 U	--
AROCLOR-1242	--	--	--	--	--	--	--	0.263 U	--
AROCLOR-1248	--	--	--	--	--	--	--	0.263 U	--
AROCLOR-1254	--	--	--	--	--	--	--	0.263 U	--
AROCLOR-1260	--	--	--	--	--	--	--	0.263 U	--
AROCLOR-1262	--	--	--	--	--	--	--	0.263 U	--
AROCLOR-1268	--	--	--	--	--	--	--	0.263 U	--
TOTAL AROCLOR	--	--	--	--	--	--	--	0 U	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	1.315	--
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	--	--	0.000037 J	0.0000061 J	0.0000072 J	0.00014 J	0 UJ	0.00013 J
HEPTACHLOROBIPHENYLS	--	--	--	0.00091 J	0.000017 J	0.0000016 J	0.00049 J	0.000034 J	0.00045 J
HEXACHLOROBIPHENYLS	--	--	--	0.00091 J	0.000013 J	0.0000039 J	0.00063 J	0.000022 J	0.00065 J
MONOCHLOROBIPHENYLS	--	--	--	0 UJ	0 UJ	0.00000098 J	0.0000043 J	0 UJ	0.0000044 J
NONACHLOROBIPHENYLS	--	--	--	0.00015 J	0.0000095 J	0.0000062 J	0.00016 J	0.000004 J	0.00022 J
OCTACHLOROBIPHENYLS	--	--	--	0.00024 J	0.000007 J	0 UJ	0.00014 J	0 UJ	0.00015 J
PCB-1	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000015 J	0.000002 U	0.0000014 J
PCB-10	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-100	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-101/90	--	--	--	0.000071	0.0000028 J	0.0000011 J	0.000047	0.0000042	0.000051
PCB-103	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-104	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-105	--	--	--	0.000012	0.00000082 U	0.0000007 U	0.000014	0.0000012 U	0.000017
PCB-108/107	--	--	--	0.0000021 J	0.000004 U	0.000004 U	0.0000031 J	0.000004 U	0.0000044
PCB-109	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-11	--	--	--	0.00003	0.0000061	0.0000072	0.00014	0.000002 U	0.00013
PCB-110	--	--	--	0.000048	0.0000016 J	0.000002 U	0.000044	0.0000019 J	0.00005
PCB-111/115	--	--	--	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.0000011 J
PCB-113	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-114	--	--	--	0.00000083 U	0.00000087 U	0.00000083 U	0.00000083 U	0.0000011 U	0.00000083 U
PCB-118/106	--	--	--	0.000035	0.0000018 J	0.00000075 U	0.000037	0.0000025 J	0.000043
PCB-119	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-12	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-120	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-121	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-122	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-123	--	--	--	0.00000074 U	0.00000097 U	0.00000077 U	0.0000013 J	0.0000013 U	0.0000013 J
PCB-124	--	--	--	0.000003	0.000002 U	0.000002 U	0.0000023	0.000002 U	0.000003
PCB-126	--	--	--	0.00000079 U	0.00000095 U	0.0000008 U	0.00000099 U	0.0000016 U	0.000001 U
PCB-127	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-128/162	--	--	--	0.000015	0.000004 U	0.000004 U	0.000016	0.000004 U	0.000016
PCB-129	--	--	--	0.0000041	0.000002 U	0.000002 U	0.0000038	0.000002 U	0.0000038
PCB-13	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-130	--	--	--	0.0000073	0.000002 U	0.000002 U	0.0000084	0.000002 U	0.0000074
PCB-131/133	--	--	--	0.000004	0.000004 U	0.000004 U	0.0000056	0.000004 U	0.0000041
PCB-132/161	--	--	--	0.000033	0.000004 U	0.000004 U	0.000022	0.000004 U	0.000025
PCB-134/143	--	--	--	0.0000072	0.000004 U	0.000004 U	0.0000051	0.000004 U	0.0000045
PCB-135	--	--	--	0.000026	0.000002 U	0.000002 U	0.000017	0.000002 U	0.000016
PCB-136	--	--	--	0.000029	0.000002 U	0.000002 U	0.000011	0.000002 U	0.0000099
PCB-137	--	--	--	0.0000025	0.000002 U	0.000002 U	0.0000034	0.000002 U	0.0000046
PCB-138/163/164	--	--	--	0.0002	0.0000047 J	0.0000013 J	0.00015	0.0000071	0.00016
PCB-139/149	--	--	--	0.00017	0.0000026 J	0.00000093 J	0.00011	0.0000064	0.00011
PCB-14	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-140	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-141	--	--	--	0.000049	0.000002 U	0.000002 U	0.000032	0.000002 U	0.000031
PCB-142	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-144	--	--	--	0.000014	0.000002 U	0.000002 U	0.0000059	0.000002 U	0.0000047
PCB-145	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-146/165	--	--	--	0.000025	0.000004 U	0.000004 U	0.000022	0.000004 U	0.000024
PCB-147	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000022	0.000002 U	0.0000023
PCB-148	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U

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SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-005	SB-007	SB-008	SB-329	SB-329	SB-329	SB-330	SB-330	SB-330
SAMPLE ID	SB-05	SB-07	SB-08	SB329-20191105-0006	SB329-20191105-0624	SB329-20191105-2448	SB330-20191111-0006	SB330-20191111-0624	SB330-20191111-0624-D
SAMPLE DATE	20170613	20170613	20170613	20191105	20191105	20191105	20191111	20191111	20191111
DUPLICATE									SB330-20191111-0624
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SS	SS	SS
TOP DEPTH	24	24	24	0	0.5	2	0	0.5	0.5
BOTTOM DEPTH	27.6	36	27	0.5	2	4	0.5	2	2
PCB-15	--	--	--	0.0000052	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-150	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-151	--	--	--	0.000064	0.000002 U	0.000002 U	0.000033	0.000002 U	0.000032
PCB-152	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-153	--	--	--	0.00022	0.0000056	0.0000017 J	0.00015	0.0000083	0.00016
PCB-154	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-155	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-156	--	--	--	0.000013	0.00000065 U	0.0000005 U	0.0000092	0.0000015 U	0.0000097
PCB-157	--	--	--	0.0000021	0.00000071 U	0.00000046 U	0.0000028	0.0000016 U	0.0000023
PCB-158/160	--	--	--	0.000018	0.000004 U	0.000004 U	0.000013	0.000004 U	0.000014
PCB-159	--	--	--	0.0000038	0.000002 U	0.000002 U	0.000002	0.000002 U	0.0000022
PCB-16	--	--	--	0.0000013 J	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-166	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-167	--	--	--	0.0000066	0.00000068 U	0.00000047 U	0.0000058	0.0000015 U	0.000006
PCB-168	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-169	--	--	--	0.0000011 U	0.00000064 U	0.00000047 U	0.00000096 U	0.0000018 U	0.0000012 U
PCB-17	--	--	--	0.0000018 J	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-170	--	--	--	0.00011	0.0000024	0.000002 U	0.00006	0.0000056	0.00005
PCB-171	--	--	--	0.000028	0.000002 U	0.000002 U	0.000019	0.000002 U	0.000014
PCB-172	--	--	--	0.00002	0.000002 U	0.000002 U	0.000015	0.000002 U	0.000011
PCB-173	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-174	--	--	--	0.0001	0.000002	0.000002 U	0.000055	0.0000037	0.000049
PCB-175	--	--	--	0.0000042	0.000002 U	0.000002 U	0.000003	0.000002 U	0.000002
PCB-176	--	--	--	0.000013	0.000002 U	0.000002 U	0.0000067	0.000002 U	0.0000055
PCB-177	--	--	--	0.000066	0.000002 U	0.000002 U	0.000038	0.000002 U	0.000032
PCB-178	--	--	--	0.000021	0.000002 U	0.000002 U	0.000017	0.0000049	0.000014
PCB-179	--	--	--	0.000045	0.000002 U	0.000002 U	0.000023	0.0000025	0.000024
PCB-18	--	--	--	0.0000032	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-180	--	--	--	0.00025	0.0000069	0.0000016 J	0.00011	0.000012	0.00012
PCB-181	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-182/187	--	--	--	0.00013	0.0000029 J	0.000004 U	0.000072	0.0000056	0.000069
PCB-183	--	--	--	0.000056	0.0000023	0.000002 U	0.000031	0.000002 U	0.000029
PCB-184	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-185	--	--	--	0.000015	0.000002 U	0.000002 U	0.0000079	0.000002 U	0.0000076
PCB-186	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-188	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-189	--	--	--	0.0000031	0.00000088 U	0.00000053 U	0.0000028	0.0000018 U	0.0000022
PCB-19	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-190	--	--	--	0.000026	0.000002 U	0.000002 U	0.000015	0.000002 U	0.000012
PCB-191	--	--	--	0.0000054	0.000002 U	0.000002 U	0.0000043	0.000002 U	0.0000027
PCB-192	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-193	--	--	--	0.000015	0.000002 U	0.000002 U	0.00001	0.000002 U	0.0000082
PCB-194	--	--	--	0.000045	0.000002 U	0.000002 U	0.000029	0.000002 U	0.000026
PCB-195	--	--	--	0.000021	0.000002 U	0.000002 U	0.000013	0.000002 U	0.000012
PCB-196/203	--	--	--	0.00007	0.0000038 J	0.000004 U	0.000036	0.000004 U	0.000037
PCB-197	--	--	--	0.0000022	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000018 J
PCB-198	--	--	--	0.0000033	0.000002 U	0.000002 U	0.0000027	0.000002 U	0.0000025
PCB-199	--	--	--	0.000068	0.0000032	0.000002 U	0.00004	0.000002 U	0.000046
PCB-2	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000013 J	0.000002 U	0.0000015 J
PCB-20/21/33	--	--	--	0.0000024 J	0.000006 U	0.000006 U	0.0000014 J	0.000006 U	0.0000011 J
PCB-200	--	--	--	0.0000078	0.000002 U	0.000002 U	0.0000045	0.000002 U	0.0000031
PCB-201	--	--	--	0.000007	0.000002 U	0.000002 U	0.0000044	0.000002 U	0.0000047
PCB-202	--	--	--	0.000015	0.000002 U	0.000002 U	0.000012	0.000002 U	0.000012
PCB-204	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-205	--	--	--	0.0000033	0.000002 U	0.000002 U	0.0000028	0.000002 U	0.000002
PCB-206	--	--	--	0.0001	0.0000064	0.0000043	0.000099	0.000004	0.00014
PCB-207	--	--	--	0.000011	0.000002 U	0.000002 U	0.000013	0.000002 U	0.000014
PCB-208	--	--	--	0.000043	0.0000031	0.0000019 J	0.000049	0.000002 U	0.000063
PCB-209	--	--	--	0.0003	0.0000094	0.0000054	0.00031	0.0000056	0.00038
PCB-22	--	--	--	0.0000044	0.000002 U	0.000002 U	0.0000021	0.000002 U	0.0000014 J
PCB-23	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-24	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-25	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-26	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-27	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-28	--	--	--	0.000011	0.000002 U	0.000002 U	0.0000041	0.000002 U	0.0000029
PCB-29	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-3	--	--	--	0.000002 U	0.000002 U	0.00000098 J	0.0000015 J	0.000002 U	0.0000015 J
PCB-30	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-31	--	--	--	0.0000061	0.000002 U	0.000002 U	0.0000042	0.000002 U	0.0000028
PCB-32	--	--	--	0.0000025	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-34	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-35	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000012 J	0.000002 U	0.0000015 J
PCB-36	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000015 J	0.000002 U	0.0000013 J
PCB-37	--	--	--	0.0000046	0.000002 U	0.000002 U	0.0000028	0.000002 U	0.0000025
PCB-38	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-39	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-4	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-40	--	--	--	0.0000023	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-41/64/71/72	--	--	--	0.000012	0.000008 U	0.000008 U	0.0000053 J	0.000008 U	0.0000045 J
PCB-42/59	--	--	--	0.0000045	0.000004 U	0.000004 U	0.0000021 J	0.000004 U	0.0000014 J
PCB-43/49	--	--	--	0.000013	0.000004 U	0.000004 U	0.0000061	0.000004 U	0.0000053
PCB-44	--	--	--	0.000012	0.000002 U	0.000002 U	0.0000043	0.000002 U	0.0000044

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-005	SB-007	SB-008	SB-329	SB-329	SB-329	SB-330	SB-330	SB-330
SAMPLE ID	SB-05	SB-07	SB-08	SB329-20191105-0006	SB329-20191105-0624	SB329-20191105-2448	SB330-20191111-0006	SB330-20191111-0624	SB330-20191111-0624-D
SAMPLE DATE	20170613	20170613	20170613	20191105	20191105	20191105	20191111	20191111	20191111
DUPLICATE									SB330-20191111-0624
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SS	SS	SS
TOP DEPTH	24	24	24	0	0.5	2	0	0.5	0.5
BOTTOM DEPTH	27.6	36	27	0.5	2	4	0.5	2	2
PCB-45	--	--	--	0.000002	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-46	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-47	--	--	--	0.0000048	0.000002 U	0.000002 U	0.0000027	0.000002 U	0.0000023
PCB-48/75	--	--	--	0.000002 J	0.000004 U	0.000004 U	0.0000012 J	0.000004 U	0.000004 U
PCB-5	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-50	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-51	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-52/69	--	--	--	0.000017	0.000004 U	0.000004 U	0.0000085	0.000004 U	0.000007
PCB-53	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-54	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-55	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-56/60	--	--	--	0.000013	0.000004 U	0.000004 U	0.0000054	0.000004 U	0.0000045
PCB-57	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-58	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-6	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-61/70	--	--	--	0.000012	0.000004 U	0.000004 U	0.000012	0.000004 U	0.000012
PCB-62	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-63	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-65	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-66/76	--	--	--	0.000016	0.000004 U	0.000004 U	0.000008	0.000004 U	0.0000069
PCB-67	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-68	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-7	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-73	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-74	--	--	--	0.0000077	0.000002 U	0.000002 U	0.0000035	0.000002 U	0.0000031
PCB-77	--	--	--	0.0000028	0.00000072 U	0.0000005 U	0.0000024	0.0000012 U	0.0000024
PCB-78	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-79	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.00000075 J
PCB-8	--	--	--	0.0000018 J	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-80	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-81	--	--	--	0.0000012 J	0.00000057 U	0.00000042 U	0.00000077 J	0.0000011 U	0.00000078 J
PCB-82	--	--	--	0.0000028	0.000002 U	0.000002 U	0.0000026	0.000002 U	0.0000036
PCB-83/112	--	--	--	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.0000014 J
PCB-84/92	--	--	--	0.000014	0.000004 U	0.000004 U	0.000012	0.000004 U	0.000011
PCB-85/116	--	--	--	0.0000063	0.000004 U	0.000004 U	0.0000065	0.000004 U	0.0000082
PCB-86	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-87/117/125	--	--	--	0.000014	0.000006 U	0.000006 U	0.000011	0.000006 U	0.000014
PCB-88/91	--	--	--	0.0000032 J	0.000004 U	0.000004 U	0.0000026 J	0.000004 U	0.000003 J
PCB-89	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-9	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-93	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-94	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-95	--	--	--	0.00004	0.000002 U	0.000002 U	0.000019	0.000002 U	0.000019
PCB-96	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-97	--	--	--	0.0000085	0.000002 U	0.000002 U	0.0000077	0.000002 U	0.0000095
PCB-98/102	--	--	--	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U
PCB-99	--	--	--	0.000013	0.000002 U	0.000002 U	0.000013	0.000002 U	0.000017
PENTACHLOROBIPHENYLS	--	--	--	0.00027 J	0.0000062 J	0.0000011 J	0.00022 J	0.0000086 J	0.00026 J
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	2.62807E-07	0.00000082 U	0.0000007 U	1.99699E-07	0.0000012 U	2.00995E-07
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	3.02901E-07	0.00000082 U	0.0000007 U	2.4972E-07	0.0000012 U	2.51636E-07
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	1.063E-09	0.00000082 U	0.0000007 U	8.04E-10	0.0000012 U	8.21E-10
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	3.068E-09	0.00000082 U	0.0000007 U	3.305E-09	0.0000012 U	3.353E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	1.744E-09	0.00000082 U	0.0000007 U	1.548E-09	0.0000012 U	1.629E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	5.7767E-08	0.00000082 U	0.0000007 U	6.546E-08	0.0000012 U	6.9641E-08
TETRACHLOROBIPHENYLS	--	--	--	0.00012 J	0 UJ	0 UJ	0.000062 J	0 UJ	0.000055 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	0.0000408	0 U	0 U	0.00003907	0 U	0.00004168
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	0.0029466	0.0000676	0.00002641	0.0021432	0.0000743	0.00226485
TOTAL PCB CONGENERS ZEROND	--	--	--	0.0029874	0.0000676	0.00002641	0.00218227	0.0000743	0.00230653
TOTAL PCB CONGENERS-NOAA	--	--	--	0.001525	0.0000429	0.0000154	0.0011029	0.0000549	0.0012392
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	0.00307013	0.00024583	0.00021201	0.00226766	0.00026015	0.002388045
TOTAL PCB CONGENERS-NOAA X2	--	--	--	0.00305	0.0000858	0.0000308	0.0022058	0.0001098	0.0024784
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	0.00305	0.00010862	0.00006025	0.0022098	0.000133	0.0024824
TRICHLOROBIPHENYLS	--	--	--	0.000037 J	0 UJ	0 UJ	0.000017 J	0 UJ	0.000014 J
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	--	--	3600	2300	2400	1400	42	1600
1,2,3,4,6,7,8,9-OCDF	--	--	--	0.82 J	0.58 U	0.43 U	0.7 J	0.39 U	1.1 J
1,2,3,4,6,7,8-HPCDD	--	--	--	23	15	15	14	0.51 J	13
1,2,3,4,6,7,8-HPCDF	--	--	--	0.69 J	0.68 J	0.53 J	0.8 J	0.17 U	1.2 J
1,2,3,4,7,8,9-HPCDF	--	--	--	0.19 U	0.16 U	0.16 U	0.15 U	0.19 U	0.23 U
1,2,3,4,7,8-HXCDD	--	--	--	0.33 J	0.38 J	0.35 J	0.32 J	0.19 U	0.44 U
1,2,3,4,7,8-HXCDF	--	--	--	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.23 U
1,2,3,6,7,8-HXCDD	--	--	--	0.31 J	0.32 J	0.22 U	0.3 J	0.19 U	0.48 U
1,2,3,6,7,8-HXCDF	--	--	--	0.2 U	0.21 U	0.2 U	0.2 U	0.2 U	0.22 U
1,2,3,7,8,9-HXCDD	--	--	--	0.48 J	0.37 J	0.2 U	0.33 J	0.17 U	0.42 U
1,2,3,7,8,9-HXCDF	--	--	--	0.23 U	0.24 U	0.2 U	0.25 U	0.16 U	0.29 U
1,2,3,7,8-PECDD	--	--	--	0.26 U	0.22 J	0.18 U	0.18 U	0.18 U	0.33 U
1,2,3,7,8-PECDF	--	--	--	0.19 U	0.15 U	0.17 U	0.15 U	0.15 U	0.35 U
2,3,4,6,7,8-HXCDF	--	--	--	0.19 U	0.21 U	0.17 U	0.2 U	0.13 U	0.23 U
2,3,4,7,8-PECDF	--	--	--	0.19 U	0.35 J	0.23 J	0.29 J	0.14 U	0.37 U
2,3,7,8-TCDD	--	--	--	0.11 U	0.085 U	0.11 U	0.1 U	0.062 U	0.13 U
2,3,7,8-TCDF	--	--	--	0.15 U	0.26 J	0.17 J	0.26 J	0.067 U	0.38 J
TEQ DIOXINS (BIRD)	--	--	--	0.457582	1.141	0.6778	0.76407	0.00471	0.56511
TEQ DIOXINS (BIRD) HALFND	--	--	--	0.864532	1.235329	0.8822215	0.95532	0.2877295	1.08166

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-005	SB-007	SB-008	SB-329	SB-329	SB-329	SB-330	SB-330	SB-330
SAMPLE ID	SB-05	SB-07	SB-08	SB329-20191105-0006	SB329-20191105-0624	SB329-20191105-2448	SB330-20191111-0006	SB330-20191111-0624	SB330-20191111-0624-D
SAMPLE DATE	20170613	20170613	20170613	20191105	20191105	20191105	20191111	20191111	20191111
DUPLICATE									SB330-20191111-0624
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SS	SS	SS
TOP DEPTH	24	24	24	0	0.5	2	0	0.5	0.5
BOTTOM DEPTH	27.6	36	27	0.5	2	4	0.5	2	2
TEQ DIOXINS (FISH)	--	--	--	0.562882	0.8567	0.5588	0.48637	0.00471	0.20411
TEQ DIOXINS (FISH) HALFND	--	--	--	0.846332	0.947279	0.7499715	0.67387	0.2522545	0.69951
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	1.429146	1.3048	0.9963	0.77621	0.0177	0.66033
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	1.695446	1.393937	1.2047145	0.96221	0.2296585	1.06773
TOTAL HPCDD	--	--	--	41 J	28 J	27 J	27 J	0.92 J	26 J
TOTAL HPCDF	--	--	--	1.1 J	0.68 J	0.53 J	1.1 J	0 UJ	1.7 J
TOTAL HXCDD	--	--	--	4.8 J	7.2 J	6 J	4.3 J	0 UJ	3.5 J
TOTAL HXCDF	--	--	--	0.28 J	0.69 J	0.55 J	0.44 J	0 UJ	0.92 J
TOTAL PECDD	--	--	--	0 UJ	3.2 J	1.7 J	1 J	0 UJ	0.57 J
TOTAL PECDF	--	--	--	0.68 J	2.5 J	1.5 J	2.1 J	0 UJ	0 UJ
TOTAL TCDD	--	--	--	0.24 J	1.8 J	1.4 J	0.64 J	0 UJ	1.1 J
TOTAL TCDF	--	--	--	0.98 J	5.7 J	3.7 J	4.4 J	0 UJ	5.7 J
METALS (MG/KG)									
ALUMINUM	--	--	--	7870	7630	7580	9700	4320	12000
ANTIMONY	--	--	--	0.23 J	1.1 U	1.1 U	1.1 U	1 U	1.1 U
ARSENIC	--	--	--	8.2	8.2	6.1	8.7	22.3	8.9
BARIUM	--	--	--	62.3	69.8	56.3	72.7	52.7	70.4
BERYLLIUM	--	--	--	0.89	0.96	0.77	0.9	0.33 J	1.1
CADMIUM	--	--	--	0.093 J	0.53 U	0.55 U	0.13 J	0.51 U	0.086 J
CALCIUM	--	--	--	696	221 J	43.6 J	2020	265 J	1430
CHROMIUM	--	--	--	16.8	15.4	11.8	17.2	5	13.9
COBALT	--	--	--	14.7	11.6	9.1	12.1	4.9	14.4
COPPER	--	--	--	15.6	20.6	16.8	21.8	36.8	21.8
CYANIDE	--	--	--	0.58 J	0.07 J	0.34 J	0.59 R	0.55 R	6.2 J-
IRON	--	--	--	24300	23800	21100	54600	11800	27400
LEAD	--	--	--	23.4	23.5	17.1	27.8	13	27.7
MAGNESIUM	--	--	--	552 J	730	583	1210	973	3010
MANGANESE	--	--	--	392	414	316	410	90.1	511
MERCURY	--	--	--	0.078 J	0.057 J	0.034 J	0.052 J	0.12	0.069 J
NICKEL	--	--	--	14.2	15.5	9.5	14.5	7	16.5
POTASSIUM	--	--	--	665	760	695	1530	1410	1590
SELENIUM	--	--	--	2.8 UJ	2.7 UJ	2.7 UJ	2.9 U	2.6 U	2.9 U
SILVER	--	--	--	0.56 U	0.53 U	0.55 U	0.57 U	0.51 U	0.57 U
SODIUM	--	--	--	15.2 J	22.1 J	13.5 J	40.4 J	131 J	48.2 J
THALLIUM	--	--	--	0.56 U	0.53 U	0.55 U	0.57 U	0.51 U	0.57 U
VANADIUM	--	--	--	21	20.6	17.6	15.9	5.6	17.6
ZINC	--	--	--	42.5	39.1	26.9	42.6	22.8	50.6
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	88	--	--	87	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	10300	--	--	45900	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	--	--	--	--	--	--	95	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-330	SB-330	SB-330	SB-331	SB-331	SB-331	SB-331	SB-332	SB-332
SAMPLE ID	SB330-20191111-156180	SB330-20191111-180204	SB330-20191111-6096	SB331-20191111-0006	SB331-20191111-0624	SB331-20191111-144168	SB331-20191111-7296	SB332-20191114-0006	SB332-20191114-0624
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	13	15	5	0	0.5	12	6	0	0.5
BOTTOM DEPTH	15	17	7	0.5	2	14	8	0.5	2
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
1,1,2,2-TETRACHLOROETHANE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
1,1,2-TRICHLOROETHANE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0077 U	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
1,1-DICHLOROETHANE	0.0077 U	--	--	0.0051 U	0.0053 U	0.0061 U	--	0.0048 U	0.0057 U
1,1-DICHLOROETHENE	0.0077 U	--	--	0.0051 U	0.0053 U	0.0061 U	--	0.0048 U	0.0057 U
1,2,3-TRICHLOROBENZENE	0.0077 R	--	--	0.0051 UJ	0.0053 R	0.0061 R	--	0.0048 U	0.0057 R
1,2,4-TRICHLOROBENZENE	0.0077 R	--	--	0.0051 UJ	0.0053 R	0.0061 R	--	0.0048 U	0.0057 R
1,2-DIBROMO-3-CHLOROPROPANE	0.0077 R	--	--	0.0051 UJ	0.0053 R	0.0061 R	--	0.0048 U	0.0057 R
1,2-DIBROMOETHANE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
1,2-DICHLOROBENZENE	0.0077 R	--	--	0.0051 UJ	0.0053 R	0.0061 R	--	0.0048 U	0.0057 R
1,2-DICHLOROETHANE	0.0077 U	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
1,2-DICHLOROPROPANE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
1,3-DICHLOROBENZENE	0.0077 R	--	--	0.0051 UJ	0.0053 R	0.0061 R	--	0.0048 U	0.0057 R
1,4-DICHLOROBENZENE	0.0077 R	--	--	0.0051 UJ	0.0053 R	0.0061 R	--	0.0048 U	0.0057 R
2-BUTANONE	0.015 U	--	--	0.01 U	0.011 U	0.012 U	--	0.0097 U	0.011 U
2-HEXANONE	0.015 UJ	--	--	0.01 U	0.011 UJ	0.012 UJ	--	0.0097 U	0.011 UJ
4-METHYL-2-PENTANONE	0.015 UJ	--	--	0.01 U	0.011 UJ	0.012 UJ	--	0.0097 U	0.011 UJ
ACETONE	0.015 U	--	--	0.01 U	0.011 U	0.012 U	--	0.0097 U	0.011 U
BENZENE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
BROMOCHLOROMETHANE	0.0077 U	--	--	0.0051 U	0.0053 U	0.0061 U	--	0.0048 U	0.0057 U
BROMODICHLOROMETHANE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
BROMOFORM	0.0077 R	--	--	0.0051 UJ	0.0053 R	0.0061 R	--	0.0048 U	0.0057 R
BROMOMETHANE	0.0077 U	--	--	0.0051 U	0.0053 U	0.0061 U	--	0.0048 U	0.0057 U
CARBON DISULFIDE	0.0077 U	--	--	0.0051 U	0.0053 U	0.0061 U	--	0.0048 U	0.0057 U
CARBON TETRACHLORIDE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
CHLOROBENZENE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
CHLORODIBROMOMETHANE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
CHLOROETHANE	0.0077 U	--	--	0.0051 U	0.0053 U	0.0061 U	--	0.0048 U	0.0057 U
CHLOROFORM	0.0077 U	--	--	0.0051 U	0.0053 U	0.0061 U	--	0.0048 U	0.0057 U
CHLOROMETHANE	0.0077 U	--	--	0.0051 U	0.0053 U	0.0061 U	--	0.0048 U	0.0057 U
CIS-1,2-DICHLOROETHENE	0.0077 U	--	--	0.0051 U	0.0053 U	0.0061 U	--	0.0048 U	0.0057 U
CIS-1,3-DICHLOROPROPENE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
CYCLOHEXANE	0.0051 J	--	--	0.0051 U	0.0051 J	0.0081 J+	--	0.0048 U	0.0032 J
DICHLORODIFLUOROMETHANE	0.0077 UJ	--	--	0.0051 U	0.0053 U	0.0061 U	--	0.0048 U	0.0057 U
ETHYLBENZENE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
ISOPROPYLBENZENE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
M+P-XYLENES	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
METHYL ACETATE	0.0077 U	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
METHYL CYCLOHEXANE	0.01 J+	--	--	0.0051 U	0.01 J+	0.017 J+	--	0.0048 U	0.0051 J
METHYL TERT-BUTYL ETHER	0.0077 U	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
METHYLENE CHLORIDE	0.0077 U	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
O-XYLENE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
STYRENE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
TETRACHLOROETHENE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
TOLUENE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
TRANS-1,2-DICHLOROETHENE	0.0077 U	--	--	0.0051 U	0.0053 U	0.0061 U	--	0.0048 U	0.0057 U
TRANS-1,3-DICHLOROPROPENE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
TRICHLOROETHENE	0.0077 UJ	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
TRICHLOROFLUOROMETHANE	0.0077 U	--	--	0.0051 U	0.0053 UJ	0.0061 UJ	--	0.0048 U	0.0057 UJ
VINYL CHLORIDE	0.0077 U	--	--	0.0051 U	0.0053 U	0.0061 U	--	0.0048 U	0.0057 U
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.026 J	--	--	0.19 U	0.049 J	0.066 J	--	0.2 U	0.026 J
1,2,4,5-TETRACHLOROBENZENE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
1,4-DIOXANE	0.072 UJ	--	--	0.076 U	0.069 U	0.07 U	--	0.077 U	0.076 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
2,3,4,6-TETRACHLOROPHENOL	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
2,4,5-TRICHLOROPHENOL	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
2,4,6-TRICHLOROPHENOL	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
2,4-DICHLOROPHENOL	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
2,4-DIMETHYLPHENOL	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
2,4-DINITROPHENOL	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
2,4-DINITROTOLUENE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
2,6-DINITROTOLUENE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
2-CHLORONAPHTHALENE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
2-CHLOROPHENOL	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
2-METHYLNAPHTHALENE	0.075 J	--	--	0.19 U	0.16 J	0.17 J	--	0.2 U	0.069 J
2-METHYLPHENOL	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
2-NITROANILINE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 UJ	0.19 U
2-NITROPHENOL	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
3&4-METHYLPHENOL	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
3,3'-DICHLOROBENZIDINE	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
3-NITROANILINE	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
4,6-DINITRO-2-METHYLPHENOL	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
4-BROMOPHENYL PHENYL ETHER	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
4-CHLORO-3-METHYLPHENOL	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
4-CHLOROANILINE	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
4-CHLOROPHENYL PHENYL ETHER	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
4-NITROANILINE	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
4-NITROPHENOL	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
ACENAPHTHENE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
ACENAPHTHYLENE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U

LOCATION	SB-330	SB-330	SB-330	SB-331	SB-331	SB-331	SB-331	SB-332	SB-332
SAMPLE ID	SB330-20191111-156180	SB330-20191111-180204	SB330-20191111-6096	SB331-20191111-0006	SB331-20191111-0624	SB331-20191111-144168	SB331-20191111-7296	SB332-20191114-0006	SB332-20191114-0624
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	13	15	5	0	0.5	12	6	0	0.5
BOTTOM DEPTH	15	17	7	0.5	2	14	8	0.5	2
ACETOPHENONE	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
ANTHRACENE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.04 J
ATRAZINE	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
BAP EQUIVALENT-HALFND	0.202889	--	--	0.23944	0.201647	0.201587	--	0.25044	0.24416
BAP EQUIVALENT-POS	0.003989	--	--	0.14444	0.002747	0.002687	--	0.15044	0.14916
BENZALDEHYDE	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
BENZO(A)ANTHRACENE	0.18 U	--	--	0.087 J	0.18 U	0.18 U	--	0.11 J	0.12 J
BENZO(A)PYRENE	0.18 U	--	--	0.11 J	0.18 U	0.18 U	--	0.11 J	0.11 J
BENZO(B)FLUORANTHENE	0.039 J	--	--	0.17 J	0.027 J	0.026 J	--	0.2	0.19
BENZO(G,H,I)PERYLENE	0.027 J	--	--	0.089 J	0.18 U	0.18 U	--	0.066 J	0.059 J
BENZO(K)FLUORANTHENE	0.18 U	--	--	0.061 J	0.18 U	0.18 U	--	0.051 J	0.065 J
BIS(2-CHLOROETHOXY)METHANE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
BIS(2-CHLOROETHYL)ETHER	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
BUTYL BENZYL PHTHALATE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
CAPROLACTAM	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
CARBAZOLE	0.35 U	--	--	0.025 J	0.34 U	0.34 U	--	0.38 U	0.37 U
CHRYSENE	0.089 J	--	--	0.13 J	0.047 J	0.087 J	--	0.13 J	0.21
DIBENZO(A,H)ANTHRACENE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
DIBENZOFURAN	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
DIETHYL PHTHALATE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
DIMETHYL PHTHALATE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
DI-N-BUTYL PHTHALATE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
DI-N-OCTYL PHTHALATE	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
FLUORANTHENE	0.038 J	--	--	0.27 J	0.025 J	0.033 J	--	0.3 J	0.31 J
FLUORENE	0.02 J	--	--	0.19 U	0.18 U	0.023 J	--	0.2 U	0.19 U
HEXACHLOROBENZENE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
HEXACHLOROBUTADIENE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
HEXACHLOROCYCLOPENTADIENE	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
HEXACHLOROETHANE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
HIGH MOLECULAR WEIGHT PAHS	0.203	--	--	0.957	0.095	0.141	--	1.015	1.107
INDENO(1,2,3-CD)PYRENE	0.18 U	--	--	0.08 J	0.18 U	0.18 U	--	0.088 J	0.073 J
ISOPHORONE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
LOW MOLECULAR WEIGHT PAHS	0.213	--	--	0.45	0.198	0.271	--	0.47	0.705
NAPHTHALENE	0.015 J	--	--	0.19 U	0.043 J	0.025 J	--	0.2 U	0.025 J
NITROBENZENE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 UJ	0.19 U
N-NITROSO-DI-N-PROPYLAMINE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
N-NITROSODIPHENYLAMINE	0.18 U	--	--	0.19 U	0.18 U	0.18 U	--	0.2 U	0.19 U
PENTACHLOROPHENOL	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
PHENANTHRENE	0.14 J	--	--	0.18 J	0.13 J	0.19	--	0.17 J	0.33
PHENOL	0.35 U	--	--	0.37 U	0.34 U	0.34 U	--	0.38 U	0.37 U
PYRENE	0.048 J	--	--	0.23	0.021 J	0.028 J	--	0.26	0.28
TOTAL PAHS	0.416	--	--	1.407	0.293	0.412	--	1.485	1.812
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	0.0071 U	--	--	0.0076 U	0.0068 U	0.007 U	--	0.0077 U	0.0076 U
2-METHYLNAPHTHALENE	0.12	--	--	0.0087	0.21	0.21	--	0.0026 J	0.058
ACENAPHTHENE	0.008	--	--	0.0022 J	0.009	0.013	--	0.0018 J	0.01
ACENAPHTHYLENE	0.002 J	--	--	0.014	0.0018 J	0.0019 J	--	0.011	0.0052
ANTHRACENE	0.018	--	--	0.014	0.0097	0.011	--	0.011	0.02
BAP EQUIVALENT-HALFND	0.013627	--	--	0.12087	0.009354	0.011187	--	0.13441	0.09529
BAP EQUIVALENT-POS	0.01361	--	--	0.11902	0.009337	0.01117	--	0.13251	0.09344
BENZO(A)ANTHRACENE	0.01	--	--	0.094	0.0057	0.0079	--	0.1	0.078
BENZO(A)PYRENE	0.005	--	--	0.089	0.0032 J	0.0038	--	0.1	0.068
BENZO(B)FLUORANTHENE	0.03	--	--	0.16	0.022	0.025	--	0.16	0.13
BENZO(G,H,I)PERYLENE	0.011	--	--	0.038	0.0057	0.0057	--	0.053	0.03
BENZO(K)FLUORANTHENE	0.0035 U	--	--	0.05	0.0034 U	0.0034 U	--	0.057	0.046
CHRYSENE	0.15	--	--	0.12	0.067	0.07	--	0.14	0.18
DIBENZO(A,H)ANTHRACENE	0.0042	--	--	0.0037 U	0.0031 J	0.0038	--	0.0038 U	0.0037 U
FLUORANTHENE	0.019	--	--	0.3	0.015	0.015	--	0.25	0.18
FLUORENE	0.019	--	--	0.0081	0.022	0.024	--	0.0038 U	0.015
HIGH MOLECULAR WEIGHT PAHS	0.2438	--	--	0.741	0.1287	0.1393	--	0.898	0.752
INDENO(1,2,3-CD)PYRENE	0.0026 J	--	--	0.04	0.002 J	0.0021 J	--	0.058	0.04
LOW MOLECULAR WEIGHT PAHS	0.266	--	--	0.5461	0.2495	0.3069	--	0.4238	0.4522
NAPHTHALENE	0.02	--	--	0.0078	0.052	0.032	--	0.0038 U	0.022
PENTACHLOROPHENOL	0.0072 U	--	--	0.0076 U	0.0069 U	0.007 U	--	0.0077 U	0.0076 U
PHENANTHRENE	0.18	--	--	0.2	0.14	0.21	--	0.15	0.2
PYRENE	0.031	--	--	0.15	0.02	0.021	--	0.23	0.18
TOTAL PAHS	0.15	--	--	0.12	0.067	0.07	--	0.14	0.18
PESTICIDES (MG/KG)									
4,4'-DDD	0.0062 J	--	--	0.001 J	0.0018 J	0.0013 J	--	0.0038 U	0.0012 R
4,4'-DDE	0.0036 U	--	--	0.00069 J	0.0034 U	0.0035 U	--	0.00052 J	0.0037 U
4,4'-DDT	0.0036 U	--	--	0.00066 J	0.0034 U	0.0035 U	--	0.00069 J	0.0012 J
ALDRIN	0.0025 J	--	--	0.002 U	0.0018 U	0.0018 U	--	0.002 U	0.0019 U
ALPHA-BHC	0.0018 U	--	--	0.002 U	0.0018 U	0.0018 U	--	0.002 U	0.0019 U
ALPHA-CHLORDANE	0.0018 U	--	--	0.002 U	0.0018 U	0.0018 U	--	0.002 U	0.001 J
BETA-BHC	0.0018 U	--	--	0.002 U	0.0018 U	0.0018 U	--	0.00051 J	0.00063 J
DELTA-BHC	0.0018 U	--	--	0.002 U	0.0018 U	0.0018 U	--	0.002 U	0.0019 U
DIELDRIN	0.0036 U	--	--	0.0038 U	0.0034 U	0.0035 U	--	0.0038 U	0.00054 R
ENDOSULFAN I	0.0018 U	--	--	0.002 U	0.0018 U	0.0018 U	--	0.002 U	0.0019 U
ENDOSULFAN II	0.0036 U	--	--	0.0038 U	0.0034 U	0.0035 U	--	0.0038 U	0.0037 U
ENDOSULFAN SULFATE	0.0036 U	--	--	0.0038 U	0.0034 U	0.0035 U	--	0.0038 U	0.0037 U
ENDRIN	0.0016 J	--	--	0.00025 J	0.00044 J	0.00036 J	--	0.0038 U	0.0022 J
ENDRIN ALDEHYDE	0.0036 U	--	--	0.0038 U	0.0034 U	0.0035 U	--	0.0038 U	0.0017 J

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-330	SB-330	SB-330	SB-331	SB-331	SB-331	SB-331	SB-332	SB-332
SAMPLE ID	SB330-20191111-156180	SB330-20191111-180204	SB330-20191111-6096	SB331-20191111-0006	SB331-20191111-0624	SB331-20191111-144168	SB331-20191111-7296	SB332-20191114-0006	SB332-20191114-0624
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	13	15	5	0	0.5	12	6	0	0.5
BOTTOM DEPTH	15	17	7	0.5	2	14	8	0.5	2
ENDRIN KETONE	0.0036 U	--	--	0.0038 U	0.0034 U	0.0035 U	--	0.0038 U	0.0037 U
GAMMA-BHC (LINDANE)	0.0022 J	--	--	0.00056 J	0.0016 J	0.0015 J	--	0.002 U	0.0019 U
GAMMA-CHLORDANE	0.0018 U	--	--	0.002 U	0.0018 U	0.0018 U	--	0.002 U	0.0019 U
HEPTACHLOR	0.0018 U	--	--	0.002 U	0.0018 U	0.0018 U	--	0.002 U	0.00053 R
HEPTACHLOR EPOXIDE	0.0018 U	--	--	0.002 U	0.0018 U	0.0018 U	--	0.002 U	0.0019 U
METHOXYCHLOR	0.018 U	--	--	0.02 U	0.018 U	0.018 U	--	0.0041 J	0.019
TOXAPHENE	0.18 U	--	--	0.2 U	0.18 U	0.18 U	--	0.2 U	0.19 U
PCBS (MG/KG)									
AROCLOR-1016	0.036 U	--	--	--	0.034 U	--	--	--	--
AROCLOR-1221	0.036 U	--	--	--	0.034 U	--	--	--	--
AROCLOR-1232	0.036 U	--	--	--	0.034 U	--	--	--	--
AROCLOR-1242	0.036 U	--	--	--	0.034 U	--	--	--	--
AROCLOR-1248	0.036 U	--	--	--	0.034 U	--	--	--	--
AROCLOR-1254	0.036 U	--	--	--	0.034 U	--	--	--	--
AROCLOR-1260	0.036 U	--	--	--	0.034 U	--	--	--	--
AROCLOR-1262	0.036 U	--	--	--	0.034 U	--	--	--	--
AROCLOR-1268	0.036 U	--	--	--	0.034 U	--	--	--	--
TOTAL AROCLOR	0 U	--	--	--	0 U	--	--	--	--
TOTAL AROCLOR HALFND	0.162	--	--	--	0.153	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	0.26 U	0.275 U	--	0.26 U	--	0.26 U	--	0.284 U
AROCLOR-1221	--	0.521 U	0.549 U	--	0.521 U	--	0.521 U	--	0.568 U
AROCLOR-1232	--	0.26 U	0.275 U	--	0.26 U	--	0.26 U	--	0.284 U
AROCLOR-1242	--	0.26 U	0.275 U	--	0.26 U	--	0.26 U	--	0.284 U
AROCLOR-1248	--	0.26 U	0.275 U	--	0.26 U	--	0.26 U	--	0.284 U
AROCLOR-1254	--	0.26 U	0.275 U	--	0.26 U	--	0.26 U	--	0.284 U
AROCLOR-1260	--	0.26 U	0.275 U	--	0.26 U	--	0.26 U	--	0.284 U
AROCLOR-1262	--	0.26 U	0.275 U	--	0.26 U	--	0.26 U	--	0.284 U
AROCLOR-1268	--	0.26 U	0.275 U	--	0.26 U	--	0.26 U	--	0.284 U
TOTAL AROCLOR	--	0 U	0 U	--	0 U	--	0 U	--	0 U
TOTAL AROCLOR HALFND	--	1.3005	1.3745	--	1.3005	--	1.3005	--	1.42
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	0 UJ	--	--	0.000078 J	0.0000016 J	0 UJ	--	0.000074 J	0.0000074 J
HEPTACHLOROBIPHENYLS	0 UJ	--	--	0.00048 J	0.0000077 J	0 UJ	--	0.00063 J	0.00028 J
HEXACHLOROBIPHENYLS	0 UJ	--	--	0.00074 J	0.0000064 J	0.0000023 J	--	0.00085 J	0.00035 J
MONOCHLOROBIPHENYLS	0 UJ	--	--	0.0000056 J	0.0000026 J	0.0000046 J	--	0 UJ	0.0000083 J
NONACHLOROBIPHENYLS	0 UJ	--	--	0.00057 J	0 UJ	0 UJ	--	0.00063 J	0.00033 J
OCTACHLOROBIPHENYLS	0 UJ	--	--	0.00021 J	0 UJ	0 UJ	--	0.00026 J	0.00014 J
PCB-1	0.000002 U	--	--	0.00000093 J	0.000002 U	0.000002 U	--	0.000002 U	0.0000019 J
PCB-10	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-100	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-101/90	0.000004 U	--	--	0.000069	0.000004 U	0.000004 U	--	0.0001	0.000046
PCB-103	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-104	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-105	0.00000072 U	--	--	0.000026	0.00000048 U	0.0000011 U	--	0.000028	0.000013
PCB-108/107	0.000004 U	--	--	0.0000063	0.000004 U	0.000004 U	--	0.0000063	0.000003 J
PCB-109	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-11	0.000002 U	--	--	0.000074	0.0000016 J	0.000002 U	--	0.000074	0.000004
PCB-110	0.000002 U	--	--	0.0001	0.000002 U	0.000002 U	--	0.000071	0.000034
PCB-111/115	0.000004 U	--	--	0.0000014 J	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U
PCB-113	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-114	0.00000083 U	--	--	0.0000014 J	0.00000083 U	0.0000011 U	--	0.0000013 U	0.00000096 U
PCB-118/106	0.0000007 U	--	--	0.000062	0.00000047 U	0.000001 U	--	0.000073	0.000032
PCB-119	0.000002 U	--	--	0.000002	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-12	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-120	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-121	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-122	0.000002 U	--	--	0.0000014 J	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-123	0.00000081 U	--	--	0.0000021	0.0000005 U	0.0000011 U	--	0.0000011 U	0.00000077 U
PCB-124	0.000002 U	--	--	0.0000043	0.000002 U	0.000002 U	--	0.0000052	0.0000017 J
PCB-126	0.00000086 U	--	--	0.0000014 J	0.00000067 U	0.0000012 U	--	0.0000018 U	0.0000016 J
PCB-127	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-128/162	0.000004 U	--	--	0.000024	0.000004 U	0.000004 U	--	0.000021	0.0000094
PCB-129	0.000002 U	--	--	0.0000059	0.000002 U	0.000002 U	--	0.0000077	0.0000024
PCB-13	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-130	0.000002 U	--	--	0.0000095	0.000002 U	0.000002 U	--	0.0000094	0.0000049
PCB-131/133	0.000004 U	--	--	0.0000037 J	0.000004 U	0.000004 U	--	0.0000045	0.000002 J
PCB-132/161	0.000004 U	--	--	0.000024	0.000004 U	0.000004 U	--	0.000028	0.00001
PCB-134/143	0.000004 U	--	--	0.0000044	0.000004 U	0.000004 U	--	0.0000054	0.0000027 J
PCB-135	0.000002 U	--	--	0.000019	0.000002 U	0.000002 U	--	0.000023	0.0000099
PCB-136	0.000002 U	--	--	0.0000097	0.000002 U	0.000002 U	--	0.000018	0.00001
PCB-137	0.000002 U	--	--	0.0000073	0.000002 U	0.000002 U	--	0.0000055	0.0000026
PCB-138/163/164	0.000006 U	--	--	0.00018	0.0000022 J	0.000006 U	--	0.00019	0.000072
PCB-139/149	0.000004 U	--	--	0.00012	0.0000017 J	0.000004 U	--	0.00014	0.000058
PCB-14	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-140	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-141	0.000002 U	--	--	0.00003	0.000002 U	0.000002 U	--	0.000039	0.000018
PCB-142	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-144	0.000002 U	--	--	0.0000054	0.000002 U	0.000002 U	--	0.0000072	0.000002
PCB-145	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-146/165	0.000004 U	--	--	0.000027	0.000004 U	0.000004 U	--	0.000029	0.000012
PCB-147	0.000002 U	--	--	0.0000028	0.000002 U	0.000002 U	--	0.0000034	0.000002 U
PCB-148	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-330	SB-330	SB-330	SB-331	SB-331	SB-331	SB-331	SB-332	SB-332
SAMPLE ID	SB330-20191111-156180	SB330-20191111-180204	SB330-20191111-6096	SB331-20191111-0006	SB331-20191111-0624	SB331-20191111-144168	SB331-20191111-7296	SB332-20191114-0006	SB332-20191114-0624
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	13	15	5	0	0.5	12	6	0	0.5
BOTTOM DEPTH	15	17	7	0.5	2	14	8	0.5	2
PCB-15	0.000002 U	--	--	0.0000027	0.000002 U	0.000002 U	--	0.000002 U	0.0000018 J
PCB-150	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-151	0.000002 U	--	--	0.000034	0.000002 U	0.000002 U	--	0.000044	0.00002
PCB-152	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-153	0.000002 U	--	--	0.00019	0.0000025	0.000002 U	--	0.00022	0.000091
PCB-154	0.000002 U	--	--	0.0000017 J	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-155	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-156	0.0000013 U	--	--	0.000012	0.00000772 U	0.0000012 U	--	0.000015	0.0000065
PCB-157	0.0000012 U	--	--	0.0000034	0.00000068 U	0.0000012 U	--	0.0000037	0.0000021
PCB-158/160	0.000004 U	--	--	0.000019	0.000004 U	0.000004 U	--	0.000021	0.0000074
PCB-159	0.000002 U	--	--	0.0000024	0.000002 U	0.000002 U	--	0.0000027	0.0000013 J
PCB-16	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-166	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-167	0.0000013 U	--	--	0.0000076	0.00000068 U	0.0000012 U	--	0.0000087	0.000004
PCB-168	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-169	0.0000013 U	--	--	0.0000012 U	0.00000076 U	0.0000023	--	0.0000014 U	0.0000013 J
PCB-17	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-170	0.000002 U	--	--	0.000058	0.000002 U	0.000002 U	--	0.000078	0.000033
PCB-171	0.000002 U	--	--	0.000014	0.000002 U	0.000002 U	--	0.000019	0.0000084
PCB-172	0.000002 U	--	--	0.000012	0.000002 U	0.000002 U	--	0.000017	0.0000069
PCB-173	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-174	0.000002 U	--	--	0.00005	0.0000013 J	0.000002 U	--	0.000071	0.000031
PCB-175	0.000002 U	--	--	0.0000026	0.000002 U	0.000002 U	--	0.0000034	0.0000017 J
PCB-176	0.000002 U	--	--	0.0000049	0.000002 U	0.000002 U	--	0.0000073	0.0000037
PCB-177	0.000002 U	--	--	0.000036	0.000002 U	0.000002 U	--	0.00005	0.00002
PCB-178	0.000002 U	--	--	0.000016	0.000002 U	0.000002 U	--	0.000019	0.0000085
PCB-179	0.000002 U	--	--	0.000022	0.000002 U	0.000002 U	--	0.00003	0.000013
PCB-18	0.000002 U	--	--	0.0000016 J	0.000002 U	0.000002 U	--	0.000002 U	0.0000017 J
PCB-180	0.000002 U	--	--	0.00012	0.0000028	0.000002 U	--	0.00015	0.000069
PCB-181	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-182/187	0.000004 U	--	--	0.000083	0.0000018 J	0.000004 U	--	0.000098	0.000047
PCB-183	0.000002 U	--	--	0.000026	0.0000018 J	0.000002 U	--	0.000038	0.000018
PCB-184	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-185	0.000002 U	--	--	0.0000072	0.000002 U	0.000002 U	--	0.000011	0.0000041
PCB-186	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-188	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-189	0.0000015 U	--	--	0.0000028	0.00000076 U	0.0000012 U	--	0.0000012 U	0.0000021
PCB-19	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-190	0.000002 U	--	--	0.000012	0.000002 U	0.000002 U	--	0.00002	0.0000069
PCB-191	0.000002 U	--	--	0.0000027	0.000002 U	0.000002 U	--	0.0000039	0.0000014 J
PCB-192	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-193	0.000002 U	--	--	0.0000089	0.000002 U	0.000002 U	--	0.000013	0.0000043
PCB-194	0.000002 U	--	--	0.000032	0.000002 U	0.000002 U	--	0.000038	0.000017
PCB-195	0.000002 U	--	--	0.000012	0.000002 U	0.000002 U	--	0.000016	0.000007
PCB-196/203	0.000004 U	--	--	0.000057	0.000004 U	0.000004 U	--	0.000066	0.000033
PCB-197	0.000002 U	--	--	0.0000025	0.000002 U	0.000002 U	--	0.0000019 J	0.0000013 J
PCB-198	0.000002 U	--	--	0.0000052	0.000002 U	0.000002 U	--	0.0000049	0.0000016 J
PCB-199	0.000002 U	--	--	0.000062	0.000002 U	0.000002 U	--	0.000089	0.000053
PCB-2	0.000002 U	--	--	0.0000021	0.0000013 J	0.0000027	--	0.000002 U	0.0000034
PCB-20/21/33	0.000006 U	--	--	0.0000015 J	0.000006 U	0.000006 U	--	0.0000012 J	0.0000021 J
PCB-200	0.000002 U	--	--	0.0000047	0.000002 U	0.000002 U	--	0.0000045	0.0000028
PCB-201	0.000002 U	--	--	0.0000075	0.000002 U	0.000002 U	--	0.0000066	0.0000048
PCB-202	0.000002 U	--	--	0.000025	0.000002 U	0.000002 U	--	0.000027	0.000014
PCB-204	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-205	0.000002 U	--	--	0.0000023	0.000002 U	0.000002 U	--	0.0000027	0.0000016 J
PCB-206	0.000002 U	--	--	0.00036	0.000002 U	0.000002 U	--	0.0004	0.00021
PCB-207	0.000002 U	--	--	0.000038	0.000002 U	0.000002 U	--	0.000042	0.000022
PCB-208	0.000002 U	--	--	0.00017	0.000002 U	0.000002 U	--	0.00019	0.000095
PCB-209	0.000002 U	--	--	0.0014	0.0000022	0.000002 U	--	0.0014	0.00065
PCB-22	0.000002 U	--	--	0.0000015 J	0.000002 U	0.000002 U	--	0.0000019 J	0.000002 U
PCB-23	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-24	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-25	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-26	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-27	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-28	0.000002 U	--	--	0.0000031	0.000002 U	0.000002 U	--	0.0000038	0.0000029
PCB-29	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-3	0.000002 U	--	--	0.0000026	0.0000013 J	0.0000019 J	--	0.000002 U	0.000003
PCB-30	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-31	0.000002 U	--	--	0.0000036	0.000002 U	0.000002 U	--	0.0000032	0.0000029
PCB-32	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-34	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-35	0.000002 U	--	--	0.0000013 J	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-36	0.000002 U	--	--	0.00000095 J	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-37	0.000002 U	--	--	0.0000021	0.000002 U	0.000002 U	--	0.0000023	0.000002 U
PCB-38	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-39	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-4	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-40	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-41/64/71/72	0.000008 U	--	--	0.0000061 J	0.000008 U	0.000008 U	--	0.0000049 J	0.0000037 J
PCB-42/59	0.000004 U	--	--	0.0000021 J	0.000004 U	0.000004 U	--	0.0000015 J	0.000004 U
PCB-43/49	0.000004 U	--	--	0.0000069	0.000004 U	0.000004 U	--	0.00001	0.0000044
PCB-44	0.000002 U	--	--	0.0000046	0.000002 U	0.000002 U	--	0.0000078	0.0000032

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-330	SB-330	SB-330	SB-331	SB-331	SB-331	SB-331	SB-332	SB-332
SAMPLE ID	SB330-20191111-156180	SB330-20191111-180204	SB330-20191111-6096	SB331-20191111-0006	SB331-20191111-0624	SB331-20191111-144168	SB331-20191111-7296	SB332-20191114-0006	SB332-20191114-0624
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	13	15	5	0	0.5	12	6	0	0.5
BOTTOM DEPTH	15	17	7	0.5	2	14	8	0.5	2
PCB-45	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-46	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-47	0.000002 U	--	--	0.0000027	0.000002 U	0.000002 U	--	0.0000026	0.0000023
PCB-48/75	0.000004 U	--	--	0.0000011 J	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U
PCB-5	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-50	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-51	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-52/69	0.000004 U	--	--	0.000011	0.000004 U	0.000004 U	--	0.000023	0.0000068
PCB-53	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-54	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-55	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-56/60	0.000004 U	--	--	0.0000054	0.000004 U	0.000004 U	--	0.0000067	0.0000033 J
PCB-57	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-58	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-6	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-61/70	0.000004 U	--	--	0.000017	0.000004 U	0.000004 U	--	0.00002	0.000012
PCB-62	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-63	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-65	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-66/76	0.000004 U	--	--	0.0000083	0.000004 U	0.000004 U	--	0.000012	0.0000066
PCB-67	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-68	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-7	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-73	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-74	0.000002 U	--	--	0.0000034	0.000002 U	0.000002 U	--	0.0000038	0.0000034
PCB-77	0.00000088 U	--	--	0.0000024	0.00000048 U	0.0000013 U	--	0.0000031	0.0000032
PCB-78	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-79	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-8	0.000002 U	--	--	0.0000012 J	0.000002 U	0.000002 U	--	0.000002 U	0.0000016 J
PCB-80	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-81	0.00000076 U	--	--	0.00000056 U	0.00000039 U	0.0000011 U	--	0.0000013 U	0.00000098 U
PCB-82	0.000002 U	--	--	0.0000054	0.000002 U	0.000002 U	--	0.0000071	0.000004
PCB-83/112	0.000004 U	--	--	0.0000025 J	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U
PCB-84/92	0.000004 U	--	--	0.00002	0.000004 U	0.000004 U	--	0.000027	0.0000098
PCB-85/116	0.000004 U	--	--	0.000014	0.000004 U	0.000004 U	--	0.000015	0.0000074
PCB-86	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-87/117/125	0.000006 U	--	--	0.00002	0.000006 U	0.000006 U	--	0.000031	0.000011
PCB-88/91	0.000004 U	--	--	0.0000069	0.000004 U	0.000004 U	--	0.0000073	0.0000032 J
PCB-89	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-9	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-93	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-94	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-95	0.000002 U	--	--	0.000031	0.000002 U	0.000002 U	--	0.00005	0.000019
PCB-96	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U
PCB-97	0.000002 U	--	--	0.000013	0.000002 U	0.000002 U	--	0.000017	0.000008
PCB-98/102	0.000004 U	--	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U
PCB-99	0.000002 U	--	--	0.000025	0.000002 U	0.000002 U	--	0.000038	0.000014
PENTACHLOROBIPHENYLS	0 UJ	--	--	0.00042 J	0 UJ	0 UJ	--	0.00048 J	0.00021 J
TEQ DIOXIN-LIKE PCBs (BIRD)	0.00000072 U	--	--	2.64405E-07	0.00000048 U	2.3E-09	--	1.59757E-07	3.23521E-07
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	0.00000072 U	--	--	2.93005E-07	0.00000048 U	1.50047E-07	--	3.15533E-07	3.72572E-07
TEQ DIOXIN-LIKE PCBs (FISH)	0.00000072 U	--	--	7.516E-09	0.00000048 U	1.15E-10	--	5.86E-10	8.522E-09
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	0.00000072 U	--	--	7.686E-09	0.00000048 U	3.473E-09	--	5.454E-09	8.77E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	0.00000072 U	--	--	1.41899E-07	0.00000048 U	0.000000069	--	1.972E-09	2.00151E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	0.00000072 U	--	--	1.59983E-07	0.00000048 U	1.2935E-07	--	1.1322E-07	2.00323E-07
TETRACHLOROBIPHENYLS	0 UJ	--	--	0.000071 J	0 UJ	0 UJ	--	0.000095 J	0.000049 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0 U	--	--	0.0000591	0 U	0.0000023	--	0.0000585	0.0000338
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0 U	--	--	0.00392528	0.0000205	0.0000046	--	0.0043626	0.0019897
TOTAL PCB CONGENERS ZEROND	0 U	--	--	0.00398438	0.0000205	0.0000069	--	0.0044211	0.0020235
TOTAL PCB CONGENERS-NOAA	0 U	--	--	0.0026138	0.0000115	0 U	--	0.0028206	0.0013022
TOTAL PCB CONGENERS-NOAA HALFND	0.00020208	--	--	0.00405826	0.00020521	0.00020725	--	0.00451515	0.002113855
TOTAL PCB CONGENERS-NOAA X2	0 U	--	--	0.0052276	0.000023	0 U	--	0.0056412	0.0026044
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.00004742	--	--	0.0052276	0.00005395	0.0000481	--	0.0056452	0.0026044
TRICHLOROBIPHENYLS	0 UJ	--	--	0.000016 J	0 UJ	0 UJ	--	0.000012 J	0.0000096 J
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	0.8 J	--	--	3100	6.2 J	0.91 J	--	3700	2700
1,2,3,4,6,7,8,9-OCDF	0.32 U	--	--	1.9 J	0.32 U	0.32 U	--	1.5 J	0.82 JZ
1,2,3,4,6,7,8-HPCDD	0.21 U	--	--	25	0.27 U	0.2 U	--	38	18
1,2,3,4,6,7,8-HPCDF	0.17 U	--	--	2.2 J	0.17 U	0.17 U	--	1.5 JZ	1.1 J
1,2,3,4,7,8,9-HPCDF	0.15 U	--	--	0.27 J	0.15 U	0.15 U	--	0.2 U	0.18 U
1,2,3,4,7,8-HXCDD	0.18 U	--	--	0.36 J	0.18 U	0.21 U	--	0.41 J	0.17 U
1,2,3,4,7,8-HXCDF	0.21 U	--	--	0.65 J	0.21 U	0.21 U	--	0.14 JZ	0.14 JZ
1,2,3,6,7,8-HXCDD	0.14 U	--	--	0.57 J	0.18 U	0.21 U	--	0.4 J	0.18 JZ
1,2,3,6,7,8-HXCDF	0.2 U	--	--	0.45 J	0.2 U	0.2 U	--	0.11 U	0.13 J
1,2,3,7,8,9-HXCDD	0.14 U	--	--	0.48 J	0.16 U	0.19 U	--	0.42 JZ	0.21 JZ
1,2,3,7,8,9-HXCDF	0.16 U	--	--	0.24 J	0.16 U	0.16 U	--	0.21 U	0.21 U
1,2,3,7,8-PECDD	0.18 U	--	--	0.26 J	0.18 U	0.18 U	--	0.18 U	0.18 U
1,2,3,7,8-PECDF	0.15 U	--	--	0.47 J	0.15 U	0.15 U	--	0.18 U	0.17 U
2,3,4,6,7,8-HXCDF	0.13 U	--	--	0.41 J	0.13 U	0.13 U	--	0.11 U	0.094 JZ
2,3,4,7,8-PECDF	0.14 U	--	--	0.7 J	0.14 U	0.14 U	--	0.16 U	0.19 JZ
2,3,7,8-TCDD	0.06 U	--	--	0.099 U	0.091 U	0.054 U	--	0.2 U	0.14 U
2,3,7,8-TCDF	0.077 U	--	--	0.65 J	0.08 U	0.065 U	--	0.33 U	0.33 J
TEQ DIOXINS (BIRD)	0.00008	--	--	2.26359	0.00062	0.000091	--	0.50365	0.878282
TEQ DIOXINS (BIRD) HALFND	0.285001	--	--	2.31309	0.303771	0.279607	--	0.97015	1.062432

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-330	SB-330	SB-330	SB-331	SB-331	SB-331	SB-331	SB-332	SB-332
SAMPLE ID	SB330-20191111-156180	SB330-20191111-180204	SB330-20191111-6096	SB331-20191111-0006	SB331-20191111-0624	SB331-20191111-144168	SB331-20191111-7296	SB332-20191114-0006	SB332-20191114-0624
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	13	15	5	0	0.5	12	6	0	0.5
BOTTOM DEPTH	15	17	7	0.5	2	14	8	0.5	2
TEQ DIOXINS (FISH)	0.00008	--	--	1.39139	0.00062	0.000091	--	0.65035	0.450882
TEQ DIOXINS (FISH) HALFND	0.243876	--	--	1.44089	0.260321	0.248682	--	0.9156	0.669032
TEQ DIOXINS (HUMANS/MAMMALS)	0.00024	--	--	2.07037	0.00186	0.000273	--	1.64245	1.166646
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	0.208038	--	--	2.11987	0.228608	0.211921	--	1.89815	1.349096
TOTAL HPCDD	0 UJ	--	--	51 J	0 UJ	0 UJ	--	71 J	31 J
TOTAL HPCDF	0 UJ	--	--	4 J	0 UJ	0 UJ	--	1.5 J	1.5 J
TOTAL HXCDD	0 UJ	--	--	6.8 J	0 UJ	0 UJ	--	4.1 J	0.44 J
TOTAL HXCDF	0 UJ	--	--	4.5 J	0 UJ	0 UJ	--	0 UJ	0.37 J
TOTAL PECDD	0 UJ	--	--	3 J	0 UJ	0 UJ	--	0 UJ	0 UJ
TOTAL PECDF	0 UJ	--	--	6.7 J	0 UJ	0 UJ	--	0.89 J	0.91 J
TOTAL TCDD	0 UJ	--	--	2.2 J	0 UJ	0 UJ	--	0 UJ	0.26 J
TOTAL TCDF	0 UJ	--	--	11 J	0 UJ	0 UJ	--	0.81 J	1.4 J
METALS (MG/KG)									
ALUMINUM	5580	--	--	11500	10100	6570	--	11100	9280
ANTIMONY	1.1 U	--	--	1.2 UJ	1 U	1 U	--	0.25 J	1 U
ARSENIC	43.4	--	--	10 J	8	19.7	--	13.3	7.9
BARIUM	79.6	--	--	79.9 J	135	104	--	125	72.4
BERYLLIUM	0.31 J	--	--	0.88	1.1	0.24 J	--	1.8	0.31 J
CADMIUM	0.54 U	--	--	0.15 J	0.1 J	0.51 U	--	0.17 J	0.51 U
CALCIUM	378 J	--	--	1560	792	312 J	--	946	780
CHROMIUM	7.4	--	--	13.7 J	13.3	8.3	--	15.9	8.1
COBALT	4.5	--	--	22.3 J	16.4	4.1	--	7.8	3.6
COPPER	29.4	--	--	21.8 J	59.3	25.6	--	45.5	14.1
CYANIDE	3.2 J-	--	--	0.58 R	3.8 J-	3.3 J-	--	0.56 R	0.55 R
IRON	13400	--	--	24200	19800	21300	--	29700	24400
LEAD	13.7	--	--	61.8 J	24.1	18.3	--	19.6	15.3
MAGNESIUM	1650	--	--	965	3640	1760	--	871	1400
MANGANESE	67.5	--	--	663 J	384	47.4	--	1180	144
MERCURY	0.14	--	--	0.1 J	0.045 J	0.34	--	0.11 UJ	0.15
NICKEL	11	--	--	14 J	31.1	10.2	--	18.4	7.5
POTASSIUM	1800	--	--	1380	2190	2320	--	1160	1520
SELENIUM	3.3	--	--	2.9 U	2.5 U	2.6 U	--	1.5 J	1 J
SILVER	0.54 U	--	--	0.58 U	0.06 J	0.062 J	--	0.57 U	0.51 U
SODIUM	77.2 J	--	--	49.8 J	76.1 J	240 J	--	27.2 J	71 J
THALLIUM	0.54 U	--	--	0.58 U	0.5 U	0.51 U	--	0.33 J	0.13 J
VANADIUM	6.4	--	--	19.1 J	11.4	6.9	--	23.9	9.4
ZINC	31.9	--	--	54.5 J	104	30.6	--	56	28.1
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	96	91	--	96	--	96	--	88

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-332	SB-332	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333
SAMPLE ID	SB332-20191114-6084	SB332-20191114-84108	SB333-20191105-0006	SB333-20191105-0624	SB333-20191105-120144	SB333-20191105-144168	SB333-20191105-168192	SB333-20191105-192216	SB333-20191105-216240
SAMPLE DATE	20191114	20191114	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SB	SB
TOP DEPTH	5	7	0	0.5	10	12	14	16	18
BOTTOM DEPTH	7	9	0.5	2	12	14	16	18	20
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
1,1,2-TRICHLOROETHANE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
1,1-DICHLOROETHANE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
1,1-DICHLOROETHENE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
1,2,3-TRICHLOROBENZENE	--	0.0094 R	0.005 UJ	0.0048 UJ	--	0.0045 UJ	--	--	--
1,2,4-TRICHLOROBENZENE	--	0.0094 R	0.005 UJ	0.0048 UJ	--	0.0045 UJ	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	0.0094 R	0.005 UJ	0.0048 U	--	0.0045 U	--	--	--
1,2-DIBROMOETHANE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
1,2-DICHLOROBENZENE	--	0.0094 R	0.005 UJ	0.0048 UJ	--	0.0045 UJ	--	--	--
1,2-DICHLOROETHANE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
1,2-DICHLOROPROPANE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
1,3-DICHLOROBENZENE	--	0.0094 R	0.005 UJ	0.0048 UJ	--	0.0045 UJ	--	--	--
1,4-DICHLOROBENZENE	--	0.0094 R	0.005 UJ	0.0048 UJ	--	0.0045 UJ	--	--	--
2-BUTANONE	--	0.019 UJ	0.0099 U	0.0097 U	--	0.009 U	--	--	--
2-HEXANONE	--	0.019 R	0.0099 U	0.0097 U	--	0.009 U	--	--	--
4-METHYL-2-PENTANONE	--	0.019 R	0.0099 U	0.0097 U	--	0.009 U	--	--	--
ACETONE	--	0.033 J+	0.0099 U	0.0097 U	--	0.009 U	--	--	--
BENZENE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
BROMOCHLOROMETHANE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
BROMODICHLOROMETHANE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
BROMOFORM	--	0.0094 R	0.005 UJ	0.0048 U	--	0.0045 U	--	--	--
BROMOMETHANE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
CARBON DISULFIDE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
CARBON TETRACHLORIDE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
CHLOROBENZENE	--	0.0094 R	0.005 UJ	0.0048 UJ	--	0.0045 UJ	--	--	--
CHLORODIBROMOMETHANE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
CHLOROETHANE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
CHLOROFORM	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
CHLOROMETHANE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
CIS-1,2-DICHLOROETHENE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
CIS-1,3-DICHLOROPROPENE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
CYCLOHEXANE	--	0.026 J+	0.005 U	0.0048 U	--	0.0045 U	--	--	--
DICHLORODIFLUOROMETHANE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
ETHYLBENZENE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
ISOPROPYLBENZENE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
M+P-XYLENES	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
METHYL ACETATE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
METHYL CYCLOHEXANE	--	0.04 J+	0.005 U	0.0048 U	--	0.0045 U	--	--	--
METHYL TERT-BUTYL ETHER	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
METHYLENE CHLORIDE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
O-XYLENE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
STYRENE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
TETRACHLOROETHENE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
TOLUENE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
TRANS-1,2-DICHLOROETHENE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	0.0094 R	0.005 U	0.0048 U	--	0.0045 U	--	--	--
TRICHLOROETHENE	--	0.0094 R	0.005 R	0.0048 R	--	0.0045 R	--	--	--
TRICHLOROFLUOROMETHANE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
VINYL CHLORIDE	--	0.0094 UJ	0.005 U	0.0048 U	--	0.0045 U	--	--	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	0.021 J	0.033 J	0.2 U	--	0.19 U	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
1,4-DIOXANE	--	0.072 U	0.075 U	0.08 U	--	0.074 U	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
2,4,5-TRICHLOROPHENOL	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
2,4,6-TRICHLOROPHENOL	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
2,4-DICHLOROPHENOL	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
2,4-DIMETHYLPHENOL	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
2,4-DINITROPHENOL	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
2,4-DINITROTOLUENE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
2,6-DINITROTOLUENE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
2-CHLORONAPHTHALENE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
2-CHLOROPHENOL	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
2-METHYLNAPHTHALENE	--	0.047 J	0.093 J	0.2 U	--	0.19 U	--	--	--
2-METHYLPHENOL	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
2-NITROANILINE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
2-NITROPHENOL	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
3&4-METHYLPHENOL	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
3,3'-DICHLOROBENZIDINE	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
3-NITROANILINE	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
4-CHLORO-3-METHYLPHENOL	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
4-CHLOROANILINE	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
4-NITROANILINE	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
4-NITROPHENOL	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
ACENAPHTHENE	--	0.18 U	0.19 U	0.04 J	--	0.19 U	--	--	--
ACENAPHTHYLENE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-332	SB-332	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333
SAMPLE ID	SB332-20191114-6084	SB332-20191114-84108	SB333-20191105-0006	SB333-20191105-0624	SB333-20191105-120144	SB333-20191105-144168	SB333-20191105-168192	SB333-20191105-192216	SB333-20191105-216240
SAMPLE DATE	20191114	20191114	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SB	SB
TOP DEPTH	5	7	0	0.5	10	12	14	16	18
BOTTOM DEPTH	7	9	0.5	2	12	14	16	18	20
ACETOPHENONE	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
ANTHRACENE	--	0.021 J	0.037 J	0.14 J	--	0.19 U	--	--	--
ATRAZINE	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
BAP EQUIVALENT-HALFND	--	0.13049	0.2236	0.41638	--	0.21219	--	--	--
BAP EQUIVALENT-POS	--	0.03059	0.1286	0.31638	--	0.00224	--	--	--
BENZALDEHYDE	--	0.35 U	0.023 J	0.022 J	--	0.036 J	--	--	--
BENZO(A)ANTHRACENE	--	0.027 J	0.1 J	0.27	--	0.19 U	--	--	--
BENZO(A)PYRENE	--	0.02 J	0.093 J	0.24	--	0.19 U	--	--	--
BENZO(B)FLUORANTHENE	--	0.077 J	0.19	0.33	--	0.022 J	--	--	--
BENZO(G,H,I)PERYLENE	--	0.18 U	0.067 J	0.15 J	--	0.19 U	--	--	--
BENZO(K)FLUORANTHENE	--	0.18 U	0.054 J	0.11 J	--	0.19 U	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
BUTYL BENZYL PHTHALATE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
CAPROLACTAM	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
CARBAZOLE	--	0.35 U	0.37 U	0.073 J	--	0.37 U	--	--	--
CHRYSENE	--	0.19	0.26	0.28	--	0.04 J	--	--	--
DIBENZO(A,H)ANTHRACENE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
DIBENZOFURAN	--	0.18 U	0.021 J	0.028 J	--	0.19 U	--	--	--
DIETHYL PHTHALATE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
DIMETHYL PHTHALATE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
DI-N-BUTYL PHTHALATE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
DI-N-OCTYL PHTHALATE	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
FLUORANTHENE	--	0.06 J	0.26 J	0.67	--	0.37 U	--	--	--
FLUORENE	--	0.18 U	0.019 J	0.038 J	--	0.19 U	--	--	--
HEXACHLOROBENZENE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
HEXACHLOROBUTADIENE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
HEXACHLOROETHANE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	0.383	1.042	2.19	--	0.062	--	--	--
INDENO(1,2,3-CD)PYRENE	--	0.18 U	0.058 J	0.15 J	--	0.19 U	--	--	--
ISOPHORONE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	0.311	0.666	1.628	--	0.077	--	--	--
NAPHTHALENE	--	0.18 U	0.03 J	0.2 U	--	0.19 U	--	--	--
NITROBENZENE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
N-NITROSODIPHENYLAMINE	--	0.18 U	0.19 U	0.2 U	--	0.19 U	--	--	--
PENTACHLOROPHENOL	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
PHENANTHRENE	--	0.23	0.32	0.74	--	0.077 J	--	--	--
PHENOL	--	0.35 U	0.37 U	0.39 U	--	0.37 U	--	--	--
PYRENE	--	0.069 J	0.22	0.66	--	0.19 U	--	--	--
TOTAL PAHS	--	0.694	1.708	3.818	--	0.139	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	0.0071 U	0.0076 U	0.008 U	--	0.0075 U	--	--	--
2-METHYLNAPHTHALENE	--	0.048	0.086	0.0089	--	0.012	--	--	--
ACENAPHTHENE	--	0.0059	0.0077	0.026	--	0.0037 U	--	--	--
ACENAPHTHYLENE	--	0.0027 J	0.0065	0.0043	--	0.00063 J	--	--	--
ANTHRACENE	--	0.0088	0.022	0.11	--	0.0021 J	--	--	--
BAP EQUIVALENT-HALFND	--	0.019527	0.07551	0.22847	--	0.007873	--	--	--
BAP EQUIVALENT-POS	--	0.01776	0.07366	0.22652	--	0.007855	--	--	--
BENZO(A)ANTHRACENE	--	0.015	0.081	0.21	--	0.0067	--	--	--
BENZO(A)PYRENE	--	0.0098	0.049	0.17	--	0.0024 J	--	--	--
BENZO(B)FLUORANTHENE	--	0.056	0.14	0.25	--	0.016	--	--	--
BENZO(G,H,I)PERYLENE	--	0.0084	0.02 J	0.055 J	--	0.0029 J	--	--	--
BENZO(K)FLUORANTHENE	--	0.0035 U	0.037	0.091	--	0.0037 U	--	--	--
CHRYSENE	--	0.13	0.19	0.21	--	0.045	--	--	--
DIBENZO(A,H)ANTHRACENE	--	0.0035 U	0.0037 U	0.0039 U	--	0.003 J	--	--	--
FLUORANTHENE	--	0.039	0.2	0.53 J	--	0.0072	--	--	--
FLUORENE	--	0.012	0.018	0.033	--	0.0023 J	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	0.2645	0.677	1.49	--	0.0884	--	--	--
INDENO(1,2,3-CD)PYRENE	--	0.0073	0.02	0.094	--	0.0014 J	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	0.2564	0.5162	1.23	--	0.07493	--	--	--
NAPHTHALENE	--	0.018	0.022	0.0067	--	0.0087	--	--	--
PENTACHLOROPHENOL	--	0.0072 U	0.0075 U	0.008 U	--	0.0074 U	--	--	--
PHENANTHRENE	--	0.17	0.24	0.52 J	--	0.054	--	--	--
PYRENE	--	0.038	0.14	0.41 J	--	0.011	--	--	--
TOTAL PAHS	--	0.13	0.19	0.21	--	0.045	--	--	--
PESTICIDES (MG/KG)									
4,4'-DDD	--	0.0035 U	0.0073	0.0004 J	--	0.0012 J	--	--	--
4,4'-DDE	--	0.0004 J	0.0023 J	0.004 U	--	0.0039 U	--	--	--
4,4'-DDT	--	0.00045 J	0.0036 J	0.004 U	--	0.0039 U	--	--	--
ALDRIN	--	0.0018 U	0.002 U	0.0021 U	--	0.002 U	--	--	--
ALPHA-BHC	--	0.0018 U	0.002 U	0.0021 U	--	0.002 U	--	--	--
ALPHA-CHLORDANE	--	0.0018 U	0.002 U	0.0021 U	--	0.002 U	--	--	--
BETA-BHC	--	0.0018 U	0.002 U	0.0021 U	--	0.002 U	--	--	--
DELTA-BHC	--	0.0018 U	0.002 U	0.0021 U	--	0.002 U	--	--	--
DIELDRIN	--	0.00032 R	0.0039 U	0.004 U	--	0.0039 U	--	--	--
ENDOSULFAN I	--	0.0018 U	0.002 U	0.0021 U	--	0.002 U	--	--	--
ENDOSULFAN II	--	0.0035 U	0.002 J	0.004 U	--	0.0039 U	--	--	--
ENDOSULFAN SULFATE	--	0.0035 U	0.0039 U	0.004 U	--	0.0039 U	--	--	--
ENDRIN	--	0.00029 J	0.0015 J	0.004 U	--	0.0039 U	--	--	--
ENDRIN ALDEHYDE	--	0.0035 U	0.0039 U	0.004 U	--	0.0039 U	--	--	--

LOCATION	SB-332	SB-332	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333
SAMPLE ID	SB332-20191114-6084	SB332-20191114-84108	SB333-20191105-0006	SB333-20191105-0624	SB333-20191105-120144	SB333-20191105-144168	SB333-20191105-168192	SB333-20191105-192216	SB333-20191105-216240
SAMPLE DATE	20191114	20191114	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SB	SB
TOP DEPTH	5	7	0	0.5	10	12	14	16	18
BOTTOM DEPTH	7	9	0.5	2	12	14	16	18	20
ENDRIN KETONE	--	0.00088 J	0.0039 U	0.004 U	--	0.0039 U	--	--	--
GAMMA-BHC (LINDANE)	--	0.0018 U	0.0034 J	0.0021 U	--	0.002 U	--	--	--
GAMMA-CHLORDANE	--	0.0018 U	0.002 U	0.0021 U	--	0.002 U	--	--	--
HEPTACHLOR	--	0.0018 U	0.002 U	0.0021 U	--	0.002 U	--	--	--
HEPTACHLOR EPOXIDE	--	0.0018 U	0.002 U	0.0021 U	--	0.002 U	--	--	--
METHOXYCHLOR	--	0.0044 J	0.02 U	0.021 U	--	0.02 U	--	--	--
TOXAPHENE	--	0.18 U	0.2 U	0.21 U	--	0.2 U	--	--	--
PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	0.039 U	--	--	--
AROCLOR-1221	--	--	--	--	--	0.039 U	--	--	--
AROCLOR-1232	--	--	--	--	--	0.039 U	--	--	--
AROCLOR-1242	--	--	--	--	--	0.039 U	--	--	--
AROCLOR-1248	--	--	--	--	--	0.039 U	--	--	--
AROCLOR-1254	--	--	--	--	--	0.039 U	--	--	--
AROCLOR-1260	--	--	--	--	--	0.0036 J	--	--	--
AROCLOR-1262	--	--	--	--	--	0.039 U	--	--	--
AROCLOR-1268	--	--	--	--	--	0.039 U	--	--	--
TOTAL AROCLOR	--	--	--	--	--	0.0036	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	0.1596	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	0.275 U	--	0.329 U	0.294 U	0.291 U	0.313 U	0.301 U	0.305 U	0.298 U
AROCLOR-1221	0.549 U	--	0.658 U	0.588 U	0.581 U	0.625 U	0.602 U	0.61 U	0.595 U
AROCLOR-1232	0.275 U	--	0.329 U	0.294 U	0.291 U	0.313 U	0.301 U	0.305 U	0.298 U
AROCLOR-1242	0.275 U	--	0.329 U	0.294 U	0.291 U	0.313 U	0.301 U	0.305 U	0.298 U
AROCLOR-1248	0.275 U	--	0.329 U	0.294 U	0.291 U	0.313 U	0.301 U	0.305 U	0.298 U
AROCLOR-1254	0.275 U	--	0.329 U	0.294 U	0.291 U	0.313 U	0.301 U	0.305 U	0.298 U
AROCLOR-1260	0.105 J	--	0.329 U	0.294 U	0.291 U	0.313 U	0.301 U	0.305 U	0.298 U
AROCLOR-1262	0.275 U	--	0.329 U	0.294 U	0.291 U	0.313 U	0.301 U	0.305 U	0.298 U
AROCLOR-1268	0.275 U	--	0.329 U	0.294 U	0.291 U	0.313 U	0.301 U	0.305 U	0.298 U
TOTAL AROCLOR	0.105	--	0 U	0 U	0 U	0 U	0 U	0 U	0 U
TOTAL AROCLOR HALFND	1.342	--	1.645	1.47	1.4545	1.5645	1.505	1.525	1.4895
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	0.000038 J	0.000033 J	0.00047 J	--	0.000012 J	--	--	--
HEPTACHLOROBIPHENYLS	--	0.00027 J	0.00094 J	0.0011 J	--	0.0037 J	--	--	--
HEXACHLOROBIPHENYLS	--	0.00023 J	0.0011 J	0.0012 J	--	0.0036 J	--	--	--
MONOCHLOROBIPHENYLS	--	0.000025 J	0.000014 J	0.0000034 J	--	0.000016 J	--	--	--
NONACHLOROBIPHENYLS	--	0.00014 J	0.00076 J	0.00028 J	--	0.000052 J	--	--	--
OCTACHLOROBIPHENYLS	--	0.00023 J	0.00038 J	0.00034 J	--	0.00089 J	--	--	--
PCB-1	--	0.0000055	0.000003	0.000002 U	--	0.0000027	--	--	--
PCB-10	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-100	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-101/90	--	0.00005	0.000095	0.000094	--	0.0002	--	--	--
PCB-103	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-104	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-105	--	0.000012	0.000018	0.000023	--	0.000014	--	--	--
PCB-108/107	--	0.0000024 J	0.0000046	0.0000041	--	0.0000012 J	--	--	--
PCB-109	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-11	--	0.0000049	0.000013	0.00046	--	0.0000072	--	--	--
PCB-110	--	0.00004	0.000073	0.000073	--	0.00011	--	--	--
PCB-111/115	--	0.000004 U	0.0000013 J	0.0000012 J	--	0.000004 U	--	--	--
PCB-113	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-114	--	0.0000014 U	0.0000014 J	0.0000017 J	--	0.0000017 J	--	--	--
PCB-118/106	--	0.000033	0.000054	0.000063	--	0.000055	--	--	--
PCB-119	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-12	--	0.0000033	0.0000013 J	0.000002 U	--	0.000002 U	--	--	--
PCB-120	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000015 J	--	--	--
PCB-121	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-122	--	0.000002 U	0.0000011 J	0.000001 J	--	0.000002 U	--	--	--
PCB-123	--	0.000001 U	0.00000085 J	0.0000015 J	--	0.00000066 U	--	--	--
PCB-124	--	0.0000022	0.0000033	0.0000046	--	0.0000058	--	--	--
PCB-126	--	0.0000015 U	0.0000022	0.0000012 J	--	0.00000078 J	--	--	--
PCB-127	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-128/162	--	0.0000071	0.000021	0.000024	--	0.000046	--	--	--
PCB-129	--	0.0000034	0.0000053	0.0000049	--	0.000011	--	--	--
PCB-13	--	0.0000029	0.000002	0.000002 U	--	0.000002 U	--	--	--
PCB-130	--	0.0000039	0.0000097	0.00001	--	0.000023	--	--	--
PCB-131/133	--	0.0000019 J	0.0000058	0.000005	--	0.000013	--	--	--
PCB-132/161	--	0.000012	0.000056	0.000045	--	0.00016	--	--	--
PCB-134/143	--	0.0000031 J	0.0000087	0.0000075	--	0.000031	--	--	--
PCB-135	--	0.0000064	0.000034	0.000028	--	0.00011	--	--	--
PCB-136	--	0.0000083	0.000038	0.000028	--	0.00018	--	--	--
PCB-137	--	0.0000031	0.0000056	0.0000037	--	0.0000031	--	--	--
PCB-138/163/164	--	0.000041	0.00024	0.00028	--	0.0007	--	--	--
PCB-139/149	--	0.000037	0.00022	0.00019	--	0.00072	--	--	--
PCB-14	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-140	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-141	--	0.00001	0.000056	0.000059	--	0.00022	--	--	--
PCB-142	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-144	--	0.0000016 J	0.0000072	0.00001	--	0.000047	--	--	--
PCB-145	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-146/165	--	0.0000083	0.000037	0.000038	--	0.000092	--	--	--
PCB-147	--	0.000002 U	0.0000015 J	0.0000014 J	--	0.0000017 J	--	--	--
PCB-148	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-332	SB-332	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333
SAMPLE ID	SB332-20191114-6084	SB332-20191114-84108	SB333-20191105-0006	SB333-20191105-0624	SB333-20191105-120144	SB333-20191105-144168	SB333-20191105-168192	SB333-20191105-192216	SB333-20191105-216240
SAMPLE DATE	20191114	20191114	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SB	SB
TOP DEPTH	5	7	0	0.5	10	12	14	16	18
BOTTOM DEPTH	7	9	0.5	2	12	14	16	18	20
PCB-15	--	0.0000072	0.0000065	0.000005	--	0.0000017 J	--	--	--
PCB-150	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-151	--	0.000012	0.000073	0.00007	--	0.00028	--	--	--
PCB-152	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-153	--	0.000055	0.00025	0.0003	--	0.0008	--	--	--
PCB-154	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-155	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-156	--	0.000005	0.000016	0.00002	--	0.000031	--	--	--
PCB-157	--	0.0000015 J	0.0000033	0.0000028	--	0.0000032	--	--	--
PCB-158/160	--	0.000005	0.000021	0.000027	--	0.000068	--	--	--
PCB-159	--	0.0000017 J	0.0000033	0.0000048	--	0.000014	--	--	--
PCB-16	--	0.0000025	0.0000025	0.0000019 J	--	0.000002 U	--	--	--
PCB-166	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-167	--	0.0000038	0.000009	0.00001	--	0.000018	--	--	--
PCB-168	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-169	--	0.00000098 U	0.0000013 U	0.00000072 U	--	0.00000071 U	--	--	--
PCB-17	--	0.000005	0.000003	0.0000014 J	--	0.000002 U	--	--	--
PCB-170	--	0.00002	0.000094	0.00013	--	0.0004	--	--	--
PCB-171	--	0.0000068	0.000028	0.00003	--	0.00012	--	--	--
PCB-172	--	0.0000058	0.000019	0.000025	--	0.000071	--	--	--
PCB-173	--	0.000002 U	0.0000023	0.0000026	--	0.0000091	--	--	--
PCB-174	--	0.000027	0.00011	0.00012	--	0.00043	--	--	--
PCB-175	--	0.000002 U	0.0000043	0.0000051	--	0.000017	--	--	--
PCB-176	--	0.0000038	0.000014	0.000013	--	0.000063	--	--	--
PCB-177	--	0.000015	0.000064	0.000078	--	0.00026	--	--	--
PCB-178	--	0.0000086	0.000025	0.00003	--	0.000085	--	--	--
PCB-179	--	0.000013	0.000044	0.000047	--	0.00018	--	--	--
PCB-18	--	0.0000093	0.000005	0.000003	--	0.0000024	--	--	--
PCB-180	--	0.000078	0.00027	0.00033	--	0.0011	--	--	--
PCB-181	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-182/187	--	0.000056	0.00015	0.00018	--	0.00051	--	--	--
PCB-183	--	0.000021	0.00006	0.000071	--	0.00026	--	--	--
PCB-184	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-185	--	0.0000049	0.000012	0.000019	--	0.00006	--	--	--
PCB-186	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-188	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-189	--	0.00000095 U	0.0000047	0.0000061	--	0.000014	--	--	--
PCB-19	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-190	--	0.0000051	0.000021	0.000036	--	0.000089	--	--	--
PCB-191	--	0.000002 U	0.0000043	0.0000058	--	0.000017	--	--	--
PCB-192	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-193	--	0.0000027	0.000014	0.00002	--	0.000049	--	--	--
PCB-194	--	0.000041	0.000048	0.000062	--	0.00018	--	--	--
PCB-195	--	0.000011	0.000022	0.000031	--	0.000085	--	--	--
PCB-196/203	--	0.000072	0.0001	0.000092	--	0.00027	--	--	--
PCB-197	--	0.0000025	0.000003	0.0000039	--	0.0000087	--	--	--
PCB-198	--	0.0000041	0.0000068	0.0000055	--	0.000017	--	--	--
PCB-199	--	0.000069	0.00013	0.000098	--	0.00022	--	--	--
PCB-2	--	0.0000091	0.0000052	0.0000016 J	--	0.000008	--	--	--
PCB-20/21/33	--	0.0000071	0.0000053 J	0.0000032 J	--	0.0000015 J	--	--	--
PCB-200	--	0.0000064	0.0000094	0.0000093	--	0.000032	--	--	--
PCB-201	--	0.0000088	0.000013	0.000012	--	0.000031	--	--	--
PCB-202	--	0.000018	0.000039	0.000023	--	0.000039	--	--	--
PCB-204	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-205	--	0.0000017 J	0.0000042	0.0000044	--	0.000011	--	--	--
PCB-206	--	0.000092	0.00049	0.00016	--	0.00004	--	--	--
PCB-207	--	0.000014	0.000042	0.00003	--	0.0000058	--	--	--
PCB-208	--	0.000035	0.00023	0.000088	--	0.0000061	--	--	--
PCB-209	--	0.00016	0.0012	0.00077	--	0.0000016 J	--	--	--
PCB-22	--	0.0000048	0.0000037	0.0000045	--	0.00000066 J	--	--	--
PCB-23	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-24	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-25	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-26	--	0.000002 U	0.0000017 J	0.0000015 J	--	0.000002 U	--	--	--
PCB-27	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-28	--	0.0000079	0.000007	0.00001	--	0.0000019 J	--	--	--
PCB-29	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-3	--	0.0000099	0.0000057	0.0000018 J	--	0.0000056	--	--	--
PCB-30	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-31	--	0.00001	0.0000065	0.0000065	--	0.000002	--	--	--
PCB-32	--	0.0000043	0.0000019 J	0.0000017 J	--	0.000002 U	--	--	--
PCB-34	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-35	--	0.000002 U	0.000002 U	0.0000045	--	0.000002 U	--	--	--
PCB-36	--	0.000002 U	0.000002 U	0.0000038	--	0.000002 U	--	--	--
PCB-37	--	0.0000056	0.0000064	0.0000064	--	0.00000088 J	--	--	--
PCB-38	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000016 J	--	--	--
PCB-39	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-4	--	0.0000037	0.0000022	0.000002 U	--	0.000002 U	--	--	--
PCB-40	--	0.0000027	0.000002 U	0.0000024	--	0.000002 U	--	--	--
PCB-41/64/71/72	--	0.000013	0.0000072 J	0.000016	--	0.0000017 J	--	--	--
PCB-42/59	--	0.0000046	0.0000029 J	0.0000063	--	0.000004 U	--	--	--
PCB-43/49	--	0.000014	0.0000096	0.000014	--	0.0000015 J	--	--	--
PCB-44	--	0.000015	0.000008	0.000014	--	0.0000017 J	--	--	--

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SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-332	SB-332	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333
SAMPLE ID	SB332-20191114-6084	SB332-20191114-84108	SB333-20191105-0006	SB333-20191105-0624	SB333-20191105-120144	SB333-20191105-144168	SB333-20191105-168192	SB333-20191105-192216	SB333-20191105-216240
SAMPLE DATE	20191114	20191114	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SB	SB
TOP DEPTH	5	7	0	0.5	10	12	14	16	18
BOTTOM DEPTH	7	9	0.5	2	12	14	16	18	20
PCB-45	--	0.0000022	0.000002 U	0.0000025	--	0.000002 U	--	--	--
PCB-46	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-47	--	0.0000076	0.0000035	0.0000052	--	0.000002 U	--	--	--
PCB-48/75	--	0.0000022 J	0.000004 U	0.0000018 J	--	0.000004 U	--	--	--
PCB-5	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-50	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-51	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-52/69	--	0.000024	0.000014	0.000021	--	0.0000064	--	--	--
PCB-53	--	0.0000019 J	0.000002 U	0.0000016 J	--	0.000002 U	--	--	--
PCB-54	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-55	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-56/60	--	0.000009	0.0000074	0.000016	--	0.0000014 J	--	--	--
PCB-57	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-58	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-6	--	0.0000029	0.0000015 J	0.000002 U	--	0.000002 U	--	--	--
PCB-61/70	--	0.000025	0.0000059	0.000023	--	0.0000035 J	--	--	--
PCB-62	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-63	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-65	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-66/76	--	0.000016	0.00002	0.000024	--	0.00001	--	--	--
PCB-67	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-68	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-7	--	0.0000014 J	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-73	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-74	--	0.0000091	0.000002 U	0.00001	--	0.0000012 J	--	--	--
PCB-77	--	0.0000034	0.0000047	0.0000058	--	0.0000011 U	--	--	--
PCB-78	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-79	--	0.000002 U	0.000002 U	0.000001 J	--	0.000002 U	--	--	--
PCB-8	--	0.00001	0.000006	0.0000023	--	0.0000026	--	--	--
PCB-80	--	0.000002 U	0.000012	0.000002 U	--	0.000002 U	--	--	--
PCB-81	--	0.0000011 U	0.00000092 U	0.0000015 J	--	0.00000088 U	--	--	--
PCB-82	--	0.0000052	0.0000042	0.0000059	--	0.0000015 J	--	--	--
PCB-83/112	--	0.0000023 J	0.0000019 J	0.0000025 J	--	0.000004 U	--	--	--
PCB-84/92	--	0.000018	0.000021	0.000021	--	0.000036	--	--	--
PCB-85/116	--	0.0000091	0.000008	0.0000099	--	0.0000015 J	--	--	--
PCB-86	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-87/117/125	--	0.000019	0.000018	0.000021	--	0.000014	--	--	--
PCB-88/91	--	0.0000069	0.0000064	0.0000058	--	0.000004 U	--	--	--
PCB-89	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-9	--	0.0000013 J	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-93	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-94	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-95	--	0.000033	0.000066	0.000051	--	0.00018	--	--	--
PCB-96	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--	--
PCB-97	--	0.000014	0.000013	0.000014	--	0.0000072	--	--	--
PCB-98/102	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--	--
PCB-99	--	0.000019	0.000016	0.000022	--	0.0000056	--	--	--
PENTACHLOROBIPHENYLS	--	0.00027 J	0.00041 J	0.00042 J	--	0.00064 J	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	1.71888E-07	4.59015E-07	5.64926E-07	--	8.331E-08	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	3.02457E-07	5.05665E-07	5.65286E-07	--	1.55168E-07	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	4.51E-10	1.1735E-08	7.654E-09	--	4.309E-09	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	4.507E-09	1.1997E-08	7.672E-09	--	4.602E-09	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	1.009E-09	2.22067E-07	1.22983E-07	--	8.0457E-08	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	9.0924E-08	2.41705E-07	1.33783E-07	--	9.1303E-08	--	--	--
TETRACHLOROBIPHENYLS	--	0.00015 J	0.000095 J	0.00017 J	--	0.000027 J	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	0.0000257	0.00006015	0.0000736	--	0.00008268	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	0.001543	0.0049331	0.0047398	--	0.00887254	--	--	--
TOTAL PCB CONGENERS ZEROND	--	0.0015687	0.00499325	0.0048134	--	0.00895522	--	--	--
TOTAL PCB CONGENERS-NOAA	--	0.0006973	0.002964	0.0024593	--	0.0039766	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	0.001643165	0.00506436	0.00488076	--	0.009042895	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	0.0013946	0.005928	0.0049186	--	0.0079532	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	0.0013946	0.005928	0.0049186	--	0.0079532	--	--	--
TRICHLOROBIPHENYLS	--	0.000057 J	0.000043 J	0.000048 J	--	0.000011 J	--	--	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	32	1800	2800	--	6300 J	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	0.66 J	3.1 J	1.7 J	--	1.9 J	--	--	--
1,2,3,4,6,7,8-HPCDD	--	1.5 J	17	21	--	54	--	--	--
1,2,3,4,6,7,8-HPCDF	--	0.67 J	3.2 J	1.2 J	--	2.6 J	--	--	--
1,2,3,4,7,8,9-HPCDF	--	0.19 U	0.25 J	0.16 U	--	0.22 U	--	--	--
1,2,3,4,7,8-HXCDD	--	0.23 U	0.34 J	0.32 J	--	0.5 J	--	--	--
1,2,3,4,7,8-HXCDF	--	0.22 JZ	0.67 J	0.24 J	--	0.86 J	--	--	--
1,2,3,6,7,8-HXCDD	--	0.23 U	0.6 J	0.34 J	--	0.71 J	--	--	--
1,2,3,6,7,8-HXCDF	--	0.11 U	0.59 J	0.21 J	--	0.35 J	--	--	--
1,2,3,7,8,9-HXCDD	--	0.24 U	0.46 J	0.4 J	--	0.68 J	--	--	--
1,2,3,7,8,9-HXCDF	--	0.21 U	0.23 U	0.17 U	--	0.18 U	--	--	--
1,2,3,7,8-PECDD	--	0.18 U	0.3 J	0.19 U	--	0.22 U	--	--	--
1,2,3,7,8-PECDF	--	0.26 U	0.55 J	0.19 J	--	0.34 J	--	--	--
2,3,4,6,7,8-HXCDF	--	0.14 JZ	0.5 J	0.2 J	--	0.19 J	--	--	--
2,3,4,7,8-PECDF	--	0.23 U	0.92 J	0.32 J	--	0.35 J	--	--	--
2,3,7,8-TCDD	--	0.22 U	0.086 U	0.1 U	--	0.087 U	--	--	--
2,3,7,8-TCDF	--	0.45 U	0.69 J	0.2 J	--	0.21 J	--	--	--
TEQ DIOXINS (BIRD)	--	0.047466	2.44181	0.97657	--	1.54429	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	0.636316	2.49631	1.13087	--	1.70789	--	--	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-332	SB-332	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333
SAMPLE ID	SB332-20191114-6084	SB332-20191114-84108	SB333-20191105-0006	SB333-20191105-0624	SB333-20191105-120144	SB333-20191105-144168	SB333-20191105-168192	SB333-20191105-192216	SB333-20191105-216240
SAMPLE DATE	20191114	20191114	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SB	SB
TOP DEPTH	5	7	0	0.5	10	12	14	16	18
BOTTOM DEPTH	7	9	0.5	2	12	14	16	18	20
TEQ DIOXINS (FISH)	--	0.047466	1.41041	0.72507	--	1.31659	--	--	--
TEQ DIOXINS (FISH) HALFND	--	0.399516	1.46491	0.87937	--	1.48019	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	0.067498	1.72293	1.35521	--	2.92177	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	0.380348	1.77743	1.50951	--	3.08537	--	--	--
TOTAL HPCDD	--	1.5 J	34 J	40 J	--	93 J	--	--	--
TOTAL HPCDF	--	0.67 J	5.7 J	2 J	--	2.9 J	--	--	--
TOTAL HXCDD	--	0 UJ	7.8 J	5.5 J	--	6.1 J	--	--	--
TOTAL HXCDF	--	0 UJ	5.5 J	1.9 J	--	2.4 J	--	--	--
TOTAL PECDD	--	0 UJ	4.8 J	1.7 J	--	0 UJ	--	--	--
TOTAL PECDF	--	1.3 J	9.7 J	2.6 J	--	2.6 J	--	--	--
TOTAL TCDD	--	0 UJ	5.3 J	1.4 J	--	0.28 J	--	--	--
TOTAL TCDF	--	0.6 J	14 J	3.8 J	--	2.3 J	--	--	--
METALS (MG/KG)									
ALUMINUM	--	2760	6240	6800	--	5590	--	--	--
ANTIMONY	--	1.1 U	0.44 J	1.2 U	--	0.59 J	--	--	--
ARSENIC	--	10.4	25.6	7	--	26.7	--	--	--
BARIUM	--	64.8	107	55.1	--	80.4	--	--	--
BERYLLIUM	--	1	0.87	0.69	--	0.88	--	--	--
CADMIUM	--	0.096 J	0.18 J	0.083 J	--	0.55 U	--	--	--
CALCIUM	--	369 J	2100	1970	--	275 J	--	--	--
CHROMIUM	--	20	12.3	13.3	--	14.4	--	--	--
COBALT	--	9.9	9.3	8.9	--	9.1	--	--	--
COPPER	--	20.1	37.1	21.9	--	25.6	--	--	--
CYANIDE	--	0.55 R	0.49 J	0.33 J	--	0.17 J	--	--	--
IRON	--	8380	18400	16600	--	19600	--	--	--
LEAD	--	31.1	58	22	--	18.7	--	--	--
MAGNESIUM	--	748	1730	566 J	--	554 J	--	--	--
MANGANESE	--	377	378	351	--	200	--	--	--
MERCURY	--	0.14	0.16	0.077 J	--	0.037 J	--	--	--
NICKEL	--	13.1	14.3	12.9	--	16.4	--	--	--
POTASSIUM	--	907	853	774	--	792	--	--	--
SELENIUM	--	0.47 J	2.9 UJ	3 UJ	--	2.7 UJ	--	--	--
SILVER	--	0.55 U	0.065 J	0.6 U	--	0.072 J	--	--	--
SODIUM	--	69.7 J	42.9 J	14.6 J	--	111 J	--	--	--
THALLIUM	--	0.11 J	0.59 U	0.6 U	--	0.55 U	--	--	--
VANADIUM	--	24.4	14.1	15.1	--	23.6	--	--	--
ZINC	--	54.6	89	40.6	--	40.2	--	--	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	91	--	76	85	86	80	83	82	84

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-334	SB-334
SAMPLE ID	SB333-20191105-240264	SB333-20191105-2448	SB333-20191105-264288	SB333-20191105-288312	SB333-20191105-312343	SB333-20191105-4872	SB333-20191105-72120	SB334-20191105-0006	SB334-20191105-0624
SAMPLE DATE	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SS	SS
TOP DEPTH	20	2	22	24	26	4	6	0	0.5
BOTTOM DEPTH	22	4	24	26	28.6	6	10	0.5	2
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
2-BUTANONE	--	--	--	--	--	--	--	0.0097 U	0.01 U
2-HEXANONE	--	--	--	--	--	--	--	0.0097 U	0.01 U
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	0.0097 U	0.01 U
ACETONE	--	--	--	--	--	--	--	0.0097 U	0.01 U
BENZENE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
BROMOFORM	--	--	--	--	--	--	--	0.0049 U	0.0052 U
BROMOMETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
CARBON DISULFIDE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
CHLOROBENZENE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
CHLOROETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
CHLOROFORM	--	--	--	--	--	--	--	0.0049 U	0.0052 U
CHLOROMETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
CYCLOHEXANE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
ETHYLBENZENE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
ISOPROPYLBENZENE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
M+P-XYLENES	--	--	--	--	--	--	--	0.0049 U	0.0052 U
METHYL ACETATE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
METHYLENE CHLORIDE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
O-XYLENE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
STYRENE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
TETRACHLOROETHENE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
TOLUENE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
TRICHLOROETHENE	--	--	--	--	--	--	--	0.0049 R	0.0052 R
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	0.0049 U	0.0052 UJ
VINYL CHLORIDE	--	--	--	--	--	--	--	0.0049 U	0.0052 U
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	--	--	--	--	--	--	0.21 U	0.041 J
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--	0.21 U	0.19 U
1,4-DIOXANE	--	--	--	--	--	--	--	0.082 U	0.075 U
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--	0.4 U	0.37 U
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--	0.21 U	0.19 U
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--	0.21 U	0.19 U
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--	0.21 U	0.19 U
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--	0.21 U	0.19 U
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	0.21 U	0.19 U
2,4-DINITROPHENOL	--	--	--	--	--	--	--	0.4 U	0.37 U
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	0.21 U	0.19 U
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	0.21 U	0.19 U
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--	0.21 U	0.19 U
2-CHLOROPHENOL	--	--	--	--	--	--	--	0.21 U	0.19 U
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	0.21 U	0.11 J
2-METHYLPHENOL	--	--	--	--	--	--	--	0.4 U	0.37 U
2-NITROANILINE	--	--	--	--	--	--	--	0.21 U	0.19 U
2-NITROPHENOL	--	--	--	--	--	--	--	0.21 U	0.19 U
3&4-METHYLPHENOL	--	--	--	--	--	--	--	0.4 U	0.37 U
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--	0.4 U	0.37 U
3-NITROANILINE	--	--	--	--	--	--	--	0.4 U	0.37 U
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--	0.4 U	0.37 U
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--	0.21 U	0.19 U
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--	0.21 U	0.19 U
4-CHLOROANILINE	--	--	--	--	--	--	--	0.4 U	0.37 U
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--	0.21 U	0.19 U
4-NITROANILINE	--	--	--	--	--	--	--	0.4 U	0.37 U
4-NITROPHENOL	--	--	--	--	--	--	--	0.4 U	0.37 U
ACENAPHTHENE	--	--	--	--	--	--	--	0.21 U	0.19 U
ACENAPHTHYLENE	--	--	--	--	--	--	--	0.21 U	0.021 J

LOCATION	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-334	SB-334
SAMPLE ID	SB333-20191105-240264	SB333-20191105-2448	SB333-20191105-264288	SB333-20191105-288312	SB333-20191105-312343	SB333-20191105-4872	SB333-20191105-72120	SB334-20191105-0006	SB334-20191105-0624
SAMPLE DATE	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SS	SS
TOP DEPTH	20	2	22	24	26	4	6	0	0.5
BOTTOM DEPTH	22	4	24	26	28.6	6	10	0.5	2
ACETOPHENONE	--	--	--	--	--	--	--	0.4 U	0.37 U
ANTHRACENE	--	--	--	--	--	--	--	0.029 J	0.039 J
ATRAZINE	--	--	--	--	--	--	--	0.4 U	0.37 U
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	0.22259	0.26832
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	0.11759	0.17332
BENZALDEHYDE	--	--	--	--	--	--	--	0.4 U	0.37 U
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	0.083 J	0.14 J
BENZO(A)PYRENE	--	--	--	--	--	--	--	0.091 J	0.12 J
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	0.12 J	0.29
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	0.061 J	0.094 J
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	0.048 J	0.1 J
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--	0.21 U	0.19 U
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--	0.4 U	0.37 U
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	0.21 U	0.026 J
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	0.21 U	0.19 U
CAPROLACTAM	--	--	--	--	--	--	--	0.4 U	0.37 U
CARBAZOLE	--	--	--	--	--	--	--	0.02 J	0.37 U
CHRYSENE	--	--	--	--	--	--	--	0.11 J	0.32
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	0.21 U	0.19 U
DIBENZOFURAN	--	--	--	--	--	--	--	0.21 U	0.027 J
DIETHYL PHTHALATE	--	--	--	--	--	--	--	0.21 U	0.19 U
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	0.21 U	0.19 U
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	0.21 U	0.19 U
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	0.4 U	0.37 U
FLUORANTHENE	--	--	--	--	--	--	--	0.2 J	0.27 J
FLUORENE	--	--	--	--	--	--	--	0.21 U	0.022 J
HEXACHLOROBENZENE	--	--	--	--	--	--	--	0.21 U	0.19 U
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--	0.21 U	0.19 U
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--	0.4 U	0.37 U
HEXACHLOROETHANE	--	--	--	--	--	--	--	0.21 U	0.19 U
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	0.78	1.454
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	0.057 J	0.09 J
ISOPHORONE	--	--	--	--	--	--	--	0.21 U	0.19 U
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	0.409	0.698
NAPHTHALENE	--	--	--	--	--	--	--	0.21 U	0.036 J
NITROBENZENE	--	--	--	--	--	--	--	0.21 U	0.19 U
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--	0.21 U	0.19 U
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	0.21 U	0.19 U
PENTACHLOROPHENOL	--	--	--	--	--	--	--	0.4 U	0.37 U
PHENANTHRENE	--	--	--	--	--	--	--	0.18 J	0.31
PHENOL	--	--	--	--	--	--	--	0.4 U	0.37 U
PYRENE	--	--	--	--	--	--	--	0.21	0.3
TOTAL PAHS	--	--	--	--	--	--	--	1.189	2.152
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	--	--	--	--	--	--	0.0082 U	0.0076 U
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	0.0095	0.086
ACENAPHTHENE	--	--	--	--	--	--	--	0.0093	0.008
ACENAPHTHYLENE	--	--	--	--	--	--	--	0.0033 J	0.013
ANTHRACENE	--	--	--	--	--	--	--	0.02	0.02
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	0.074739	0.10272
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	0.072739	0.10087
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	0.051	0.091
BENZO(A)PYRENE	--	--	--	--	--	--	--	0.054	0.071
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	0.098	0.17
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	0.034	0.028 J
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	0.036	0.058
CHRYSENE	--	--	--	--	--	--	--	0.079	0.19
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	0.004 U	0.0037 U
FLUORANTHENE	--	--	--	--	--	--	--	0.16	0.19
FLUORENE	--	--	--	--	--	--	--	0.011	0.02
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	0.516	0.788
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	0.034	0.03
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	0.3517	0.457
NAPHTHALENE	--	--	--	--	--	--	--	0.0081	0.026
PENTACHLOROPHENOL	--	--	--	--	--	--	--	0.0082 U	0.0075 U
PHENANTHRENE	--	--	--	--	--	--	--	0.14	0.18
PYRENE	--	--	--	--	--	--	--	0.13	0.15
TOTAL PAHS	--	--	--	--	--	--	--	0.079	0.19
PESTICIDES (MG/KG)									
4,4'-DDD	--	--	--	--	--	--	--	0.00044 J	0.0029 J
4,4'-DDE	--	--	--	--	--	--	--	0.0039 U	0.00076 J
4,4'-DDT	--	--	--	--	--	--	--	0.0039 U	0.00093 J
ALDRIN	--	--	--	--	--	--	--	0.002 U	0.002 U
ALPHA-BHC	--	--	--	--	--	--	--	0.002 U	0.002 U
ALPHA-CHLORDANE	--	--	--	--	--	--	--	0.002 U	0.002 U
BETA-BHC	--	--	--	--	--	--	--	0.002 U	0.002 U
DELTA-BHC	--	--	--	--	--	--	--	0.002 U	0.002 U
DIELDRIN	--	--	--	--	--	--	--	0.0039 U	0.0039 U
ENDOSULFAN I	--	--	--	--	--	--	--	0.002 U	0.002 U
ENDOSULFAN II	--	--	--	--	--	--	--	0.0039 U	0.0039 U
ENDOSULFAN SULFATE	--	--	--	--	--	--	--	0.0039 U	0.0039 U
ENDRIN	--	--	--	--	--	--	--	0.0039 U	0.00068 J
ENDRIN ALDEHYDE	--	--	--	--	--	--	--	0.0039 U	0.0039 U

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-334	SB-334
SAMPLE ID	SB333-20191105-240264	SB333-20191105-2448	SB333-20191105-264288	SB333-20191105-288312	SB333-20191105-312343	SB333-20191105-4872	SB333-20191105-72120	SB334-20191105-0006	SB334-20191105-0624
SAMPLE DATE	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SS	SS
TOP DEPTH	20	2	22	24	26	4	6	0	0.5
BOTTOM DEPTH	22	4	24	26	28.6	6	10	0.5	2
ENDRIN KETONE	--	--	--	--	--	--	--	0.0039 U	0.0039 U
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--	0.002 U	0.0019 J
GAMMA-CHLORDANE	--	--	--	--	--	--	--	0.002 U	0.002 U
HEPTACHLOR	--	--	--	--	--	--	--	0.002 U	0.002 U
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--	0.002 U	0.002 U
METHOXYCHLOR	--	--	--	--	--	--	--	0.02 U	0.02 U
TOXAPHENE	--	--	--	--	--	--	--	0.2 U	0.2 U
PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	0.305 U	0.291 U	0.305 U	0.309 U	0.309 U	0.301 U	0.287 U	0.294 U	0.287 U
AROCLOR-1221	0.61 U	0.581 U	0.61 U	0.617 U	0.602 U	0.602 U	0.575 U	0.588 U	0.575 U
AROCLOR-1232	0.305 U	0.291 U	0.305 U	0.309 U	0.301 U	0.301 U	0.287 U	0.294 U	0.287 U
AROCLOR-1242	0.305 U	0.291 U	0.305 U	0.617 U	0.301 U	0.301 U	0.287 U	0.294 U	0.287 U
AROCLOR-1248	0.305 U	0.291 U	0.305 U	0.309 U	0.301 U	0.301 U	0.287 U	0.294 U	0.287 U
AROCLOR-1254	0.305 U	0.291 U	0.305 U	0.309 U	0.301 U	0.301 U	0.287 U	0.294 U	0.287 U
AROCLOR-1260	0.11 J	0.291 U	0.305 U	0.309 U	0.301 U	0.301 U	6.69	0.294 U	0.11 J
AROCLOR-1262	0.305 U	0.291 U	0.305 U	0.309 U	0.301 U	0.301 U	0.287 U	0.294 U	0.287 U
AROCLOR-1268	0.305 U	0.291 U	0.305 U	0.309 U	0.301 U	0.301 U	0.287 U	0.294 U	0.287 U
TOTAL AROCLOR	0.11	0 U	0 U	0 U	0 U	0 U	6.69	0 U	0.11
TOTAL AROCLOR HALFND	1.4825	1.4545	1.525	1.6985	1.509	1.505	7.982	1.47	1.402
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	0.00025 J	0.000068 J
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	0.002 J	0.014 J
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	0.002 J	0.013 J
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	0.0000025 J	0.000017 J
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	0.00025 J	0.0007 J
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	0.00059 J	0.0034 J
PCB-1	--	--	--	--	--	--	--	0.00000097 J	0.0000046
PCB-10	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-100	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-101/90	--	--	--	--	--	--	--	0.00016	0.00091
PCB-103	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-104	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-105	--	--	--	--	--	--	--	0.000029	0.000097
PCB-108/107	--	--	--	--	--	--	--	0.000006	0.000019
PCB-109	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-11	--	--	--	--	--	--	--	0.00024	0.000019
PCB-110	--	--	--	--	--	--	--	0.0001	0.00049
PCB-111/115	--	--	--	--	--	--	--	0.0000014 J	0.0000048
PCB-113	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-114	--	--	--	--	--	--	--	0.0000027	0.0000098
PCB-118/106	--	--	--	--	--	--	--	0.000091	0.00036
PCB-119	--	--	--	--	--	--	--	0.000002 U	0.0000032
PCB-12	--	--	--	--	--	--	--	0.000002 U	0.0000019 J
PCB-120	--	--	--	--	--	--	--	0.000002 U	0.0000052
PCB-121	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-122	--	--	--	--	--	--	--	0.0000013 J	0.0000044
PCB-123	--	--	--	--	--	--	--	0.0000013 J	0.0000046
PCB-124	--	--	--	--	--	--	--	0.0000063	0.000028
PCB-126	--	--	--	--	--	--	--	0.0000017 J	0.0000067
PCB-127	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-128/162	--	--	--	--	--	--	--	0.000038	0.0002
PCB-129	--	--	--	--	--	--	--	0.0000092	0.000044
PCB-13	--	--	--	--	--	--	--	0.000002 U	0.0000031
PCB-130	--	--	--	--	--	--	--	0.000018	0.000088
PCB-131/133	--	--	--	--	--	--	--	0.0000093	0.000049
PCB-132/161	--	--	--	--	--	--	--	0.000069	0.00059
PCB-134/143	--	--	--	--	--	--	--	0.000011	0.0001
PCB-135	--	--	--	--	--	--	--	0.000046	0.00038
PCB-136	--	--	--	--	--	--	--	0.000035	0.00045
PCB-137	--	--	--	--	--	--	--	0.0000051	0.000028
PCB-138/163/164	--	--	--	--	--	--	--	0.0005	0.0028
PCB-139/149	--	--	--	--	--	--	--	0.00031	0.0025
PCB-14	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-140	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-141	--	--	--	--	--	--	--	0.00011	0.00076
PCB-142	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-144	--	--	--	--	--	--	--	0.000021	0.00013
PCB-145	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-146/165	--	--	--	--	--	--	--	0.000065	0.00036
PCB-147	--	--	--	--	--	--	--	0.000002	0.000008
PCB-148	--	--	--	--	--	--	--	0.000002 U	0.000002 U

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SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-334	SB-334
SAMPLE ID	SB333-20191105-240264	SB333-20191105-2448	SB333-20191105-264288	SB333-20191105-288312	SB333-20191105-312343	SB333-20191105-4872	SB333-20191105-72120	SB334-20191105-0006	SB334-20191105-0624
SAMPLE DATE	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SS	SS
TOP DEPTH	20	2	22	24	26	4	6	0	0.5
BOTTOM DEPTH	22	4	24	26	28.6	6	10	0.5	2
PCB-15	--	--	--	--	--	--	--	0.0000061	0.000021
PCB-150	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-151	--	--	--	--	--	--	--	0.00011	0.00091
PCB-152	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-153	--	--	--	--	--	--	--	0.00055	0.0032
PCB-154	--	--	--	--	--	--	--	0.000002 U	0.0000061
PCB-155	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-156	--	--	--	--	--	--	--	0.000036	0.00018
PCB-157	--	--	--	--	--	--	--	0.0000039	0.000017
PCB-158/160	--	--	--	--	--	--	--	0.000046	0.00025
PCB-159	--	--	--	--	--	--	--	0.0000073	0.000045
PCB-16	--	--	--	--	--	--	--	0.0000015 J	0.0000071
PCB-166	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-167	--	--	--	--	--	--	--	0.000017	0.000088
PCB-168	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-169	--	--	--	--	--	--	--	0.0000012 U	0.0000014 U
PCB-17	--	--	--	--	--	--	--	0.0000021	0.0000071
PCB-170	--	--	--	--	--	--	--	0.00025	0.0015
PCB-171	--	--	--	--	--	--	--	0.000057	0.00042
PCB-172	--	--	--	--	--	--	--	0.000045	0.00026
PCB-173	--	--	--	--	--	--	--	0.0000041	0.000027
PCB-174	--	--	--	--	--	--	--	0.00021	0.0015
PCB-175	--	--	--	--	--	--	--	0.0000068	0.000062
PCB-176	--	--	--	--	--	--	--	0.000019	0.00019
PCB-177	--	--	--	--	--	--	--	0.00014	0.00092
PCB-178	--	--	--	--	--	--	--	0.000051	0.00032
PCB-179	--	--	--	--	--	--	--	0.00007	0.00062
PCB-18	--	--	--	--	--	--	--	0.0000038	0.000015
PCB-180	--	--	--	--	--	--	--	0.00061	0.004
PCB-181	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-182/187	--	--	--	--	--	--	--	0.00029	0.002
PCB-183	--	--	--	--	--	--	--	0.00011	0.00087
PCB-184	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-185	--	--	--	--	--	--	--	0.00003	0.0002
PCB-186	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-188	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-189	--	--	--	--	--	--	--	0.000011	0.000053
PCB-19	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-190	--	--	--	--	--	--	--	0.000064	0.00035
PCB-191	--	--	--	--	--	--	--	0.00001	0.000063
PCB-192	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-193	--	--	--	--	--	--	--	0.000035	0.00019
PCB-194	--	--	--	--	--	--	--	0.00012	0.00071
PCB-195	--	--	--	--	--	--	--	0.000056	0.00033
PCB-196/203	--	--	--	--	--	--	--	0.00017	0.00098
PCB-197	--	--	--	--	--	--	--	0.0000044	0.00003
PCB-198	--	--	--	--	--	--	--	0.0000097	0.000047
PCB-199	--	--	--	--	--	--	--	0.00016	0.0009
PCB-2	--	--	--	--	--	--	--	0.000002 U	0.0000046
PCB-20/21/33	--	--	--	--	--	--	--	0.0000038 J	0.000018
PCB-200	--	--	--	--	--	--	--	0.000014	0.00011
PCB-201	--	--	--	--	--	--	--	0.000014	0.0001
PCB-202	--	--	--	--	--	--	--	0.000032	0.00017
PCB-204	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-205	--	--	--	--	--	--	--	0.0000084	0.000042
PCB-206	--	--	--	--	--	--	--	0.00016	0.00048
PCB-207	--	--	--	--	--	--	--	0.000018	0.000056
PCB-208	--	--	--	--	--	--	--	0.00007	0.00016
PCB-209	--	--	--	--	--	--	--	0.00049	0.00092
PCB-22	--	--	--	--	--	--	--	0.0000036	0.000013
PCB-23	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-24	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-25	--	--	--	--	--	--	--	0.000002 U	0.0000034
PCB-26	--	--	--	--	--	--	--	0.000002	0.0000052
PCB-27	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-28	--	--	--	--	--	--	--	0.0000085	0.000024
PCB-29	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-3	--	--	--	--	--	--	--	0.0000015 J	0.0000077
PCB-30	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-31	--	--	--	--	--	--	--	0.0000079	0.000028
PCB-32	--	--	--	--	--	--	--	0.0000017 J	0.0000056
PCB-34	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-35	--	--	--	--	--	--	--	0.0000019 J	0.000002 U
PCB-36	--	--	--	--	--	--	--	0.0000016 J	0.000002 U
PCB-37	--	--	--	--	--	--	--	0.0000056	0.000024
PCB-38	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-39	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-4	--	--	--	--	--	--	--	0.0000014 J	0.0000033
PCB-40	--	--	--	--	--	--	--	0.000002	0.0000059
PCB-41/64/71/72	--	--	--	--	--	--	--	0.000011	0.000036
PCB-42/59	--	--	--	--	--	--	--	0.0000041	0.000012
PCB-43/49	--	--	--	--	--	--	--	0.000012	0.000035
PCB-44	--	--	--	--	--	--	--	0.000016	0.000038

LOCATION	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-334	SB-334
SAMPLE ID	SB333-20191105-240264	SB333-20191105-2448	SB333-20191105-264288	SB333-20191105-288312	SB333-20191105-312343	SB333-20191105-4872	SB333-20191105-72120	SB334-20191105-0006	SB334-20191105-0624
SAMPLE DATE	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SS	SS
TOP DEPTH	20	2	22	24	26	4	6	0	0.5
BOTTOM DEPTH	22	4	24	26	28.6	6	10	0.5	2
PCB-45	--	--	--	--	--	--	--	0.000002 U	0.0000042
PCB-46	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-47	--	--	--	--	--	--	--	0.000004	0.000013
PCB-48/75	--	--	--	--	--	--	--	0.0000018 J	0.0000056
PCB-5	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-50	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-51	--	--	--	--	--	--	--	0.000002 U	0.0000013 J
PCB-52/69	--	--	--	--	--	--	--	0.000027	0.000074
PCB-53	--	--	--	--	--	--	--	0.000002 U	0.0000032
PCB-54	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-55	--	--	--	--	--	--	--	0.000002 U	0.0000021
PCB-56/60	--	--	--	--	--	--	--	0.000011	0.000037
PCB-57	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-58	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-6	--	--	--	--	--	--	--	0.0000012 J	0.0000032
PCB-61/70	--	--	--	--	--	--	--	0.000027	0.0001
PCB-62	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-63	--	--	--	--	--	--	--	0.000002 U	0.0000026
PCB-65	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-66/76	--	--	--	--	--	--	--	0.000018	0.000085
PCB-67	--	--	--	--	--	--	--	0.000002 U	0.0000019 J
PCB-68	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-7	--	--	--	--	--	--	--	0.000002 U	0.00000088 J
PCB-73	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-74	--	--	--	--	--	--	--	0.0000081	0.000033
PCB-77	--	--	--	--	--	--	--	0.0000034	0.000016
PCB-78	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-79	--	--	--	--	--	--	--	0.000002 U	0.000002
PCB-8	--	--	--	--	--	--	--	0.0000044	0.000015
PCB-80	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-81	--	--	--	--	--	--	--	0.0000017 J	0.000005
PCB-82	--	--	--	--	--	--	--	0.0000057	0.00002
PCB-83/112	--	--	--	--	--	--	--	0.000004 U	0.0000085
PCB-84/92	--	--	--	--	--	--	--	0.000031	0.00016
PCB-85/116	--	--	--	--	--	--	--	0.000011	0.000031
PCB-86	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-87/117/125	--	--	--	--	--	--	--	0.000031	0.00012
PCB-88/91	--	--	--	--	--	--	--	0.0000072	0.000023
PCB-89	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-9	--	--	--	--	--	--	--	0.000002 U	0.0000011 J
PCB-93	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-94	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-95	--	--	--	--	--	--	--	0.000076	0.00064
PCB-96	--	--	--	--	--	--	--	0.000002 U	0.000002 U
PCB-97	--	--	--	--	--	--	--	0.000019	0.000067
PCB-98/102	--	--	--	--	--	--	--	0.000004 U	0.000004 U
PCB-99	--	--	--	--	--	--	--	0.000028	0.000083
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	0.00061 J	0.0031 J
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	5.17453E-07	2.00184E-06
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	5.18053E-07	2.00254E-06
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	1.0193E-08	3.9847E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	1.0223E-08	3.9882E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	1.73877E-07	6.86582E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	1.91877E-07	7.07582E-07
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	0.00015 J	0.00051 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	0.0001077	0.0004771
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	0.00630677	0.03512978
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	0.00641447	0.03560688
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	0.0033017	0.017048
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	0.00648507	0.03566158
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	0.0066034	0.034096
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	0.0066034	0.034096
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	0.000044 J	0.00015 J
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	2600	1400
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	1.7 J	1.6 U
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	20	11
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	1.3 J	1.4 J
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	0.16 U	0.27 U
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	0.4 J	0.36 J
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	0.32 J	0.45 J
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	0.41 J	0.36 J
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	0.24 J	0.3 J
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	0.51 J	0.35 J
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	0.18 U	0.21 U
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	0.19 U	0.26 U
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	0.18 U	0.34 J
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	0.25 J	0.39 J
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	0.35 J	0.52 J
2,3,7,8-TCDD	--	--	--	--	--	--	--	0.11 U	0.16 U
2,3,7,8-TCDF	--	--	--	--	--	--	--	0.23 J	0.32 J
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	1.02927	1.2096
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	1.19807	1.43153

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-333	SB-334	SB-334
SAMPLE ID	SB333-20191105-240264	SB333-20191105-2448	SB333-20191105-264288	SB333-20191105-288312	SB333-20191105-312343	SB333-20191105-4872	SB333-20191105-72120	SB334-20191105-0006	SB334-20191105-0624
SAMPLE DATE	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SS	SS
TOP DEPTH	20	2	22	24	26	4	6	0	0.5
BOTTOM DEPTH	22	4	24	26	28.6	6	10	0.5	2
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	0.76987	0.7591
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	0.93417	0.98103
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	1.33451	0.9632
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	1.49701	1.18529
TOTAL HPCDD	--	--	--	--	--	--	--	38 J	20 J
TOTAL HPCDF	--	--	--	--	--	--	--	2.2 J	2.2 J
TOTAL HXCDD	--	--	--	--	--	--	--	6.5 J	5.4 J
TOTAL HXCDF	--	--	--	--	--	--	--	2.5 J	3.6 J
TOTAL PECDD	--	--	--	--	--	--	--	0.95 J	2 J
TOTAL PECDF	--	--	--	--	--	--	--	2.8 J	5.1 J
TOTAL TCDD	--	--	--	--	--	--	--	0.91 J	1.4 J
TOTAL TCDF	--	--	--	--	--	--	--	4.3 J	7.3 J
METALS (MG/KG)									
ALUMINUM	--	--	--	--	--	--	--	7030	6110
ANTIMONY	--	--	--	--	--	--	--	1.2 U	0.22 J
ARSENIC	--	--	--	--	--	--	--	6.7	14.4
BARIUM	--	--	--	--	--	--	--	53	86.9
BERYLLIUM	--	--	--	--	--	--	--	0.61 J	0.94
CADMIUM	--	--	--	--	--	--	--	0.093 J	0.14 J
CALCIUM	--	--	--	--	--	--	--	2600	708
CHROMIUM	--	--	--	--	--	--	--	14.1	12.4
COBALT	--	--	--	--	--	--	--	9.5	12.6
COPPER	--	--	--	--	--	--	--	13.6	51.5
CYANIDE	--	--	--	--	--	--	--	0.44 J	0.32 J
IRON	--	--	--	--	--	--	--	22900	18700
LEAD	--	--	--	--	--	--	--	21	32
MAGNESIUM	--	--	--	--	--	--	--	664	1200
MANGANESE	--	--	--	--	--	--	--	428	481
MERCURY	--	--	--	--	--	--	--	0.052 J	0.13
NICKEL	--	--	--	--	--	--	--	10.8	15.5
POTASSIUM	--	--	--	--	--	--	--	605	739
SELENIUM	--	--	--	--	--	--	--	3.1 UJ	2.8 UJ
SILVER	--	--	--	--	--	--	--	0.62 U	0.049 J
SODIUM	--	--	--	--	--	--	--	12.8 J	36.5 J
THALLIUM	--	--	--	--	--	--	--	0.62 U	0.56 U
VANADIUM	--	--	--	--	--	--	--	16.3	14.1
ZINC	--	--	--	--	--	--	--	35.4	51.2
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	82	83	82	81	86	83	87	85	87

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334
SAMPLE ID	SB334-20191105-120144	SB334-20191105-144168	SB334-20191105-168192	SB334-20191105-192216	SB334-20191105-216240	SB334-20191105-240264	SB334-20191105-2448	SB334-20191105-264300	SB334-20191105-4872
SAMPLE DATE	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	10	12	14	16	18	20	2	22	4
BOTTOM DEPTH	12	14	16	18	20	22	4	25	6
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	0.0049 U	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	0.0049 U	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	0.0049 U	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	0.0049 U	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	0.0049 U	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	0.0049 U	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	0.0049 U	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	0.0049 U	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	0.0049 U	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	0.0049 U	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	0.0049 U	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	0.0049 U	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	0.0049 U	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	0.0049 U	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	0.0049 U	--	--	--	--	--	--
2-BUTANONE	--	--	0.0097 U	--	--	--	--	--	--
2-HEXANONE	--	--	0.0097 U	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	0.0097 U	--	--	--	--	--	--
ACETONE	--	--	0.0097 U	--	--	--	--	--	--
BENZENE	--	--	0.0049 U	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	0.0049 U	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	0.0049 U	--	--	--	--	--	--
BROMOFORM	--	--	0.0049 U	--	--	--	--	--	--
BROMOMETHANE	--	--	0.0049 U	--	--	--	--	--	--
CARBON DISULFIDE	--	--	0.0049 U	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	0.0049 U	--	--	--	--	--	--
CHLOROBENZENE	--	--	0.0049 U	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	0.0049 U	--	--	--	--	--	--
CHLOROETHANE	--	--	0.0049 U	--	--	--	--	--	--
CHLOROFORM	--	--	0.0049 U	--	--	--	--	--	--
CHLOROMETHANE	--	--	0.0049 U	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	0.0049 U	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	0.0049 U	--	--	--	--	--	--
CYCLOHEXANE	--	--	0.0049 U	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	0.0049 U	--	--	--	--	--	--
ETHYLBENZENE	--	--	0.0049 U	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	0.0049 U	--	--	--	--	--	--
M+P-XYLENES	--	--	0.0049 U	--	--	--	--	--	--
METHYL ACETATE	--	--	0.0049 U	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	0.0049 U	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	0.0049 U	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	0.0049 U	--	--	--	--	--	--
O-XYLENE	--	--	0.0049 U	--	--	--	--	--	--
STYRENE	--	--	0.0049 U	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	0.0049 U	--	--	--	--	--	--
TOLUENE	--	--	0.0049 U	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	0.0049 U	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	0.0049 U	--	--	--	--	--	--
TRICHLOROETHENE	--	--	0.0049 R	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	0.0049 U	--	--	--	--	--	--
VINYL CHLORIDE	--	--	0.0049 U	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	--	0.2 U	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	0.2 U	--	--	--	--	--	--
1,4-DIOXANE	--	--	0.078 U	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	0.38 U	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	0.2 U	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	0.2 U	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	0.2 U	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	0.2 U	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	0.2 U	--	--	--	--	--	--
2,4-DINITROPHENOL	--	--	0.38 U	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	0.2 U	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	0.2 U	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	0.2 U	--	--	--	--	--	--
2-CHLOROPHENOL	--	--	0.2 U	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	0.2 U	--	--	--	--	--	--
2-METHYLPHENOL	--	--	0.38 U	--	--	--	--	--	--
2-NITROANILINE	--	--	0.2 U	--	--	--	--	--	--
2-NITROPHENOL	--	--	0.2 U	--	--	--	--	--	--
3&4-METHYLPHENOL	--	--	0.38 U	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	0.38 U	--	--	--	--	--	--
3-NITROANILINE	--	--	0.38 U	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	0.38 U	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	0.2 U	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	0.2 U	--	--	--	--	--	--
4-CHLOROANILINE	--	--	0.38 U	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	0.2 U	--	--	--	--	--	--
4-NITROANILINE	--	--	0.38 U	--	--	--	--	--	--
4-NITROPHENOL	--	--	0.38 U	--	--	--	--	--	--
ACENAPHTHENE	--	--	0.2 U	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	0.2 U	--	--	--	--	--	--

LOCATION	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334
SAMPLE ID	SB334-20191105-120144	SB334-20191105-144168	SB334-20191105-168192	SB334-20191105-192216	SB334-20191105-216240	SB334-20191105-240264	SB334-20191105-2448	SB334-20191105-264300	SB334-20191105-4872
SAMPLE DATE	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	10	12	14	16	18	20	2	22	4
BOTTOM DEPTH	12	14	16	18	20	22	4	25	6
ACETOPHENONE	--	--	0.38 U	--	--	--	--	--	--
ANTHRACENE	--	--	0.2 U	--	--	--	--	--	--
ATRAZINE	--	--	0.38 U	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	0.2 U	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	0.2 U	--	--	--	--	--	--
BENZALDEHYDE	--	--	0.38 U	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	0.2 U	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	0.2 U	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	0.2 U	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	0.2 U	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	0.2 U	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	0.2 U	--	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	0.38 U	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	0.2 U	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	0.2 U	--	--	--	--	--	--
CAPROLACTAM	--	--	0.38 U	--	--	--	--	--	--
CARBAZOLE	--	--	0.38 U	--	--	--	--	--	--
CHRYSENE	--	--	0.2 U	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	0.2 U	--	--	--	--	--	--
DIBENZOFURAN	--	--	0.2 U	--	--	--	--	--	--
DIETHYL PHTHALATE	--	--	0.2 U	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	0.2 U	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	0.2 U	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	0.38 U	--	--	--	--	--	--
FLUORANTHENE	--	--	0.38 U	--	--	--	--	--	--
FLUORENE	--	--	0.2 U	--	--	--	--	--	--
HEXACHLOROBENZENE	--	--	0.2 U	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	0.2 U	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	0.38 U	--	--	--	--	--	--
HEXACHLOROETHANE	--	--	0.2 U	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	0 U	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	0.2 U	--	--	--	--	--	--
ISOPHORONE	--	--	0.2 U	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	0 U	--	--	--	--	--	--
NAPHTHALENE	--	--	0.2 U	--	--	--	--	--	--
NITROBENZENE	--	--	0.2 U	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	0.2 U	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	0.2 U	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	0.38 U	--	--	--	--	--	--
PHENANTHRENE	--	--	0.2 U	--	--	--	--	--	--
PHENOL	--	--	0.38 U	--	--	--	--	--	--
PYRENE	--	--	0.2 U	--	--	--	--	--	--
TOTAL PAHS	--	--	0 U	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	--	0.0079 U	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	0.0077	--	--	--	--	--	--
ACENAPHTHENE	--	--	0.00065 J	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	0.0038 U	--	--	--	--	--	--
ANTHRACENE	--	--	0.00088 J	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	0.003547	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	0.001438	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	0.0015 J	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	0.00092 J	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	0.0036 J	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	0.0012 J	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	0.0038 U	--	--	--	--	--	--
CHRYSENE	--	--	0.0083	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	0.0038 U	--	--	--	--	--	--
FLUORANTHENE	--	--	0.0025 J	--	--	--	--	--	--
FLUORENE	--	--	0.0011 J	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	0.01962	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	0.0038 U	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	0.01873	--	--	--	--	--	--
NAPHTHALENE	--	--	0.0026 J	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	0.0078 U	--	--	--	--	--	--
PHENANTHRENE	--	--	0.011	--	--	--	--	--	--
PYRENE	--	--	0.0041	--	--	--	--	--	--
TOTAL PAHS	--	--	0.0083	--	--	--	--	--	--
PESTICIDES (MG/KG)									
4,4'-DDD	--	--	0.0042 U	--	--	--	--	--	--
4,4'-DDE	--	--	0.0042 U	--	--	--	--	--	--
4,4'-DDT	--	--	0.0042 U	--	--	--	--	--	--
ALDRIN	--	--	0.0021 U	--	--	--	--	--	--
ALPHA-BHC	--	--	0.0021 U	--	--	--	--	--	--
ALPHA-CHLORDANE	--	--	0.0021 U	--	--	--	--	--	--
BETA-BHC	--	--	0.0021 U	--	--	--	--	--	--
DELTA-BHC	--	--	0.0021 U	--	--	--	--	--	--
DIELDRIN	--	--	0.0042 U	--	--	--	--	--	--
ENDOSULFAN I	--	--	0.0021 U	--	--	--	--	--	--
ENDOSULFAN II	--	--	0.0042 U	--	--	--	--	--	--
ENDOSULFAN SULFATE	--	--	0.0042 U	--	--	--	--	--	--
ENDRIN	--	--	0.0042 U	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	0.0042 U	--	--	--	--	--	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334
SAMPLE ID	SB334-20191105-120144	SB334-20191105-144168	SB334-20191105-168192	SB334-20191105-192216	SB334-20191105-216240	SB334-20191105-240264	SB334-20191105-2448	SB334-20191105-264300	SB334-20191105-4872
SAMPLE DATE	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	10	12	14	16	18	20	2	22	4
BOTTOM DEPTH	12	14	16	18	20	22	4	25	6
ENDRIN KETONE	--	--	0.0042 U	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	0.0021 U	--	--	--	--	--	--
GAMMA-CHLORDANE	--	--	0.0021 U	--	--	--	--	--	--
HEPTACHLOR	--	--	0.0021 U	--	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	--	0.0021 U	--	--	--	--	--	--
METHOXYCHLOR	--	--	0.021 U	--	--	--	--	--	--
TOXAPHENE	--	--	0.21 U	--	--	--	--	--	--
PCBS (MG/KG)									
AROCLOR-1016	--	--	0.042 U	--	--	--	--	--	--
AROCLOR-1221	--	--	0.042 U	--	--	--	--	--	--
AROCLOR-1232	--	--	0.042 U	--	--	--	--	--	--
AROCLOR-1242	--	--	0.042 U	--	--	--	--	--	--
AROCLOR-1248	--	--	0.042 U	--	--	--	--	--	--
AROCLOR-1254	--	--	0.042 U	--	--	--	--	--	--
AROCLOR-1260	--	--	0.042 U	--	--	--	--	--	--
AROCLOR-1262	--	--	0.042 U	--	--	--	--	--	--
AROCLOR-1268	--	--	0.042 U	--	--	--	--	--	--
TOTAL AROCLOR	--	--	0 U	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	0.189	--	--	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	0.275 U	0.284 U	0.298 U	0.305 U	0.301 U	0.305 U	0.284 U	0.298 U	0.272 U
AROCLOR-1221	0.549 U	0.568 U	0.595 U	0.61 U	0.61 U	0.61 U	0.568 U	0.595 U	0.543 U
AROCLOR-1232	0.275 U	0.284 U	0.298 U	0.305 U	0.301 U	0.305 U	0.284 U	0.298 U	0.272 U
AROCLOR-1242	0.275 U	0.284 U	0.298 U	0.305 U	0.301 U	0.305 U	0.284 U	0.298 U	0.272 U
AROCLOR-1248	0.275 U	0.284 U	0.298 U	0.305 U	0.301 U	0.305 U	0.284 U	0.298 U	0.272 U
AROCLOR-1254	0.275 U	0.284 U	0.298 U	0.305 U	0.301 U	0.305 U	0.284 U	0.298 U	0.272 U
AROCLOR-1260	0.275 U	0.284 U	0.298 U	0.305 U	0.301 U	0.305 U	0.284 U	0.298 U	0.272 U
AROCLOR-1262	0.275 U	0.284 U	0.298 U	0.305 U	0.301 U	0.305 U	0.284 U	0.298 U	0.272 U
AROCLOR-1268	0.275 U	0.284 U	0.298 U	0.305 U	0.301 U	0.305 U	0.284 U	0.298 U	0.272 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U
TOTAL AROCLOR HALFND	1.3745	1.42	1.4895	1.525	1.509	1.525	1.42	1.4895	1.3595
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	--	0.000029 J	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	0.000017 J	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	0.000012 J	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	0.0000019 J	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	0.0000086 J	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	0.000022 J	--	--	--	--	--	--
PCB-1	--	--	0.00000093 J	--	--	--	--	--	--
PCB-10	--	--	0.000002 U	--	--	--	--	--	--
PCB-100	--	--	0.000002 U	--	--	--	--	--	--
PCB-101/90	--	--	0.0000041	--	--	--	--	--	--
PCB-103	--	--	0.000002 U	--	--	--	--	--	--
PCB-104	--	--	0.000002 U	--	--	--	--	--	--
PCB-105	--	--	0.000001 J	--	--	--	--	--	--
PCB-108/107	--	--	0.000004 U	--	--	--	--	--	--
PCB-109	--	--	0.000002 U	--	--	--	--	--	--
PCB-11	--	--	0.000027	--	--	--	--	--	--
PCB-110	--	--	0.0000038	--	--	--	--	--	--
PCB-111/115	--	--	0.000004 U	--	--	--	--	--	--
PCB-113	--	--	0.000002 U	--	--	--	--	--	--
PCB-114	--	--	0.00000083 U	--	--	--	--	--	--
PCB-118/106	--	--	0.0000031 J	--	--	--	--	--	--
PCB-119	--	--	0.000002 U	--	--	--	--	--	--
PCB-12	--	--	0.000002 U	--	--	--	--	--	--
PCB-120	--	--	0.000002 U	--	--	--	--	--	--
PCB-121	--	--	0.000002 U	--	--	--	--	--	--
PCB-122	--	--	0.000002 U	--	--	--	--	--	--
PCB-123	--	--	0.0000005 U	--	--	--	--	--	--
PCB-124	--	--	0.000002 U	--	--	--	--	--	--
PCB-126	--	--	0.00000067 U	--	--	--	--	--	--
PCB-127	--	--	0.000002 U	--	--	--	--	--	--
PCB-128/162	--	--	0.000004 U	--	--	--	--	--	--
PCB-129	--	--	0.000002 U	--	--	--	--	--	--
PCB-13	--	--	0.000002 U	--	--	--	--	--	--
PCB-130	--	--	0.000002 U	--	--	--	--	--	--
PCB-131/133	--	--	0.000004 U	--	--	--	--	--	--
PCB-132/161	--	--	0.0000011 J	--	--	--	--	--	--
PCB-134/143	--	--	0.000004 U	--	--	--	--	--	--
PCB-135	--	--	0.000002 U	--	--	--	--	--	--
PCB-136	--	--	0.000002 U	--	--	--	--	--	--
PCB-137	--	--	0.000002 U	--	--	--	--	--	--
PCB-138/163/164	--	--	0.0000039 J	--	--	--	--	--	--
PCB-139/149	--	--	0.0000029 J	--	--	--	--	--	--
PCB-14	--	--	0.000002 U	--	--	--	--	--	--
PCB-140	--	--	0.000002 U	--	--	--	--	--	--
PCB-141	--	--	0.000002 U	--	--	--	--	--	--
PCB-142	--	--	0.000002 U	--	--	--	--	--	--
PCB-144	--	--	0.000002 U	--	--	--	--	--	--
PCB-145	--	--	0.000002 U	--	--	--	--	--	--
PCB-146/165	--	--	0.000004 U	--	--	--	--	--	--
PCB-147	--	--	0.000002 U	--	--	--	--	--	--
PCB-148	--	--	0.000002 U	--	--	--	--	--	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334
SAMPLE ID	SB334-20191105-120144	SB334-20191105-144168	SB334-20191105-168192	SB334-20191105-192216	SB334-20191105-216240	SB334-20191105-240264	SB334-20191105-2448	SB334-20191105-264300	SB334-20191105-4872
SAMPLE DATE	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	10	12	14	16	18	20	2	22	4
BOTTOM DEPTH	12	14	16	18	20	22	4	25	6
PCB-15	--	--	0.00000096 J	--	--	--	--	--	--
PCB-150	--	--	0.000002 U	--	--	--	--	--	--
PCB-151	--	--	0.000002 U	--	--	--	--	--	--
PCB-152	--	--	0.000002 U	--	--	--	--	--	--
PCB-153	--	--	0.0000036	--	--	--	--	--	--
PCB-154	--	--	0.000002 U	--	--	--	--	--	--
PCB-155	--	--	0.000002 U	--	--	--	--	--	--
PCB-156	--	--	0.0000004 U	--	--	--	--	--	--
PCB-157	--	--	0.00000039 U	--	--	--	--	--	--
PCB-158/160	--	--	0.000004 U	--	--	--	--	--	--
PCB-159	--	--	0.000002 U	--	--	--	--	--	--
PCB-16	--	--	0.000002 U	--	--	--	--	--	--
PCB-166	--	--	0.000002 U	--	--	--	--	--	--
PCB-167	--	--	0.0000004 U	--	--	--	--	--	--
PCB-168	--	--	0.000002 U	--	--	--	--	--	--
PCB-169	--	--	0.00000038 U	--	--	--	--	--	--
PCB-17	--	--	0.000002 U	--	--	--	--	--	--
PCB-170	--	--	0.000002 U	--	--	--	--	--	--
PCB-171	--	--	0.000002 U	--	--	--	--	--	--
PCB-172	--	--	0.000002 U	--	--	--	--	--	--
PCB-173	--	--	0.000002 U	--	--	--	--	--	--
PCB-174	--	--	0.0000019 J	--	--	--	--	--	--
PCB-175	--	--	0.000002 U	--	--	--	--	--	--
PCB-176	--	--	0.000002 U	--	--	--	--	--	--
PCB-177	--	--	0.000002 U	--	--	--	--	--	--
PCB-178	--	--	0.000002 U	--	--	--	--	--	--
PCB-179	--	--	0.0000012 J	--	--	--	--	--	--
PCB-18	--	--	0.000002 U	--	--	--	--	--	--
PCB-180	--	--	0.0000069	--	--	--	--	--	--
PCB-181	--	--	0.000002 U	--	--	--	--	--	--
PCB-182/187	--	--	0.0000048	--	--	--	--	--	--
PCB-183	--	--	0.0000022	--	--	--	--	--	--
PCB-184	--	--	0.000002 U	--	--	--	--	--	--
PCB-185	--	--	0.000002 U	--	--	--	--	--	--
PCB-186	--	--	0.000002 U	--	--	--	--	--	--
PCB-188	--	--	0.000002 U	--	--	--	--	--	--
PCB-189	--	--	0.00000036 U	--	--	--	--	--	--
PCB-19	--	--	0.000002 U	--	--	--	--	--	--
PCB-190	--	--	0.000002 U	--	--	--	--	--	--
PCB-191	--	--	0.000002 U	--	--	--	--	--	--
PCB-192	--	--	0.000002 U	--	--	--	--	--	--
PCB-193	--	--	0.000002 U	--	--	--	--	--	--
PCB-194	--	--	0.0000042	--	--	--	--	--	--
PCB-195	--	--	0.00000099 J	--	--	--	--	--	--
PCB-196/203	--	--	0.0000071	--	--	--	--	--	--
PCB-197	--	--	0.000002 U	--	--	--	--	--	--
PCB-198	--	--	0.000002 U	--	--	--	--	--	--
PCB-199	--	--	0.0000075	--	--	--	--	--	--
PCB-2	--	--	0.000002 U	--	--	--	--	--	--
PCB-20/21/33	--	--	0.000006 U	--	--	--	--	--	--
PCB-200	--	--	0.000002 U	--	--	--	--	--	--
PCB-201	--	--	0.000002 U	--	--	--	--	--	--
PCB-202	--	--	0.0000021	--	--	--	--	--	--
PCB-204	--	--	0.000002 U	--	--	--	--	--	--
PCB-205	--	--	0.000002 U	--	--	--	--	--	--
PCB-206	--	--	0.0000062	--	--	--	--	--	--
PCB-207	--	--	0.000001 J	--	--	--	--	--	--
PCB-208	--	--	0.0000014 J	--	--	--	--	--	--
PCB-209	--	--	0.0000021	--	--	--	--	--	--
PCB-22	--	--	0.000002 U	--	--	--	--	--	--
PCB-23	--	--	0.000002 U	--	--	--	--	--	--
PCB-24	--	--	0.000002 U	--	--	--	--	--	--
PCB-25	--	--	0.000002 U	--	--	--	--	--	--
PCB-26	--	--	0.000002 U	--	--	--	--	--	--
PCB-27	--	--	0.000002 U	--	--	--	--	--	--
PCB-28	--	--	0.000002 U	--	--	--	--	--	--
PCB-29	--	--	0.000002 U	--	--	--	--	--	--
PCB-3	--	--	0.000001 J	--	--	--	--	--	--
PCB-30	--	--	0.000002 U	--	--	--	--	--	--
PCB-31	--	--	0.000002 U	--	--	--	--	--	--
PCB-32	--	--	0.000002 U	--	--	--	--	--	--
PCB-34	--	--	0.000002 U	--	--	--	--	--	--
PCB-35	--	--	0.000002 U	--	--	--	--	--	--
PCB-36	--	--	0.000002 U	--	--	--	--	--	--
PCB-37	--	--	0.000002 U	--	--	--	--	--	--
PCB-38	--	--	0.000002 U	--	--	--	--	--	--
PCB-39	--	--	0.000002 U	--	--	--	--	--	--
PCB-4	--	--	0.000002 U	--	--	--	--	--	--
PCB-40	--	--	0.000002 U	--	--	--	--	--	--
PCB-41/64/71/72	--	--	0.00000098 J	--	--	--	--	--	--
PCB-42/59	--	--	0.000004 U	--	--	--	--	--	--
PCB-43/49	--	--	0.0000012 J	--	--	--	--	--	--
PCB-44	--	--	0.0000012 J	--	--	--	--	--	--

LOCATION	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334
SAMPLE ID	SB334-20191105-120144	SB334-20191105-144168	SB334-20191105-168192	SB334-20191105-192216	SB334-20191105-216240	SB334-20191105-240264	SB334-20191105-2448	SB334-20191105-264300	SB334-20191105-4872
SAMPLE DATE	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	10	12	14	16	18	20	2	22	4
BOTTOM DEPTH	12	14	16	18	20	22	4	25	6
PCB-45	--	--	0.000002 U	--	--	--	--	--	--
PCB-46	--	--	0.000002 U	--	--	--	--	--	--
PCB-47	--	--	0.000002 U	--	--	--	--	--	--
PCB-48/75	--	--	0.000004 U	--	--	--	--	--	--
PCB-5	--	--	0.000002 U	--	--	--	--	--	--
PCB-50	--	--	0.000002 U	--	--	--	--	--	--
PCB-51	--	--	0.000002 U	--	--	--	--	--	--
PCB-52/69	--	--	0.0000018 J	--	--	--	--	--	--
PCB-53	--	--	0.000002 U	--	--	--	--	--	--
PCB-54	--	--	0.000002 U	--	--	--	--	--	--
PCB-55	--	--	0.000002 U	--	--	--	--	--	--
PCB-56/60	--	--	0.000004 U	--	--	--	--	--	--
PCB-57	--	--	0.000002 U	--	--	--	--	--	--
PCB-58	--	--	0.000002 U	--	--	--	--	--	--
PCB-6	--	--	0.000002 U	--	--	--	--	--	--
PCB-61/70	--	--	0.0000019 J	--	--	--	--	--	--
PCB-62	--	--	0.000002 U	--	--	--	--	--	--
PCB-63	--	--	0.000002 U	--	--	--	--	--	--
PCB-65	--	--	0.000002 U	--	--	--	--	--	--
PCB-66/76	--	--	0.0000011 J	--	--	--	--	--	--
PCB-67	--	--	0.000002 U	--	--	--	--	--	--
PCB-68	--	--	0.000002 U	--	--	--	--	--	--
PCB-7	--	--	0.000002 U	--	--	--	--	--	--
PCB-73	--	--	0.000002 U	--	--	--	--	--	--
PCB-74	--	--	0.000002 U	--	--	--	--	--	--
PCB-77	--	--	0.00000042 U	--	--	--	--	--	--
PCB-78	--	--	0.000002 U	--	--	--	--	--	--
PCB-79	--	--	0.000002 U	--	--	--	--	--	--
PCB-8	--	--	0.0000012 J	--	--	--	--	--	--
PCB-80	--	--	0.000002 U	--	--	--	--	--	--
PCB-81	--	--	0.00000036 U	--	--	--	--	--	--
PCB-82	--	--	0.000002 U	--	--	--	--	--	--
PCB-83/112	--	--	0.000004 U	--	--	--	--	--	--
PCB-84/92	--	--	0.0000016 J	--	--	--	--	--	--
PCB-85/116	--	--	0.000004 U	--	--	--	--	--	--
PCB-86	--	--	0.000002 U	--	--	--	--	--	--
PCB-87/117/125	--	--	0.0000017 J	--	--	--	--	--	--
PCB-88/91	--	--	0.000004 U	--	--	--	--	--	--
PCB-89	--	--	0.000002 U	--	--	--	--	--	--
PCB-9	--	--	0.000002 U	--	--	--	--	--	--
PCB-93	--	--	0.000002 U	--	--	--	--	--	--
PCB-94	--	--	0.000002 U	--	--	--	--	--	--
PCB-95	--	--	0.0000027	--	--	--	--	--	--
PCB-96	--	--	0.000002 U	--	--	--	--	--	--
PCB-97	--	--	0.0000015 J	--	--	--	--	--	--
PCB-98/102	--	--	0.000004 U	--	--	--	--	--	--
PCB-99	--	--	0.0000014 J	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	0.000021 J	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	1E-10	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	6.2375E-08	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	5E-12	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	1.805E-09	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	3E-11	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	3.9346E-08	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	0.0000082 J	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	0.000001	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	0.00012026	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	0.00012126	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	0.00004199	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	0.000266615	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	0.00008398	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	0.00009398	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	0 UJ	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	--	1200	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	0.71 U	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	13	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	0.26 U	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	0.33 U	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	0.32 U	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	0.23 U	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	0.34 U	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	0.23 U	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	0.62 J	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	0.29 U	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	0.22 U	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	0.24 U	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	0.24 U	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	0.24 U	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	0.11 U	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	0.17 U	--	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	0.195	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	0.6391855	--	--	--	--	--	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334	SB-334
SAMPLE ID	SB334-20191105-120144	SB334-20191105-144168	SB334-20191105-168192	SB334-20191105-192216	SB334-20191105-216240	SB334-20191105-240264	SB334-20191105-2448	SB334-20191105-264300	SB334-20191105-4872
SAMPLE DATE	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105	20191105
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB
TOP DEPTH	10	12	14	16	18	20	2	22	4
BOTTOM DEPTH	12	14	16	18	20	22	4	25	6
TEQ DIOXINS (FISH)	--	--	0.1392	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	0.5086355	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	0.552	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	0.8506565	--	--	--	--	--	--
TOTAL HPCDD	--	--	26 J	--	--	--	--	--	--
TOTAL HPCDF	--	--	0 UJ	--	--	--	--	--	--
TOTAL HXCDD	--	--	3.2 J	--	--	--	--	--	--
TOTAL HXCDF	--	--	0 UJ	--	--	--	--	--	--
TOTAL PECDD	--	--	0 UJ	--	--	--	--	--	--
TOTAL PECDF	--	--	0 UJ	--	--	--	--	--	--
TOTAL TCDD	--	--	0 UJ	--	--	--	--	--	--
TOTAL TCDF	--	--	0 UJ	--	--	--	--	--	--
METALS (MG/KG)									
ALUMINUM	--	--	4480	--	--	--	--	--	--
ANTIMONY	--	--	1.1 U	--	--	--	--	--	--
ARSENIC	--	--	8.2	--	--	--	--	--	--
BARIUM	--	--	44.9	--	--	--	--	--	--
BERYLLIUM	--	--	0.28 J	--	--	--	--	--	--
CADMIUM	--	--	0.56 U	--	--	--	--	--	--
CALCIUM	--	--	44.9 J	--	--	--	--	--	--
CHROMIUM	--	--	12.8	--	--	--	--	--	--
COBALT	--	--	2	--	--	--	--	--	--
COPPER	--	--	12.2	--	--	--	--	--	--
CYANIDE	--	--	0.33 J	--	--	--	--	--	--
IRON	--	--	14400	--	--	--	--	--	--
LEAD	--	--	12.6	--	--	--	--	--	--
MAGNESIUM	--	--	181 J	--	--	--	--	--	--
MANGANESE	--	--	58.9	--	--	--	--	--	--
MERCURY	--	--	0.039 J	--	--	--	--	--	--
NICKEL	--	--	5.1	--	--	--	--	--	--
POTASSIUM	--	--	567 U	--	--	--	--	--	--
SELENIUM	--	--	2.8 UJ	--	--	--	--	--	--
SILVER	--	--	0.56 U	--	--	--	--	--	--
SODIUM	--	--	8.7 J	--	--	--	--	--	--
THALLIUM	--	--	0.56 U	--	--	--	--	--	--
VANADIUM	--	--	19.9	--	--	--	--	--	--
ZINC	--	--	20	--	--	--	--	--	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	84	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	14800	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	91	88	84	82	83	82	88	84	92

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-334	SB-334	SB-335	SB-335	SB-335	SB-335	SB-336	SB-336	SB-336
SAMPLE ID	SB334-20191105-7296	SB334-20191105-96120	SB335-20191115-0006	SB335-20191115-0624	SB335-20191115-4872	SB335-20191115-7296	SB336-20191111-0006	SB336-20191111-0624	SB336-20191111-108132
SAMPLE DATE	20191105	20191105	20191115	20191115	20191115	20191115	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	6	8	0	0.5	4	6	0	0.5	9
BOTTOM DEPTH	8	10	0.5	2	6	8	0.5	2	11
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
1,1,2,2-TETRACHLOROETHANE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
1,1,2-TRICHLOROETHANE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
1,1-DICHLOROETHANE	--	--	0.0057 U	0.0047 U	--	0.0048 UJ	0.0073 U	0.0095 U	--
1,1-DICHLOROETHENE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 U	0.0095 U	--
1,2,3-TRICHLOROBENZENE	--	--	0.0057 UJ	0.0047 UJ	--	0.0048 R	0.0073 R	0.0095 R	--
1,2,4-TRICHLOROBENZENE	--	--	0.0057 UJ	0.0047 UJ	--	0.0048 R	0.0073 R	0.0095 R	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	0.0057 U	0.0047 UJ	--	0.0048 R	0.0073 R	0.0095 R	--
1,2-DIBROMOETHANE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
1,2-DICHLOROBENZENE	--	--	0.0057 UJ	0.0047 UJ	--	0.0048 R	0.0073 R	0.0095 R	--
1,2-DICHLOROETHANE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
1,2-DICHLOROPROPANE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
1,3-DICHLOROBENZENE	--	--	0.0057 UJ	0.0047 UJ	--	0.0048 R	0.0073 R	0.0095 R	--
1,4-DICHLOROBENZENE	--	--	0.0057 UJ	0.0047 UJ	--	0.0048 R	0.0073 R	0.0095 R	--
2-BUTANONE	--	--	0.011 U	0.0095 U	--	0.0096 UJ	0.015 U	0.019 U	--
2-HEXANONE	--	--	0.011 U	0.0095 UJ	--	0.0096 UJ	0.015 UJ	0.019 UJ	--
4-METHYL-2-PENTANONE	--	--	0.011 U	0.0095 UJ	--	0.0096 UJ	0.015 UJ	0.019 UJ	--
ACETONE	--	--	0.011 U	0.0095 U	--	0.0096 UJ	0.015 U	0.019 U	--
BENZENE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
BROMOCHLOROMETHANE	--	--	0.0057 U	0.0047 U	--	0.0048 UJ	0.0073 U	0.0095 U	--
BROMODICHLOROMETHANE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
BROMOFORM	--	--	0.0057 U	0.0047 UJ	--	0.0048 R	0.0073 R	0.0095 R	--
BROMOMETHANE	--	--	0.0057 U	0.0047 U	--	0.0048 UJ	0.0073 U	0.0095 U	--
CARBON DISULFIDE	--	--	0.0057 U	0.0047 U	--	0.0048 UJ	0.0073 U	0.0095 U	--
CARBON TETRACHLORIDE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
CHLOROBENZENE	--	--	0.0057 UJ	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
CHLORODIBROMOMETHANE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
CHLOROETHANE	--	--	0.0057 U	0.0047 U	--	0.0048 UJ	0.0073 U	0.0095 U	--
CHLOROFORM	--	--	0.0057 U	0.0047 U	--	0.0048 UJ	0.0073 U	0.0095 U	--
CHLOROMETHANE	--	--	0.0057 U	0.0047 U	--	0.0048 UJ	0.0073 U	0.0095 U	--
CIS-1,2-DICHLOROETHENE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 U	0.0095 U	--
CIS-1,3-DICHLOROPROPENE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
CYCLOHEXANE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
DICHLORODIFLUOROMETHANE	--	--	0.0057 U	0.0047 U	--	0.0048 UJ	0.0073 U	0.0095 U	--
ETHYLBENZENE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
ISOPROPYLBENZENE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
M+P-XYLENES	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
METHYL ACETATE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
METHYL CYCLOHEXANE	--	--	0.0057 U	0.0032 J	--	0.0048 UJ	0.0068 J	0.019 J+	--
METHYL TERT-BUTYL ETHER	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
METHYLENE CHLORIDE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
O-XYLENE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
STYRENE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
TETRACHLOROETHENE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
TOLUENE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
TRANS-1,2-DICHLOROETHENE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 U	0.0095 U	--
TRANS-1,3-DICHLOROPROPENE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
TRICHLOROETHENE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
TRICHLOROFLUOROMETHANE	--	--	0.0057 U	0.0047 UJ	--	0.0048 UJ	0.0073 UJ	0.0095 UJ	--
VINYL CHLORIDE	--	--	0.0057 U	0.0047 U	--	0.0048 UJ	0.0073 U	0.0095 U	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	--	0.22 U	0.025 J	--	0.19 U	0.21 U	0.055 J	--
1,2,4,5-TETRACHLOROBENZENE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
1,4-DIOXANE	--	--	0.088 U	0.073 U	--	0.074 U	0.082 U	0.075 U	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
2,3,4,6-TETRACHLOROPHENOL	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
2,4,5-TRICHLOROPHENOL	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
2,4,6-TRICHLOROPHENOL	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
2,4-DICHLOROPHENOL	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
2,4-DIMETHYLPHENOL	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
2,4-DINITROPHENOL	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
2,4-DINITROTOLUENE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
2,6-DINITROTOLUENE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
2-CHLORONAPHTHALENE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
2-CHLOROPHENOL	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
2-METHYLNAPHTHALENE	--	--	0.22 U	0.086 J	--	0.19 U	0.21 U	0.15 J	--
2-METHYLPHENOL	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
2-NITROANILINE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
2-NITROPHENOL	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
3&4-METHYLPHENOL	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
3,3'-DICHLOROBENZIDINE	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
3-NITROANILINE	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
4,6-DINITRO-2-METHYLPHENOL	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
4-BROMOPHENYL PHENYL ETHER	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
4-CHLORO-3-METHYLPHENOL	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
4-CHLOROANILINE	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
4-CHLOROPHENYL PHENYL ETHER	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
4-NITROANILINE	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
4-NITROPHENOL	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
ACENAPHTHENE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
ACENAPHTHYLENE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--

LOCATION	SB-334	SB-334	SB-335	SB-335	SB-335	SB-335	SB-336	SB-336	SB-336
SAMPLE ID	SB334-20191105-7296	SB334-20191105-96120	SB335-20191115-0006	SB335-20191115-0624	SB335-20191115-4872	SB335-20191115-7296	SB336-20191111-0006	SB336-20191111-0624	SB336-20191111-108132
SAMPLE DATE	20191105	20191105	20191115	20191115	20191115	20191115	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	6	8	0	0.5	4	6	0	0.5	9
BOTTOM DEPTH	8	10	0.5	2	6	8	0.5	2	11
ACETOPHENONE	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
ANTHRACENE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.026 J	--
ATRAZINE	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
BAP EQUIVALENT-HALFND	--	--	0.21555	0.212916	--	0.214842	0.235874	0.14269	--
BAP EQUIVALENT-POS	--	--	0.10555	0.002966	--	0.004892	0.003824	0.03724	--
BENZALDEHYDE	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.03 J	--
BENZO(A)ANTHRACENE	--	--	0.077 J	0.19 U	--	0.19 U	0.21 U	0.035 J	--
BENZO(A)PYRENE	--	--	0.08 J	0.19 U	--	0.19 U	0.21 U	0.024 J	--
BENZO(B)FLUORANTHENE	--	--	0.12 J	0.029 J	--	0.048 J	0.038 J	0.095 J	--
BENZO(G,H,I)PERYLENE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.034 J	--
BENZO(K)FLUORANTHENE	--	--	0.044 J	0.19 U	--	0.19 U	0.21 U	0.19 U	--
BIS(2-CHLOROETHOXY)METHANE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
BIS(2-CHLOROETHYL)ETHER	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
BUTYL BENZYL PHTHALATE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
CAPROLACTAM	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
CARBAZOLE	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
CHRYSENE	--	--	0.11 J	0.066 J	--	0.092 J	0.024 J	0.24	--
DIBENZO(A,H)ANTHRACENE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
DIBENZOFURAN	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.023 J	--
DIETHYL PHTHALATE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
DIMETHYL PHTHALATE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
DI-N-BUTYL PHTHALATE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
DI-N-OCTYL PHTHALATE	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
FLUORANTHENE	--	--	0.19 J	0.027 J	--	0.039 J	0.032 J	0.085 J	--
FLUORENE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.024 J	--
HEXACHLOROBENZENE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
HEXACHLOROBUTADIENE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
HEXACHLOROCYCLOPENTADIENE	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
HEXACHLOROETHANE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
HIGH MOLECULAR WEIGHT PAHS	--	--	0.644	0.129	--	0.178	0.095	0.521	--
INDENO(1,2,3-CD)PYRENE	--	--	0.053 J	0.19 U	--	0.19 U	0.21 U	0.19 U	--
ISOPHORONE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
LOW MOLECULAR WEIGHT PAHS	--	--	0.31	0.117	--	0.113	0.062	0.488	--
NAPHTHALENE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.043 J	--
NITROBENZENE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
N-NITROSODIPHENYLAMINE	--	--	0.22 U	0.19 U	--	0.19 U	0.21 U	0.19 U	--
PENTACHLOROPHENOL	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
PHENANTHRENE	--	--	0.12 J	0.09 J	--	0.074 J	0.03 J	0.31	--
PHENOL	--	--	0.44 U	0.36 U	--	0.36 U	0.4 U	0.37 U	--
PYRENE	--	--	0.16 J	0.034 J	--	0.038 J	0.033 J	0.093 J	--
TOTAL PAHS	--	--	0.954	0.246	--	0.291	0.157	1.009	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	--	0.0088 U	0.0072 U	--	0.0074 U	0.0083 U	0.0073 U	--
2-METHYLNAPHTHALENE	--	--	0.014	0.11	--	0.011	0.011	0.14	--
ACENAPHTHENE	--	--	0.0061	0.0055	--	0.0053	0.004 U	0.011	--
ACENAPHTHYLENE	--	--	0.0086	0.0019 J	--	0.0036 U	0.0023 J	0.0053	--
ANTHRACENE	--	--	0.018	0.0067	--	0.01	0.0037 J	0.02	--
BAP EQUIVALENT-HALFND	--	--	0.11483	0.015779	--	0.017111	0.022154	0.027628	--
BAP EQUIVALENT-POS	--	--	0.11263	0.015779	--	0.017111	0.022154	0.02761	--
BENZO(A)ANTHRACENE	--	--	0.094	0.0099	--	0.011	0.012	0.023	--
BENZO(A)PYRENE	--	--	0.085	0.0085	--	0.0043	0.014	0.012	--
BENZO(B)FLUORANTHENE	--	--	0.14	0.028	--	0.042	0.026	0.063	--
BENZO(G,H,I)PERYLENE	--	--	0.012 J	0.0026 J	--	0.0031 J	0.0086	0.013	--
BENZO(K)FLUORANTHENE	--	--	0.04	0.0058	--	0.0031 J	0.0092	0.0037 U	--
CHRYSENE	--	--	0.13	0.051	--	0.13	0.022	0.17	--
DIBENZO(A,H)ANTHRACENE	--	--	0.0044 U	0.003 J	--	0.007	0.0034 J	0.0063	--
FLUORANTHENE	--	--	0.24	0.025	--	0.015	0.032	0.056	--
FLUORENE	--	--	0.0075	0.0093	--	0.008	0.0018 J	0.02	--
HIGH MOLECULAR WEIGHT PAHS	--	--	0.688	0.1356	--	0.231	0.1266	0.3467	--
INDENO(1,2,3-CD)PYRENE	--	--	0.037	0.0038	--	0.0035 J	0.0084	0.0054	--
LOW MOLECULAR WEIGHT PAHS	--	--	0.4372	0.1714	--	0.1298	0.0705	0.4003	--
NAPHTHALENE	--	--	0.007	0.013	--	0.0055	0.0047	0.038	--
PENTACHLOROPHENOL	--	--	0.0088 U	0.0073 U	--	0.0074 U	0.0082 U	0.0075 U	--
PHENANTHRENE	--	--	0.15	0.11	--	0.086	0.026	0.25	--
PYRENE	--	--	0.15	0.023	--	0.027	0.023	0.054	--
TOTAL PAHS	--	--	0.13	0.051	--	0.13	0.022	0.17	--
PESTICIDES (MG/KG)									
4,4'-DDD	--	--	0.00032 J	0.0012 J	--	0.0007 R	0.00084 J	0.0056	--
4,4'-DDE	--	--	0.00052 R	0.0006 J	--	0.00033 R	0.0043 U	0.0037 U	--
4,4'-DDT	--	--	0.0011 J	0.0013 J	--	0.00054 R	0.0043 U	0.0037 U	--
ALDRIN	--	--	0.0022 U	0.0019 U	--	0.0019 U	0.0022 U	0.0019 U	--
ALPHA-BHC	--	--	0.0022 U	0.0019 U	--	0.0019 U	0.0022 U	0.0019 U	--
ALPHA-CHLORDANE	--	--	0.0022 U	0.00037 J	--	0.00078 J	0.0022 U	0.0019 U	--
BETA-BHC	--	--	0.0022 U	0.0019 U	--	0.0019 U	0.0022 U	0.0019 U	--
DELTA-BHC	--	--	0.0022 U	0.0019 U	--	0.0019 U	0.0022 U	0.0019 U	--
DIELDRIN	--	--	0.00036 R	0.0036 U	--	0.00053 R	0.0043 U	0.0037 U	--
ENDOSULFAN I	--	--	0.00046 J	0.00098 J	--	0.0019 U	0.0022 U	0.0019 U	--
ENDOSULFAN II	--	--	0.0043 U	0.0036 U	--	0.0036 U	0.0043 U	0.0017 J	--
ENDOSULFAN SULFATE	--	--	0.0043 U	0.0005 J	--	0.0036 U	0.0043 U	0.0037 U	--
ENDRIN	--	--	0.0043 U	0.00076 J	--	0.0015 J	0.0043 U	0.0011 J	--
ENDRIN ALDEHYDE	--	--	0.0043 U	0.00076 J	--	0.001 J	0.0043 U	0.0037 U	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-334	SB-334	SB-335	SB-335	SB-335	SB-335	SB-336	SB-336	SB-336
SAMPLE ID	SB334-20191105-7296	SB334-20191105-96120	SB335-20191115-0006	SB335-20191115-0624	SB335-20191115-4872	SB335-20191115-7296	SB336-20191111-0006	SB336-20191111-0624	SB336-20191111-108132
SAMPLE DATE	20191105	20191105	20191115	20191115	20191115	20191115	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	6	8	0	0.5	4	6	0	0.5	9
BOTTOM DEPTH	8	10	0.5	2	6	8	0.5	2	11
ENDRIN KETONE	--	--	0.0031 J	0.0036 U	--	0.0036 U	0.0043 U	0.0037 U	--
GAMMA-BHC (LINDANE)	--	--	0.0022 U	0.0019 U	--	0.00047 J	0.0011 J	0.0023 J	--
GAMMA-CHLORDANE	--	--	0.0022 U	0.0019 U	--	0.0019 U	0.0022 U	0.0019 U	--
HEPTACHLOR	--	--	0.0022 U	0.00039 J	--	0.00026 R	0.0022 U	0.0019 U	--
HEPTACHLOR EPOXIDE	--	--	0.0022 U	0.0019 U	--	0.0019 U	0.0022 U	0.0019 U	--
METHOXYCHLOR	--	--	0.0036 J	0.019 U	--	0.014 J	0.022 U	0.019 U	--
TOXAPHENE	--	--	0.22 U	0.19 U	--	0.19 U	0.22 U	0.19 U	--
PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	0.278 U	0.298 U	--	0.284 U	0.291 U	--	--	0.281 U	0.275 U
AROCLOR-1221	0.556 U	0.595 U	--	0.568 U	0.581 U	--	--	0.562 U	0.549 U
AROCLOR-1232	0.278 U	0.298 U	--	0.284 U	0.291 U	--	--	0.281 U	0.275 U
AROCLOR-1242	0.278 U	0.298 U	--	0.284 U	0.291 U	--	--	0.281 U	0.275 U
AROCLOR-1248	0.278 U	0.298 U	--	0.284 U	0.291 U	--	--	0.281 U	0.275 U
AROCLOR-1254	0.278 U	0.298 U	--	0.284 U	0.291 U	--	--	0.281 U	0.275 U
AROCLOR-1260	0.278 U	0.298 U	--	0.284 U	0.291 U	--	--	0.281 U	0.275 U
AROCLOR-1262	0.278 U	0.298 U	--	0.284 U	0.291 U	--	--	0.281 U	0.275 U
AROCLOR-1268	0.278 U	0.298 U	--	0.284 U	0.291 U	--	--	0.281 U	0.275 U
TOTAL AROCLOR	0 U	0 U	--	0 U	0 U	--	--	0 U	0 U
TOTAL AROCLOR HALFND	1.39	1.4895	--	1.42	1.4545	--	--	1.405	1.3745
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	--	0.00069 J	0.00013 J	--	0.000055 J	0.0012 J	0.000032 J	--
HEPTACHLOROBIPHENYLS	--	--	0.012 J	0.0058 J	--	0.00011 J	0.00058 J	0.00084 J	--
HEXACHLOROBIPHENYLS	--	--	0.011 J	0.005 J	--	0.00025 J	0.00058 J	0.00092 J	--
MONOCHLOROBIPHENYLS	--	--	0.000012 J	0.000012 J	--	0.000033 J	0.0000035 J	0.0000097 J	--
NONACHLOROBIPHENYLS	--	--	0.0017 J	0.00041 J	--	0.000011 J	0.0002 J	0.00012 J	--
OCTACHLOROBIPHENYLS	--	--	0.003 J	0.0019 J	--	0.00004 J	0.00018 J	0.00019 J	--
PCB-1	--	--	0.0000048	0.0000036	--	0.000015	0.000002 U	0.0000026	--
PCB-10	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-100	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-101/90	--	--	0.00084	0.00039	--	0.000079	0.000039	0.000083	--
PCB-103	--	--	0.0000017 J	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-104	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-105	--	--	0.00012	0.00007	--	0.000026	0.000009	0.000012	--
PCB-108/107	--	--	0.000026	0.000017	--	0.0000038 J	0.000002 J	0.0000043	--
PCB-109	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-11	--	--	0.00061	0.000013	--	0.0000052	0.0012	0.0000043	--
PCB-110	--	--	0.00041	0.00023	--	0.000072	0.000029	0.000045	--
PCB-111/115	--	--	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--
PCB-113	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-114	--	--	0.000011	0.0000067	--	0.0000018 J	0.00000084 U	0.0000015 U	--
PCB-118/106	--	--	0.00042	0.0002	--	0.000063	0.000029	0.000039	--
PCB-119	--	--	0.0000068	0.000003	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-12	--	--	0.000002 U	0.0000045	--	0.0000017 J	0.000002 U	0.0000019 J	--
PCB-120	--	--	0.0000047	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-121	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-122	--	--	0.000002 U	0.000004	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-123	--	--	0.00000082 U	0.0000029	--	0.0000016 J	0.00000078 U	0.0000014 U	--
PCB-124	--	--	0.000033	0.000017	--	0.0000029	0.0000022	0.0000018 J	--
PCB-126	--	--	0.0000059	0.0000052	--	0.0000011 U	0.0000011 U	0.0000027	--
PCB-127	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-128/162	--	--	0.00018	0.000077	--	0.000011	0.000011	0.000015	--
PCB-129	--	--	0.000043	0.000022	--	0.0000041	0.0000029	0.0000038	--
PCB-13	--	--	0.000002 U	0.0000046	--	0.0000029	0.000002 U	0.000002	--
PCB-130	--	--	0.000089	0.000041	--	0.0000043	0.0000068	0.000011	--
PCB-131/133	--	--	0.000038	0.00002	--	0.0000023 J	0.0000032 J	0.0000055	--
PCB-132/161	--	--	0.00038	0.0002	--	0.000014	0.000015	0.000046	--
PCB-134/143	--	--	0.000057	0.000032	--	0.0000031 J	0.0000026 J	0.0000075	--
PCB-135	--	--	0.00028	0.00014	--	0.000007	0.000015	0.000028	--
PCB-136	--	--	0.00025	0.00016	--	0.0000085	0.000011	0.000034	--
PCB-137	--	--	0.000025	0.000011	--	0.0000051	0.0000018 J	0.0000033	--
PCB-138/163/164	--	--	0.0023	0.00099	--	0.000056	0.00014	0.00019	--
PCB-139/149	--	--	0.0019	0.00095	--	0.000038	0.000089	0.00017	--
PCB-14	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-140	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-141	--	--	0.00061	0.0003	--	0.000012	0.000028	0.000049	--
PCB-142	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000051	--
PCB-144	--	--	0.0001	0.000053	--	0.0000015 J	0.0000051	0.000008	--
PCB-145	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-146/165	--	--	0.00034	0.00016	--	0.0000069	0.000022	0.00003	--
PCB-147	--	--	0.000011	0.0000056	--	0.000002 U	0.000002 U	0.0000015 J	--
PCB-148	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-334	SB-334	SB-335	SB-335	SB-335	SB-335	SB-336	SB-336	SB-336
SAMPLE ID	SB334-20191105-7296	SB334-20191105-96120	SB335-20191115-0006	SB335-20191115-0624	SB335-20191115-4872	SB335-20191115-7296	SB336-20191111-0006	SB336-20191111-0624	SB336-20191111-108132
SAMPLE DATE	20191105	20191105	20191115	20191115	20191115	20191115	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	6	8	0	0.5	4	6	0	0.5	9
BOTTOM DEPTH	8	10	0.5	2	6	8	0.5	2	11
PCB-15	--	--	0.000038	0.000057	--	0.000012	0.000002 U	0.0000089	--
PCB-150	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-151	--	--	0.00074	0.00036	--	0.0000087	0.00003	0.000061	--
PCB-152	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-153	--	--	0.0027	0.0012	--	0.000049	0.00016	0.00021	--
PCB-154	--	--	0.0000088	0.0000064	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-155	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-156	--	--	0.00017	0.000072	--	0.000008	0.000011	0.00001	--
PCB-157	--	--	0.000018	0.0000094	--	0.0000017 J	0.0000017 J	0.0000025	--
PCB-158/160	--	--	0.00024	0.00011	--	0.0000086	0.000012	0.000018	--
PCB-159	--	--	0.000042	0.000019	--	0.000002 U	0.0000025	0.0000035	--
PCB-16	--	--	0.000011	0.000015	--	0.0000053	0.000002 U	0.0000033	--
PCB-166	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-167	--	--	0.000087	0.000037	--	0.0000038	0.0000064	0.0000075	--
PCB-168	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-169	--	--	0.000001 U	0.0000016 U	--	0.0000011 U	0.0000011 U	0.0000015 U	--
PCB-17	--	--	0.000015	0.000021	--	0.0000054	0.000002 U	0.0000034	--
PCB-170	--	--	0.0016	0.00067	--	0.000013	0.000066	0.000085	--
PCB-171	--	--	0.00036	0.00019	--	0.0000041	0.000015	0.000026	--
PCB-172	--	--	0.00027	0.00013	--	0.0000032	0.000013	0.000019	--
PCB-173	--	--	0.000026	0.000015	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-174	--	--	0.0014	0.00067	--	0.000012	0.000069	0.00011	--
PCB-175	--	--	0.00004	0.000025	--	0.000002 U	0.0000024	0.0000045	--
PCB-176	--	--	0.00012	0.000071	--	0.0000022	0.0000051	0.000011	--
PCB-177	--	--	0.00091	0.00043	--	0.000008	0.000041	0.00006	--
PCB-178	--	--	0.00033	0.00015	--	0.0000032	0.000017	0.000023	--
PCB-179	--	--	0.00044	0.00028	--	0.0000053	0.00002	0.000038	--
PCB-18	--	--	0.000026	0.000039	--	0.000013	0.0000014 J	0.0000059	--
PCB-180	--	--	0.0028	0.0015	--	0.00003	0.00016	0.00023	--
PCB-181	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-182/187	--	--	0.0017	0.00086	--	0.000016	0.000091	0.00013	--
PCB-183	--	--	0.00067	0.00039	--	0.0000093	0.000031	0.000054	--
PCB-184	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-185	--	--	0.00017	0.000088	--	0.000002 U	0.0000082	0.000013	--
PCB-186	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-188	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-189	--	--	0.000054	0.000022	--	0.00000088 U	0.0000034	0.000004	--
PCB-19	--	--	0.0000033	0.0000025	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-190	--	--	0.00036	0.00017	--	0.0000029	0.000018	0.000019	--
PCB-191	--	--	0.000066	0.000029	--	0.000002 U	0.0000041	0.0000049	--
PCB-192	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-193	--	--	0.00021	0.000096	--	0.0000014 J	0.000012	0.000012	--
PCB-194	--	--	0.00073	0.00045	--	0.0000083	0.000035	0.000041	--
PCB-195	--	--	0.00038	0.00019	--	0.0000032	0.000017	0.000017	--
PCB-196/203	--	--	0.00078	0.00056	--	0.000014	0.000044	0.000052	--
PCB-197	--	--	0.000023	0.000014	--	0.000002 U	0.0000019 J	0.0000025	--
PCB-198	--	--	0.000065	0.000031	--	0.000002 U	0.0000032	0.0000044	--
PCB-199	--	--	0.00067	0.00045	--	0.000012	0.00005	0.00005	--
PCB-2	--	--	0.0000032	0.0000035	--	0.0000046	0.0000018 J	0.0000036	--
PCB-20/21/33	--	--	0.000021	0.00005	--	0.00001	0.0000011 J	0.0000073	--
PCB-200	--	--	0.000096	0.000057	--	0.000002 U	0.000004	0.0000066	--
PCB-201	--	--	0.000078	0.000051	--	0.000002 U	0.0000047	0.000006	--
PCB-202	--	--	0.00016	0.000091	--	0.0000028	0.000014	0.000012	--
PCB-204	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-205	--	--	0.000043	0.000022	--	0.000002 U	0.0000024	0.0000027	--
PCB-206	--	--	0.0011	0.00029	--	0.0000089	0.00012	0.000087	--
PCB-207	--	--	0.00011	0.000036	--	0.000002 U	0.000016	0.0000066	--
PCB-208	--	--	0.00047	0.000086	--	0.0000024	0.000063	0.000029	--
PCB-209	--	--	0.0032	0.00033	--	0.000002	0.00054	0.00011	--
PCB-22	--	--	0.00003	0.000041	--	0.0000069	0.0000012 J	0.0000058	--
PCB-23	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-24	--	--	0.0000025	0.0000033	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-25	--	--	0.0000046	0.0000067	--	0.0000014 J	0.000002 U	0.0000015 J	--
PCB-26	--	--	0.00001	0.000015	--	0.0000036	0.000002 U	0.0000014 J	--
PCB-27	--	--	0.000002	0.0000021	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-28	--	--	0.000025	0.000034	--	0.0000058	0.0000031	0.0000074	--
PCB-29	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-3	--	--	0.0000041	0.0000046	--	0.000013	0.0000017 J	0.0000035	--
PCB-30	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-31	--	--	0.00009	0.00013	--	0.000018	0.0000022	0.000011	--
PCB-32	--	--	0.000015	0.00002	--	0.0000062	0.000002 U	0.000003	--
PCB-34	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-35	--	--	0.0000062	0.0000048	--	0.000002 U	0.000013	0.000002 U	--
PCB-36	--	--	0.0000039	0.000002 U	--	0.000002 U	0.000017	0.000002 U	--
PCB-37	--	--	0.000037	0.000068	--	0.0000077	0.0000018 J	0.0000083	--
PCB-38	--	--	0.0000016 J	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-39	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-4	--	--	0.00001	0.0000055	--	0.0000067	0.000002 U	0.0000029	--
PCB-40	--	--	0.00001	0.000018	--	0.0000037	0.000002 U	0.000002 U	--
PCB-41/64/71/72	--	--	0.000068	0.000095	--	0.000016	0.0000023 J	0.0000065 J	--
PCB-42/59	--	--	0.000024	0.000037	--	0.0000057	0.000001 J	0.0000025 J	--
PCB-43/49	--	--	0.000078	0.000085	--	0.000017	0.0000035 J	0.0000084	--
PCB-44	--	--	0.000057	0.000083	--	0.000022	0.0000025	0.0000085	--

LOCATION	SB-334	SB-334	SB-335	SB-335	SB-335	SB-335	SB-336	SB-336	SB-336
SAMPLE ID	SB334-20191105-7296	SB334-20191105-96120	SB335-20191115-0006	SB335-20191115-0624	SB335-20191115-4872	SB335-20191115-7296	SB336-20191111-0006	SB336-20191111-0624	SB336-20191111-108132
SAMPLE DATE	20191105	20191105	20191115	20191115	20191115	20191115	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	6	8	0	0.5	4	6	0	0.5	9
BOTTOM DEPTH	8	10	0.5	2	6	8	0.5	2	11
PCB-45	--	--	0.000006	0.0000099	--	0.0000031	0.000002 U	0.000002 U	--
PCB-46	--	--	0.0000023	0.0000038	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-47	--	--	0.000032	0.000035	--	0.0000059	0.0000019 J	0.0000052	--
PCB-48/75	--	--	0.0000091	0.000018	--	0.000004	0.000004 U	0.0000014 J	--
PCB-5	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-50	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-51	--	--	0.000002 U	0.0000029	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-52/69	--	--	0.00009	0.000085	--	0.000034	0.0000047	0.000014	--
PCB-53	--	--	0.0000051	0.0000078	--	0.0000024	0.000002 U	0.000002 U	--
PCB-54	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-55	--	--	0.0000033	0.0000047	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-56/60	--	--	0.000081	0.00011	--	0.000015	0.0000044	0.000008	--
PCB-57	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-58	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-6	--	--	0.0000063	0.0000079	--	0.0000042	0.000002 U	0.0000031	--
PCB-61/70	--	--	0.00011	0.00017	--	0.00004	0.000007	0.0000054	--
PCB-62	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-63	--	--	0.0000048	0.0000058	--	0.0000013 J	0.000002 U	0.000002 U	--
PCB-65	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-66/76	--	--	0.00012	0.00016	--	0.000023	0.0000051	0.000015	--
PCB-67	--	--	0.0000045	0.0000055	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-68	--	--	0.000002 U	0.000001 J	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-7	--	--	0.0000012 J	0.0000018 J	--	0.0000018 J	0.000002 U	0.000002 U	--
PCB-73	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-74	--	--	0.000052	0.00007	--	0.000013	0.0000022	0.000002 U	--
PCB-77	--	--	0.000022	0.000026	--	0.000003	0.0000015 J	0.0000044	--
PCB-78	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-79	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-8	--	--	0.000024	0.000029	--	0.000018	0.000002 U	0.0000086	--
PCB-80	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000011	--
PCB-81	--	--	0.0000056	0.0000036	--	0.0000017 J	0.00000075 U	0.0000011 U	--
PCB-82	--	--	0.000024	0.000021	--	0.0000094	0.000002 U	0.000002 U	--
PCB-83/112	--	--	0.0000097	0.0000061	--	0.0000038 J	0.000004 U	0.000004 U	--
PCB-84/92	--	--	0.00014	0.00008	--	0.000031	0.0000073	0.000018	--
PCB-85/116	--	--	0.000047	0.000027	--	0.000014	0.0000043	0.0000065	--
PCB-86	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-87/117/125	--	--	0.00014	0.000072	--	0.000032	0.0000072	0.000017	--
PCB-88/91	--	--	0.000026	0.000023	--	0.00001	0.0000015 J	0.0000038 J	--
PCB-89	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-9	--	--	0.0000023	0.000002	--	0.0000024	0.000002 U	0.000002 U	--
PCB-93	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-94	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-95	--	--	0.00036	0.00025	--	0.00005	0.000014	0.000046	--
PCB-96	--	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-97	--	--	0.000057	0.000035	--	0.000023	0.0000045	0.000011	--
PCB-98/102	--	--	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--
PCB-99	--	--	0.0001	0.000055	--	0.000025	0.00001	0.000015	--
PENTACHLOROBIPHENYLS	--	--	0.0028 J	0.0015 J	--	0.00045 J	0.00016 J	0.00031 J	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	2.28331E-06	2.19643E-06	--	3.23804E-07	7.7268E-08	4.92565E-07	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	2.28381E-06	2.19723E-06	--	3.79358E-07	1.70363E-07	5.48397E-07	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	3.68E-08	3.1499E-08	--	1.364E-09	3.07E-10	1.4119E-08	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	3.6827E-08	3.1539E-08	--	4.143E-09	3.274E-09	1.4437E-08	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	6.0768E-07	5.3028E-07	--	2.097E-09	1.095E-09	2.7152E-07	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	6.22692E-07	5.5428E-07	--	7.361E-08	7.273E-08	2.94228E-07	--
TETRACHLOROBIPHENYLS	--	--	0.00078 J	0.001 J	--	0.00021 J	0.000036 J	0.00009 J	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	0.0004935	0.0002548	--	0.0000476	0.000033	0.0000431	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	0.0341218	0.0163059	--	0.0012001	0.0034748	0.0026424	--
TOTAL PCB CONGENERS ZEROND	--	--	0.0346153	0.0165607	--	0.0012477	0.0035078	0.0026855	--
TOTAL PCB CONGENERS-NOAA	--	--	0.017682	0.007197	--	0.0004729	0.0013988	0.0012674	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	0.03466921	0.0166135	--	0.00132524	0.003597085	0.00276125	--
TOTAL PCB CONGENERS-NOAA X2	--	--	0.035364	0.014394	--	0.0009458	0.0027976	0.0025348	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	0.035364	0.014394	--	0.0009458	0.0027996	0.0025348	--
TRICHLOROBIPHENYLS	--	--	0.0003 J	0.00045 J	--	0.000083 J	0.000041 J	0.000058 J	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	--	2800	1300	--	17	2400	21	--
1,2,3,4,6,7,8,9-OCDF	--	--	2.3 J	1.4 J	--	0.31 U	1.2 J	0.64 J	--
1,2,3,4,6,7,8-HPCDD	--	--	39	12	--	0.51 J	18	1.2 J	--
1,2,3,4,6,7,8-HPCDF	--	--	2.2 J	0.93 JZ	--	0.18 U	0.94 J	0.49 J	--
1,2,3,4,7,8,9-HPCDF	--	--	0.19 U	0.18 U	--	0.18 U	0.18 U	0.2 U	--
1,2,3,4,7,8-HXCDD	--	--	0.64 J	0.15 JZ	--	0.14 U	0.32 J	0.22 U	--
1,2,3,4,7,8-HXCDF	--	--	0.51 J	0.14 JZ	--	0.13 U	0.21 U	0.21 U	--
1,2,3,6,7,8-HXCDD	--	--	0.88 J	0.24 J	--	0.14 U	0.4 J	0.21 U	--
1,2,3,6,7,8-HXCDF	--	--	0.49 JZ	0.14 J	--	0.093 U	0.2 U	0.2 U	--
1,2,3,7,8,9-HXCDD	--	--	1.1 J	0.18 JZ	--	0.15 U	0.45 J	0.2 U	--
1,2,3,7,8,9-HXCDF	--	--	0.21 U	0.21 U	--	0.21 U	0.25 U	0.21 U	--
1,2,3,7,8-PECDD	--	--	0.5 JZ	0.18 U	--	0.18 U	0.22 U	0.18 U	--
1,2,3,7,8-PECDF	--	--	0.29 U	0.2 U	--	0.17 U	0.17 U	0.18 U	--
2,3,4,6,7,8-HXCDF	--	--	0.49 J	0.1 JZ	--	0.091 U	0.21 U	0.18 U	--
2,3,4,7,8-PECDF	--	--	1.3 JZ	0.18 U	--	0.16 U	0.18 U	0.18 U	--
2,3,7,8-TCDD	--	--	0.14 U	0.14 U	--	0.14 U	0.093 U	0.088 U	--
2,3,7,8-TCDF	--	--	0.46 J	0.18 U	--	0.14 U	0.23 J	0.24 J	--
TEQ DIOXINS (BIRD)	--	--	2.90103	0.21734	--	0.00221	0.56252	0.248264	--
TEQ DIOXINS (BIRD) HALFND	--	--	2.99698	0.57874	--	0.3604255	0.86192	0.538814	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-334	SB-334	SB-335	SB-335	SB-335	SB-335	SB-336	SB-336	SB-336
SAMPLE ID	SB334-20191105-7296	SB334-20191105-96120	SB335-20191115-0006	SB335-20191115-0624	SB335-20191115-4872	SB335-20191115-7296	SB336-20191111-0006	SB336-20191111-0624	SB336-20191111-108132
SAMPLE DATE	20191105	20191105	20191115	20191115	20191115	20191115	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	6	8	0	0.5	4	6	0	0.5	9
BOTTOM DEPTH	8	10	0.5	2	6	8	0.5	2	11
TEQ DIOXINS (FISH)	--	--	2.00303	0.26864	--	0.00221	0.44752	0.020264	--
TEQ DIOXINS (FISH) HALFND	--	--	2.09173	0.49454	--	0.2744255	0.69767	0.301814	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	2.59969	0.61472	--	0.0102	1.04976	0.047392	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	2.68549	0.82512	--	0.2532965	1.28021	0.283592	--
TOTAL HPCDD	--	--	79 J	21 J	--	0.51 J	36 J	2.4 J	--
TOTAL HPCDF	--	--	4 J	1.2 J	--	0 UJ	1.6 J	0.78 J	--
TOTAL HXCDD	--	--	12 J	1.3 J	--	0 UJ	5.5 J	1.1 J	--
TOTAL HXCDF	--	--	4.9 J	0.54 J	--	0 UJ	0.49 J	0.32 J	--
TOTAL PECDD	--	--	0.42 J	0 UJ	--	0 UJ	0.53 J	0.53 J	--
TOTAL PECDF	--	--	10 J	2.8 J	--	0 UJ	0.98 J	0.78 J	--
TOTAL TCDD	--	--	1.4 J	0.28 J	--	0 UJ	0.64 J	0.43 J	--
TOTAL TCDF	--	--	5.9 J	0 UJ	--	0 UJ	3.3 J	1.8 J	--
METALS (MG/KG)									
ALUMINUM	--	--	8410	10400	--	599	10500	6490	--
ANTIMONY	--	--	1.2 U	1.1 U	--	1 U	0.24 J	0.39 J	--
ARSENIC	--	--	8	7.5	--	16.7	9	19.8	--
BARIUM	--	--	83.2	69.6	--	15.8	77.3	109	--
BERYLLIUM	--	--	0.62	0.73	--	0.11 J	0.9	0.43 J	--
CADMIUM	--	--	0.099 J	0.14 J	--	0.076 J	0.11 J	0.54 U	--
CALCIUM	--	--	1150	884	--	372 J	2410	486 J	--
CHROMIUM	--	--	10.3	11.6	--	0.85 J	11.7	7.9	--
COBALT	--	--	7.9	11	--	0.48 J	11.2	5.2	--
COPPER	--	--	15.4	32	--	8.8	22.4	35.9	--
CYANIDE	--	--	0.035 J	0.068 J	--	0.065 J	0.6 R	0.54 R	--
IRON	--	--	16600	17100	--	2060	19100	18000	--
LEAD	--	--	28.1	27.4	--	3.3	28.8	25.1	--
MAGNESIUM	--	--	758	1930	--	89.4 J	1020	2110	--
MANGANESE	--	--	455	528	--	7.8	447	111	--
MERCURY	--	--	0.11 UJ	0.11 UJ	--	0.11 UJ	0.098 J	0.2	--
NICKEL	--	--	10.7	22.8	--	2	13.6	10	--
POTASSIUM	--	--	1160	1640	--	536 U	1410	1760	--
SELENIUM	--	--	0.27 J	0.68 J	--	2.2 J	1.1 J	3.1	--
SILVER	--	--	0.58 U	0.55 U	--	0.52 U	0.62 U	0.056 J	--
SODIUM	--	--	24.5 J	35.2 J	--	34.9 J	28.4 J	125 J	--
THALLIUM	--	--	0.1 J	0.15 J	--	0.062 J	0.075 J	0.13 J	--
VANADIUM	--	--	14.4	12.9	--	1.1 J	17.3	7.9	--
ZINC	--	--	35.9	54.2	--	6.8	45.3	33	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	89	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	427000	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	90	84	--	88	86	--	--	89	91

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-336	SB-336	SB-367	SB-367	SB-367	SB-367	SB-367	SB-368	SB-368
SAMPLE ID	SB336-20191111-2442	SB336-20191111-7296	SB367-20191111-0006	SB367-20191111-0624	SB367-20191111-120144	SB367-20191111-4872	SB367-20191111-7296	SB368-20191111-0006	SB368-20191111-0624
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SS	SS
TOP DEPTH	2	6	0	0.5	10	4	6	0	0.5
BOTTOM DEPTH	3.5	8	0.5	2	12	6	8	0.5	2
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
1,1,2,2-TETRACHLOROETHANE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
1,1,2-TRICHLOROETHANE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	--	0.0062 U	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
1,1-DICHLOROETHANE	--	0.0062 U	0.0048 U	0.0074 U	--	--	0.0081 U	0.0056 U	0.0074 U
1,1-DICHLOROETHENE	--	0.0062 U	0.0048 U	0.0074 U	--	--	0.0081 U	0.0056 U	0.0074 U
1,2,3-TRICHLOROBENZENE	--	0.0062 R	0.0048 U	0.0074 R	--	--	0.0081 R	0.0056 U	0.0074 R
1,2,4-TRICHLOROBENZENE	--	0.0062 R	0.0048 U	0.0074 R	--	--	0.0081 R	0.0056 U	0.0074 R
1,2-DIBROMO-3-CHLOROPROPANE	--	0.0062 R	0.0048 U	0.0074 R	--	--	0.0081 R	0.0056 U	0.0074 R
1,2-DIBROMOETHANE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
1,2-DICHLOROBENZENE	--	0.0062 R	0.0048 U	0.0074 R	--	--	0.0081 R	0.0056 U	0.0074 R
1,2-DICHLOROETHANE	--	0.0062 U	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
1,2-DICHLOROPROPANE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
1,3-DICHLOROBENZENE	--	0.0062 R	0.0048 U	0.0074 R	--	--	0.0081 R	0.0056 U	0.0074 R
1,4-DICHLOROBENZENE	--	0.0062 R	0.0048 U	0.0074 R	--	--	0.0081 R	0.0056 U	0.0074 R
2-BUTANONE	--	0.012 U	0.0097 U	0.015 U	--	--	0.016 U	0.011 U	0.015 U
2-HEXANONE	--	0.012 UJ	0.0097 U	0.015 UJ	--	--	0.016 UJ	0.011 U	0.015 UJ
4-METHYL-2-PENTANONE	--	0.012 UJ	0.0097 U	0.015 UJ	--	--	0.016 UJ	0.011 U	0.015 UJ
ACETONE	--	0.012 U	0.0079 J	0.008 J	--	--	0.016 U	0.0097 J	0.015 U
BENZENE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
BROMOCHLOROMETHANE	--	0.0062 U	0.0048 U	0.0074 U	--	--	0.0081 U	0.0056 U	0.0074 U
BROMODICHLOROMETHANE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
BROMOFORM	--	0.0062 R	0.0048 U	0.0074 R	--	--	0.0081 R	0.0056 U	0.0074 R
BROMOMETHANE	--	0.0062 U	0.0048 U	0.0074 U	--	--	0.0081 U	0.0056 U	0.0074 U
CARBON DISULFIDE	--	0.0062 U	0.0048 U	0.0074 U	--	--	0.0081 U	0.0056 U	0.0074 U
CARBON TETRACHLORIDE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
CHLOROBENZENE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
CHLORODIBROMOMETHANE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
CHLOROETHANE	--	0.0062 U	0.0048 U	0.0074 U	--	--	0.0081 U	0.0056 U	0.0074 U
CHLOROFORM	--	0.0062 U	0.0048 U	0.0074 U	--	--	0.0081 U	0.0056 U	0.0074 U
CHLOROMETHANE	--	0.0062 U	0.0048 U	0.0074 U	--	--	0.0081 U	0.0056 U	0.0074 U
CIS-1,2-DICHLOROETHENE	--	0.0062 U	0.0048 U	0.0074 U	--	--	0.0081 U	0.0056 U	0.0074 U
CIS-1,3-DICHLOROPROPENE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
CYCLOHEXANE	--	0.0054 J	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
DICHLORODIFLUOROMETHANE	--	0.0062 U	0.0048 U	0.0074 U	--	--	0.0081 U	0.0056 U	0.0074 U
ETHYLBENZENE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
ISOPROPYLBENZENE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
M+P-XYLENES	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
METHYL ACETATE	--	0.0062 U	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
METHYL CYCLOHEXANE	--	0.0096 J+	0.0048 U	0.0054 J	--	--	0.0044 J	0.0056 U	0.0074 UJ
METHYL TERT-BUTYL ETHER	--	0.0062 U	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
METHYLENE CHLORIDE	--	0.0062 U	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
O-XYLENE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
STYRENE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
TETRACHLOROETHENE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
TOLUENE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
TRANS-1,2-DICHLOROETHENE	--	0.0062 U	0.0048 U	0.0074 U	--	--	0.0081 U	0.0056 U	0.0074 U
TRANS-1,3-DICHLOROPROPENE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
TRICHLOROETHENE	--	0.0062 UJ	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
TRICHLOROFLUOROMETHANE	--	0.0062 U	0.0048 U	0.0074 UJ	--	--	0.0081 UJ	0.0056 U	0.0074 UJ
VINYL CHLORIDE	--	0.0062 U	0.0048 U	0.0074 U	--	--	0.0081 U	0.0056 U	0.0074 U
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	0.048 J	0.2 U	0.19 U	--	--	0.018 J	0.22 U	0.04 J
1,2,4,5-TETRACHLOROBENZENE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
1,4-DIOXANE	--	0.075 U	0.079 U	0.074 U	--	--	0.072 U	0.088 U	0.076 U
2,2'-OXYBIS(1-CHLOROPROPANE)	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
2,3,4,6-TETRACHLOROPHENOL	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
2,4,5-TRICHLOROPHENOL	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
2,4,6-TRICHLOROPHENOL	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
2,4-DICHLOROPHENOL	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
2,4-DIMETHYLPHENOL	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
2,4-DINITROPHENOL	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
2,4-DINITROTOLUENE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
2,6-DINITROTOLUENE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
2-CHLORONAPHTHALENE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
2-CHLOROPHENOL	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
2-METHYLNAPHTHALENE	--	0.11 J	0.2 U	0.05 J	--	--	0.042 J	0.22 U	0.087 J
2-METHYLPHENOL	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
2-NITROANILINE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
2-NITROPHENOL	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
3&4-METHYLPHENOL	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.036 J
3,3'-DICHLOROBENZIDINE	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
3-NITROANILINE	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
4,6-DINITRO-2-METHYLPHENOL	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
4-BROMOPHENYL PHENYL ETHER	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
4-CHLORO-3-METHYLPHENOL	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
4-CHLOROANILINE	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
4-CHLOROPHENYL PHENYL ETHER	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
4-NITROANILINE	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
4-NITROPHENOL	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
ACENAPHTHENE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
ACENAPHTHYLENE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U

LOCATION	SB-336	SB-336	SB-367	SB-367	SB-367	SB-367	SB-367	SB-368	SB-368
SAMPLE ID	SB336-20191111-2442	SB336-20191111-7296	SB367-20191111-0006	SB367-20191111-0624	SB367-20191111-120144	SB367-20191111-4872	SB367-20191111-7296	SB368-20191111-0006	SB368-20191111-0624
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SS	SS
TOP DEPTH	2	6	0	0.5	10	4	6	0	0.5
BOTTOM DEPTH	3.5	8	0.5	2	12	6	8	0.5	2
ACETOPHENONE	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
ANTHRACENE	--	0.19 U	0.2 U	0.028 J	--	--	0.18 U	0.22 U	0.026 J
ATRAZINE	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
BAP EQUIVALENT-HALFND	--	0.21586	0.2245	0.14912	--	--	0.202671	0.159027	0.1828
BAP EQUIVALENT-POS	--	0.00591	0.0034	0.05412	--	--	0.003771	0.038027	0.0878
BENZALDEHYDE	--	0.028 J	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
BENZO(A)ANTHRACENE	--	0.19 U	0.2 U	0.039 J	--	--	0.18 U	0.029 J	0.074 J
BENZO(A)PYRENE	--	0.19 U	0.2 U	0.038 J	--	--	0.18 U	0.031 J	0.054 J
BENZO(B)FLUORANTHENE	--	0.058 J	0.034 J	0.1 J	--	--	0.037 J	0.039 J	0.21
BENZO(G,H,I)PERYLENE	--	0.019 J	0.2 U	0.033 J	--	--	0.18 U	0.22 U	0.041 J
BENZO(K)FLUORANTHENE	--	0.19 U	0.2 U	0.022 J	--	--	0.18 U	0.019 J	0.061 J
BIS(2-CHLOROETHOXY)METHANE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
BIS(2-CHLOROETHYL)ETHER	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
BIS(2-ETHYLHEXYL)PHTHALATE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
BUTYL BENZYL PHTHALATE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
CAPROLACTAM	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 UJ	0.38 UJ
CARBAZOLE	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.024 J
CHRYSENE	--	0.11 J	0.2 U	0.1 J	--	--	0.071 J	0.037 J	0.29
DIBENZO(A,H)ANTHRACENE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
DIBENZOFURAN	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.024 J
DIETHYL PHTHALATE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
DIMETHYL PHTHALATE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
DI-N-BUTYL PHTHALATE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
DI-N-OCTYL PHTHALATE	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
FLUORANTHENE	--	0.071 J	0.023 J	0.085 J	--	--	0.036 J	0.075 J	0.47
FLUORENE	--	0.19 U	0.2 U	0.019 J	--	--	0.18 U	0.22 U	0.024 J
HEXACHLOROBENZENE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
HEXACHLOROBUTADIENE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
HEXACHLOROCYCLOPENTADIENE	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
HEXACHLOROETHANE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
HIGH MOLECULAR WEIGHT PAHS	--	0.247	0.057	0.451	--	--	0.143	0.22	1.115
INDENO(1,2,3-CD)PYRENE	--	0.19 U	0.2 U	0.019 J	--	--	0.18 U	0.22 U	0.045 J
ISOPHORONE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
LOW MOLECULAR WEIGHT PAHS	--	0.359	0.023	0.363	--	--	0.179	0.112	0.949
NAPHTHALENE	--	0.028 J	0.2 U	0.021 J	--	--	0.013 J	0.22 U	0.029 J
NITROBENZENE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
N-NITROSO-DI-N-PROPYLAMINE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
N-NITROSODIPHENYLAMINE	--	0.19 U	0.2 U	0.19 U	--	--	0.18 U	0.22 U	0.19 U
PENTACHLOROPHENOL	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
PHENANTHRENE	--	0.26	0.2 U	0.21	--	--	0.13 J	0.037 J	0.4
PHENOL	--	0.37 U	0.39 U	0.37 U	--	--	0.35 U	0.43 U	0.38 U
PYRENE	--	0.06 J	0.023 J	0.1 J	--	--	0.035 J	0.065 J	0.34
TOTAL PAHS	--	0.606	0.08	0.814	--	--	0.322	0.332	2.064
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	0.0075 U	0.0079 U	0.0075 U	--	--	0.0072 U	0.0089 U	0.0076 U
2-METHYLNAPHTHALENE	--	0.16	0.0017 J	0.058	--	--	0.051	0.003 J	0.1
ACENAPHTHENE	--	0.013	0.0039 U	0.0093	--	--	0.0062	0.001 J	0.017
ACENAPHTHYLENE	--	0.0054	0.0018 J	0.0079	--	--	0.002 J	0.0025 J	0.015
ANTHRACENE	--	0.019	0.0019 J	0.025	--	--	0.015	0.0052	0.025
BAP EQUIVALENT-HALFND	--	0.027268	0.019362	0.048988	--	--	0.012057	0.038929	0.07315
BAP EQUIVALENT-POS	--	0.02725	0.017412	0.04897	--	--	0.01204	0.036779	0.07125
BENZO(A)ANTHRACENE	--	0.022	0.0091	0.029 J-	--	--	0.011	0.022	0.054
BENZO(A)PYRENE	--	0.011	0.013	0.028	--	--	0.0038	0.028	0.042
BENZO(B)FLUORANTHENE	--	0.061	0.026	0.11	--	--	0.03	0.038	0.18
BENZO(G,H,I)PERYLENE	--	0.009	0.0076	0.012	--	--	0.0058	0.029	0.051
BENZO(K)FLUORANTHENE	--	0.0037 UJ	0.0086	0.0037 U	--	--	0.0035 U	0.015	0.053
CHRYSENE	--	0.18	0.016	0.12	--	--	0.12	0.029	0.22
DIBENZO(A,H)ANTHRACENE	--	0.0072	0.0039 U	0.0061	--	--	0.0038	0.0043 U	0.0038 U
FLUORANTHENE	--	0.036	0.02	0.1	--	--	0.02	0.074	0.51 J
FLUORENE	--	0.018	0.0007 J	0.014	--	--	0.011	0.0018 J	0.027
HIGH MOLECULAR WEIGHT PAHS	--	0.3399	0.1093	0.3686	--	--	0.2016	0.234	0.881
INDENO(1,2,3-CD)PYRENE	--	0.0057	0.008	0.0085	--	--	0.0022 J	0.026	0.051
LOW MOLECULAR WEIGHT PAHS	--	0.4374	0.0374	0.4822	--	--	0.2292	0.1227	1.005
NAPHTHALENE	--	0.036	0.0039 U	0.026	--	--	0.015	0.0022 J	0.031
PENTACHLOROPHENOL	--	0.0075 UJ	0.0079 U	0.0074 U	--	--	0.0072 U	0.0088 U	0.0076 U
PHENANTHRENE	--	0.31 J	0.013	0.3	--	--	0.16	0.036	0.38 J
PYRENE	--	0.044	0.021	0.055 J-	--	--	0.025	0.047	0.23
TOTAL PAHS	--	0.18	0.016	0.12	--	--	0.12	0.029	0.22
PESTICIDES (MG/KG)									
4,4'-DDD	--	0.0028 J	0.0035 U	0.01 J	--	--	0.0041 J	0.0016 J	0.0037 J
4,4'-DDE	--	0.00046 J	0.0035 U	0.0038 U	--	--	0.0036 U	0.0044 U	0.0038 U
4,4'-DDT	--	0.0037 U	0.0035 U	0.0038 U	--	--	0.0036 U	0.0044 U	0.0038 U
ALDRIN	--	0.0019 U	0.0018 U	0.0019 U	--	--	0.0019 U	0.0022 U	0.0019 U
ALPHA-BHC	--	0.0019 U	0.0018 U	0.0019 U	--	--	0.0019 U	0.0022 U	0.0019 U
ALPHA-CHLORDANE	--	0.0019 U	0.0018 U	0.0019 U	--	--	0.0019 U	0.0022 U	0.0019 U
BETA-BHC	--	0.0019 U	0.0018 U	0.0019 U	--	--	0.0019 U	0.0022 U	0.0019 U
DELTA-BHC	--	0.0019 U	0.0018 U	0.0019 U	--	--	0.0019 U	0.0022 U	0.0019 U
DIELDRIN	--	0.0037 U	0.0035 U	0.0038 U	--	--	0.0036 U	0.0044 U	0.0038 U
ENDOSULFAN I	--	0.0019 U	0.0018 U	0.0019 U	--	--	0.0019 U	0.0022 U	0.0019 U
ENDOSULFAN II	--	0.0037 U	0.0035 U	0.0038 U	--	--	0.0036 U	0.0044 U	0.0038 U
ENDOSULFAN SULFATE	--	0.0037 U	0.0035 U	0.0038 U	--	--	0.0036 U	0.0044 U	0.0038 U
ENDRIN	--	0.00062 J	0.0035 U	0.0014 J	--	--	0.00078 J	0.0044 U	0.00051 J
ENDRIN ALDEHYDE	--	0.0037 U	0.0035 U	0.0038 U	--	--	0.0036 U	0.0044 U	0.0038 U

LOCATION	SB-336	SB-336	SB-367	SB-367	SB-367	SB-367	SB-367	SB-368	SB-368
SAMPLE ID	SB336-20191111-2442	SB336-20191111-7296	SB367-20191111-0006	SB367-20191111-0624	SB367-20191111-120144	SB367-20191111-4872	SB367-20191111-7296	SB368-20191111-0006	SB368-20191111-0624
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SS	SS
TOP DEPTH	2	6	0	0.5	10	4	6	0	0.5
BOTTOM DEPTH	3.5	8	0.5	2	12	6	8	0.5	2
ENDRIN KETONE	--	0.0037 U	0.0035 U	0.0038 U	--	--	0.0036 U	0.0044 U	0.0038 U
GAMMA-BHC (LINDANE)	--	0.0019 J	0.0018 U	0.0029 J	--	--	0.002 J	0.0021 J	0.0023 J
GAMMA-CHLORDANE	--	0.0019 U	0.0018 U	0.0019 U	--	--	0.0019 U	0.0022 U	0.0019 U
HEPTACHLOR	--	0.0019 U	0.0018 U	0.0019 U	--	--	0.0019 U	0.0022 U	0.0019 U
HEPTACHLOR EPOXIDE	--	0.0019 U	0.0018 U	0.0019 U	--	--	0.0019 U	0.0022 U	0.0019 U
METHOXYCHLOR	--	0.019 U	0.018 U	0.019 U	--	--	0.019 U	0.022 U	0.02 U
TOXAPHENE	--	0.19 U	0.18 U	0.19 U	--	--	0.19 U	0.22 U	0.19 U
PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	0.284 U	--	--	0.281 U	0.269 U	0.294 U	--	--	0.284 U
AROCLOR-1221	0.568 U	--	--	0.562 U	0.538 U	0.588 U	--	--	0.568 U
AROCLOR-1232	0.284 U	--	--	0.281 U	0.269 U	0.294 U	--	--	0.284 U
AROCLOR-1242	0.284 U	--	--	0.281 U	0.269 U	0.294 U	--	--	0.284 U
AROCLOR-1248	0.284 U	--	--	0.281 U	0.269 U	0.294 U	--	--	0.284 U
AROCLOR-1254	0.284 U	--	--	0.281 U	0.269 U	0.294 U	--	--	0.284 U
AROCLOR-1260	0.284 U	--	--	0.281 U	0.269 U	0.294 U	--	--	0.284 U
AROCLOR-1262	0.284 U	--	--	0.281 U	0.269 U	0.294 U	--	--	0.284 U
AROCLOR-1268	0.284 U	--	--	0.281 U	0.269 U	0.294 U	--	--	0.284 U
TOTAL AROCLOR	0 U	--	--	0 U	0 U	0 U	--	--	0 U
TOTAL AROCLOR HALFND	1.42	--	--	1.405	1.345	1.47	--	--	1.42
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	0.000016 J	0.00013 J	0.0000044 J	--	--	0 UJ	0.00045 J	0.000088 J
HEPTACHLOROBIPHENYLS	--	0.00053 J	0.00016 J	0.000081 J	--	--	0 UJ	0.00082 J	0.006 J
HEXACHLOROBIPHENYLS	--	0.00057 J	0.0002 J	0.000076 J	--	--	0 UJ	0.00074 J	0.0078 J
MONOCHLOROBIPHENYLS	--	0.000014 J	0 UJ	0.0000043 J	--	--	0.000011 J	0.0000025 J	0.000024 J
NONACHLOROBIPHENYLS	--	0.000049 J	0.00024 J	0.000072 J	--	--	0 UJ	0.00027 J	0.00031 J
OCTACHLOROBIPHENYLS	--	0.00017 J	0.00008 J	0.000028 J	--	--	0 UJ	0.00026 J	0.0018 J
PCB-1	--	0.0000041	0.000002 U	0.000002 U	--	--	0.0000031	0.0000014 J	0.0000074
PCB-10	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-100	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000017 J
PCB-101/90	--	0.000077	0.000016	0.0000074	--	--	0.000004 U	0.000047	0.0011
PCB-103	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000022
PCB-104	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-105	--	0.000013	0.0000052	0.0000013 U	--	--	0.0000011 U	0.000012	0.00051
PCB-108/107	--	0.0000031 J	0.0000014 J	0.000004 U	--	--	0.000004 U	0.0000026 J	0.000074
PCB-109	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-11	--	0.000002 U	0.00013	0.0000044	--	--	0.000002 U	0.00045	0.000011
PCB-110	--	0.000045	0.000015	0.0000072	--	--	0.000002 U	0.000031	0.0011
PCB-111/115	--	0.0000011 J	0.000004 U	0.000004 U	--	--	0.000004 U	0.000004 U	0.000019
PCB-113	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-114	--	0.0000011 U	0.00000083 U	0.0000013 U	--	--	0.0000011 U	0.000001 U	0.000027
PCB-118/106	--	0.000042	0.000013	0.0000048	--	--	0.0000012 U	0.000033	0.0012
PCB-119	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000012
PCB-12	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000033
PCB-120	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000015 J
PCB-121	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-122	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000013
PCB-123	--	0.0000011 U	0.00000078 U	0.0000013 U	--	--	0.0000012 U	0.0000011 U	0.000013
PCB-124	--	0.0000026	0.000002 U	0.000002 U	--	--	0.000002 U	0.0000022	0.000046
PCB-126	--	0.0000014 J	0.00000098 U	0.0000015 U	--	--	0.0000013 U	0.0000013 U	0.0000089
PCB-127	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-128/162	--	0.000012	0.0000052	0.000004 U	--	--	0.000004 U	0.000014	0.00026
PCB-129	--	0.0000039	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000073
PCB-13	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000048
PCB-130	--	0.0000049	0.0000031	0.000002 U	--	--	0.000002 U	0.0000087	0.00011
PCB-131/133	--	0.0000035 J	0.0000019 J	0.000004 U	--	--	0.000004 U	0.0000058	0.00004
PCB-132/161	--	0.000026	0.0000053	0.000006	--	--	0.000004 U	0.000022	0.00035
PCB-134/143	--	0.0000056	0.0000013 J	0.000004 U	--	--	0.000004 U	0.0000066	0.00007
PCB-135	--	0.000019	0.0000048	0.0000031	--	--	0.000002 U	0.000017	0.00021
PCB-136	--	0.00002	0.0000024	0.0000039	--	--	0.000002 U	0.000019	0.0002
PCB-137	--	0.0000043	0.0000012 J	0.000002 U	--	--	0.000002 U	0.0000026	0.000064
PCB-138/163/164	--	0.00012	0.000051	0.000018	--	--	0.000006 U	0.00018	0.0019
PCB-139/149	--	0.0001	0.000026	0.000016	--	--	0.000004 U	0.00011	0.0012
PCB-14	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-140	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000054
PCB-141	--	0.000032	0.0000079	0.0000046	--	--	0.000002 U	0.00004	0.00039
PCB-142	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-144	--	0.0000042	0.000001 J	0.000002 U	--	--	0.000002 U	0.0000072	0.000061
PCB-145	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-146/165	--	0.000018	0.0000084	0.0000031 J	--	--	0.000004 U	0.000026	0.00023
PCB-147	--	0.0000018 J	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000015
PCB-148	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-336	SB-336	SB-367	SB-367	SB-367	SB-367	SB-367	SB-368	SB-368
SAMPLE ID	SB336-20191111-2442	SB336-20191111-7296	SB367-20191111-0006	SB367-20191111-0624	SB367-20191111-120144	SB367-20191111-4872	SB367-20191111-7296	SB368-20191111-0006	SB368-20191111-0624
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SS	SS
TOP DEPTH	2	6	0	0.5	10	4	6	0	0.5
BOTTOM DEPTH	3.5	8	0.5	2	12	6	8	0.5	2
PCB-15	--	0.0000077	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000029
PCB-150	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-151	--	0.000035	0.0000076	0.0000076	--	--	0.000002 U	0.000042	0.00041
PCB-152	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-153	--	0.00013	0.000055	0.000014	--	--	0.000002 U	0.0002	0.0017
PCB-154	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000011
PCB-155	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-156	--	0.0000083	0.0000034	0.0000012 U	--	--	0.0000013 U	0.000012	0.0002
PCB-157	--	0.0000021	0.0000015 J	0.0000012 U	--	--	0.0000013 U	0.0000023	0.000041
PCB-158/160	--	0.00001	0.0000049	0.000004 U	--	--	0.000004 U	0.000017	0.00019
PCB-159	--	0.0000026	0.0000011 J	0.000002 U	--	--	0.000002 U	0.0000036	0.000024
PCB-16	--	0.0000024	0.000002 U	0.000002 U	--	--	0.000002 U	0.0000016 J	0.0000087
PCB-166	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000006
PCB-167	--	0.0000056	0.0000028	0.0000013 U	--	--	0.0000012 U	0.0000088	0.000085
PCB-168	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-169	--	0.0000012 U	0.00000069 U	0.0000011 U	--	--	0.0000012 U	0.0000012 U	0.00000099 U
PCB-17	--	0.0000032	0.000002 U	0.000002 U	--	--	0.000002 U	0.0000022	0.0000088
PCB-170	--	0.000052	0.000017	0.0000074	--	--	0.000002 U	0.0001	0.00065
PCB-171	--	0.000015	0.0000042	0.0000036	--	--	0.000002 U	0.000023	0.00018
PCB-172	--	0.000011	0.0000046	0.000002 U	--	--	0.000002 U	0.000021	0.00013
PCB-173	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000015
PCB-174	--	0.000065	0.000018	0.000011	--	--	0.000002 U	0.000095	0.00075
PCB-175	--	0.0000027	0.000002 U	0.000002 U	--	--	0.000002 U	0.0000055	0.000026
PCB-176	--	0.000007	0.0000014 J	0.000002 U	--	--	0.000002 U	0.0000075	0.00007
PCB-177	--	0.000033	0.000012	0.0000064	--	--	0.000002 U	0.00006	0.00038
PCB-178	--	0.000015	0.0000063	0.000003	--	--	0.000002 U	0.000022	0.00014
PCB-179	--	0.000024	0.0000059	0.0000043	--	--	0.000002 U	0.000029	0.00026
PCB-18	--	0.0000061	0.000002 U	0.000002 U	--	--	0.000002 U	0.0000041	0.00002
PCB-180	--	0.00016	0.00004	0.000025	--	--	0.000002 U	0.00024	0.0018
PCB-181	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-182/187	--	0.000082	0.00003	0.000013	--	--	0.000004 U	0.00011	0.00083
PCB-183	--	0.000034	0.0000081	0.0000056	--	--	0.000002 U	0.000044	0.0004
PCB-184	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-185	--	0.0000073	0.0000028	0.000002 U	--	--	0.000002 U	0.000013	0.000083
PCB-186	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-188	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-189	--	0.0000027	0.00000064 U	0.0000012 U	--	--	0.0000014 U	0.0000053	0.000024
PCB-19	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-190	--	0.000011	0.0000043	0.0000021	--	--	0.000002 U	0.000026	0.00014
PCB-191	--	0.0000024	0.000002 U	0.000002 U	--	--	0.000002 U	0.000005	0.00003
PCB-192	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-193	--	0.0000071	0.0000039	0.000002 U	--	--	0.000002 U	0.000016	0.000079
PCB-194	--	0.000031	0.000011	0.0000047	--	--	0.000002 U	0.000054	0.00039
PCB-195	--	0.000014	0.0000051	0.000002 U	--	--	0.000002 U	0.000023	0.00015
PCB-196/203	--	0.00005	0.00002	0.0000082	--	--	0.000004 U	0.000064	0.00052
PCB-197	--	0.0000028	0.000002 U	0.000002 U	--	--	0.000002 U	0.0000023	0.000015
PCB-198	--	0.0000029	0.0000019 J	0.000002 U	--	--	0.000002 U	0.0000058	0.000029
PCB-199	--	0.000046	0.000028	0.0000089	--	--	0.000002 U	0.000071	0.00046
PCB-2	--	0.0000042	0.000002 U	0.0000023	--	--	0.000005	0.000002 U	0.0000056
PCB-20/21/33	--	0.0000062	0.000006 U	0.000006 U	--	--	0.000006 U	0.0000037 J	0.000023
PCB-200	--	0.0000057	0.0000015 J	0.0000013 J	--	--	0.000002 U	0.0000067	0.000057
PCB-201	--	0.0000061	0.0000026	0.0000014 J	--	--	0.000002 U	0.0000068	0.000056
PCB-202	--	0.000012	0.0000096	0.0000031	--	--	0.000002 U	0.000018	0.000089
PCB-204	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-205	--	0.0000024	0.000002 U	0.000002 U	--	--	0.000002 U	0.000005	0.00002
PCB-206	--	0.000032	0.00014	0.000043	--	--	0.000002 U	0.00017	0.00022
PCB-207	--	0.0000054	0.000022	0.0000074	--	--	0.000002 U	0.000016	0.000032
PCB-208	--	0.000012	0.000075	0.000022	--	--	0.000002 U	0.00008	0.000057
PCB-209	--	0.000026	0.00081	0.00024	--	--	0.000002 U	0.00057	0.00011
PCB-22	--	0.0000035	0.000002 U	0.000002 U	--	--	0.000002 U	0.0000033	0.000017
PCB-23	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-24	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-25	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.00000098 J	0.0000038
PCB-26	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.0000013 J	0.0000055
PCB-27	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-28	--	0.0000078	0.000002 U	0.000002 U	--	--	0.000002 U	0.0000076	0.000029
PCB-29	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-3	--	0.0000055	0.000002 U	0.000002	--	--	0.0000028	0.0000011 J	0.000011
PCB-30	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-31	--	0.0000084	0.000002 U	0.000002 U	--	--	0.000002 U	0.0000062	0.000036
PCB-32	--	0.0000021	0.000002 U	0.000002 U	--	--	0.000002 U	0.0000016 J	0.0000072
PCB-34	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-35	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.0000041	0.0000026
PCB-36	--	0.000002 U	0.0000018 J	0.000002 U	--	--	0.000002 U	0.000005	0.000002 U
PCB-37	--	0.0000068	0.000002 U	0.000002 U	--	--	0.000002 U	0.0000039	0.000027
PCB-38	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-39	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-4	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000078
PCB-40	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.00001
PCB-41/64/71/72	--	0.0000085	0.0000011 J	0.000008 U	--	--	0.000008 U	0.0000056 J	0.000067
PCB-42/59	--	0.0000034 J	0.000004 U	0.000004 U	--	--	0.000004 U	0.000002 J	0.000017
PCB-43/49	--	0.0000098	0.0000016 J	0.000004 U	--	--	0.000004 U	0.000006	0.000077
PCB-44	--	0.0000097	0.000002 U	0.000002 U	--	--	0.000002 U	0.000005	0.00012

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-336	SB-336	SB-367	SB-367	SB-367	SB-367	SB-367	SB-368	SB-368
SAMPLE ID	SB336-20191111-2442	SB336-20191111-7296	SB367-20191111-0006	SB367-20191111-0624	SB367-20191111-120144	SB367-20191111-4872	SB367-20191111-7296	SB368-20191111-0006	SB368-20191111-0624
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SS	SS
TOP DEPTH	2	6	0	0.5	10	4	6	0	0.5
BOTTOM DEPTH	3.5	8	0.5	2	12	6	8	0.5	2
PCB-45	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000035
PCB-46	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000015 J
PCB-47	--	0.0000055	0.0000012 J	0.000002 U	--	--	0.000002 U	0.0000033	0.000024
PCB-48/75	--	0.0000022 J	0.000004 U	0.000004 U	--	--	0.000004 U	0.0000013 J	0.0000069
PCB-5	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-50	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-51	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000013 J
PCB-52/69	--	0.000016	0.0000017 J	0.000004 U	--	--	0.000004 U	0.000007	0.00021
PCB-53	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000044
PCB-54	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-55	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000041
PCB-56/60	--	0.0000097	0.000004 U	0.000004 U	--	--	0.000004 U	0.0000065	0.000089
PCB-57	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-58	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-6	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000055
PCB-61/70	--	0.0000076	0.0000035 J	0.000004 U	--	--	0.000004 U	0.000011	0.00039
PCB-62	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-63	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000056
PCB-65	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-66/76	--	0.00002	0.000002 J	0.000004 U	--	--	0.000004 U	0.0000086	0.00016
PCB-67	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000023
PCB-68	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-7	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000029
PCB-73	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000024
PCB-74	--	0.000002 U	0.00000093 J	0.000002 U	--	--	0.000002 U	0.0000041	0.000093
PCB-77	--	0.0000036	0.00000072 U	0.0000011 U	--	--	0.0000011 U	0.0000024	0.000028
PCB-78	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-79	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000073
PCB-8	--	0.0000083	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000022
PCB-80	--	0.000012	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-81	--	0.00000095 U	0.0000006 U	0.000001 U	--	--	0.000001 U	0.00000091 U	0.000016
PCB-82	--	0.0000053	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.00012
PCB-83/112	--	0.000002 J	0.000004 U	0.000004 U	--	--	0.000004 U	0.000004 U	0.000036
PCB-84/92	--	0.000019	0.000004	0.0000018 J	--	--	0.000004 U	0.0000084	0.0003
PCB-85/116	--	0.000007	0.0000034 J	0.000004 U	--	--	0.000004 U	0.0000046	0.00014
PCB-86	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-87/117/125	--	0.000018	0.0000046 J	0.0000024 J	--	--	0.000006 U	0.0000085	0.00041
PCB-88/91	--	0.0000042	0.0000011 J	0.000004 U	--	--	0.000004 U	0.0000025 J	0.000062
PCB-89	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000041
PCB-9	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002
PCB-93	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-94	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000019 J
PCB-95	--	0.000038	0.0000053	0.0000044	--	--	0.000002 U	0.000022	0.00046
PCB-96	--	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.0000015 J
PCB-97	--	0.000016	0.0000031	0.000002 U	--	--	0.000002 U	0.000005	0.00032
PCB-98/102	--	0.000004 U	0.000004 U	0.000004 U	--	--	0.000004 U	0.000004 U	0.000004 U
PCB-99	--	0.000018	0.000007	0.000002 U	--	--	0.000002 U	0.0000098	0.00033
PENTACHLOROBIPHENYLS	--	0.00031 J	0.000079 J	0.000028 J	--	--	0 UJ	0.00019 J	0.0063 J
TEQ DIOXIN-LIKE PCBs (BIRD)	--	3.22423E-07	1.038E-09	0.0000013 U	--	--	0.0000011 U	1.22771E-07	3.96902E-06
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	3.70583E-07	9.843E-08	0.0000013 U	--	--	0.0000011 U	2.33926E-07	3.96952E-06
TEQ DIOXIN-LIKE PCBs (FISH)	--	7.517E-09	6.4E-11	0.0000013 U	--	--	0.0000011 U	4.41E-10	5.98E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	7.788E-09	2.721E-09	0.0000013 U	--	--	0.0000011 U	3.952E-09	5.9824E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	1.41311E-07	3.87E-10	0.0000013 U	--	--	0.0000011 U	1.452E-09	9.246E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	1.59485E-07	5.9895E-08	0.0000013 U	--	--	0.0000011 U	8.4619E-08	9.3945E-07
TETRACHLOROBIPHENYLS	--	0.00011 J	0.000012 J	0 UJ	--	--	0 UJ	0.000063 J	0.0013 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	0.0000367	0.0000129	0 U	--	--	0 U	0.0000428	0.0009529
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	0.0018086	0.00169103	0.0005344	--	--	0.0000109	0.00336618	0.0230395
TOTAL PCB CONGENERS ZEROND	--	0.0018453	0.00170393	0.0005344	--	--	0.0000109	0.00340898	0.0239924
TOTAL PCB CONGENERS-NOAA	--	0.0008279	0.0011912	0.0003726	--	--	0 U	0.0017313	0.010991
TOTAL PCB CONGENERS-NOAA HALFND	--	0.001923475	0.00181555	0.00068915	--	--	0.0002111	0.003492735	0.024036895
TOTAL PCB CONGENERS-NOAA X2	--	0.0016558	0.0023824	0.0007452	--	--	0 U	0.0034626	0.021982
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	0.0016558	0.0023904	0.0007685	--	--	0.0000483	0.0034646	0.021982
TRICHLOROBIPHENYLS	--	0.000047 J	0.0000018 J	0 UJ	--	--	0 UJ	0.000046 J	0.00019 J
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	13	3100	2500	--	--	2.6 J	2900	250
1,2,3,4,6,7,8,9-OCDF	--	0.51 J	0.72 J	0.46 U	--	--	0.32 U	1.3 J	1.6 J
1,2,3,4,6,7,8-HPCDD	--	1 J	17	14	--	--	0.29 U	51	8.6
1,2,3,4,6,7,8-HPCDF	--	0.41 J	0.75 J	0.32 J	--	--	0.17 U	1.1 J	1.5 J
1,2,3,4,7,8,9-HPCDF	--	0.15 U	0.18 U	0.15 U	--	--	0.15 U	0.15 U	0.25 U
1,2,3,4,7,8-HXCDD	--	0.23 U	0.27 U	0.21 U	--	--	0.2 U	0.74 J	0.23 J
1,2,3,4,7,8-HXCDF	--	0.21 U	0.21 U	0.21 U	--	--	0.21 U	0.21 U	0.47 J
1,2,3,6,7,8-HXCDD	--	0.23 U	0.28 U	0.21 U	--	--	0.19 U	0.96 J	0.42 J
1,2,3,6,7,8-HXCDF	--	0.2 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.38 J
1,2,3,7,8,9-HXCDD	--	0.21 U	0.25 U	0.19 U	--	--	0.18 U	0.96 J	0.35 J
1,2,3,7,8,9-HXCDF	--	0.22 U	0.22 U	0.23 U	--	--	0.16 U	0.26 U	0.19 U
1,2,3,7,8-PECDD	--	0.18 U	0.18 U	0.19 U	--	--	0.18 U	0.18 U	0.2 U
1,2,3,7,8-PECDF	--	0.15 U	0.22 U	0.15 U	--	--	0.15 U	0.16 U	0.37 J
2,3,4,6,7,8-HXCDF	--	0.18 U	0.19 U	0.19 U	--	--	0.13 U	0.19 U	0.44 J
2,3,4,7,8-PECDF	--	0.32 J	0.22 U	0.15 U	--	--	0.14 U	0.2 J	0.75 J
2,3,7,8-TCDD	--	0.08 U	0.091 U	0.091 U	--	--	0.059 U	0.098 U	0.091 U
2,3,7,8-TCDF	--	0.27 J	0.25 J	0.079 U	--	--	0.091 U	0.11 U	0.94 J
TEQ DIOXINS (BIRD)	--	0.596451	0.584572	0.2672	--	--	0.00026	0.69473	1.95546
TEQ DIOXINS (BIRD) HALFND	--	0.792601	0.903622	0.587773	--	--	0.294471	0.94048	2.11171

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-336	SB-336	SB-367	SB-367	SB-367	SB-367	SB-367	SB-368	SB-368
SAMPLE ID	SB336-20191111-2442	SB336-20191111-7296	SB367-20191111-0006	SB367-20191111-0624	SB367-20191111-120144	SB367-20191111-4872	SB367-20191111-7296	SB368-20191111-0006	SB368-20191111-0624
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SS	SS
TOP DEPTH	2	6	0	0.5	10	4	6	0	0.5
BOTTOM DEPTH	3.5	8	0.5	2	12	6	8	0.5	2
TEQ DIOXINS (FISH)	--	0.179951	0.347072	0.2672	--	--	0.00026	0.84133	0.74096
TEQ DIOXINS (FISH) HALFND	--	0.414651	0.655122	0.547698	--	--	0.249396	1.03083	0.89721
TEQ DIOXINS (HUMANS/MAMMALS)	--	0.141153	1.132716	0.8932	--	--	0.00078	1.71739	0.73558
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	0.348153	1.386416	1.135219	--	--	0.214678	1.90804	0.89183
TOTAL HPCDD	--	2 J	35 J	27 J	--	--	0 UJ	100 J	17 J
TOTAL HPCDF	--	0.64 J	1.4 J	0.64 J	--	--	0 UJ	1.6 J	2.4 J
TOTAL HXCDD	--	0.43 J	2.6 J	1.1 J	--	--	0 UJ	11 J	4.4 J
TOTAL HXCDF	--	0.66 J	0.6 J	0 UJ	--	--	0 UJ	0.59 J	3.5 J
TOTAL PECDD	--	0.2 J	0.36 J	0 UJ	--	--	0 UJ	0.55 J	1.4 J
TOTAL PECDF	--	2 J	0.78 J	0 UJ	--	--	0 UJ	1.4 J	6.1 J
TOTAL TCDD	--	0.4 J	0.67 J	0 UJ	--	--	0 UJ	0.55 J	0.88 J
TOTAL TCDF	--	3.7 J	3.2 J	0.32 J	--	--	0 UJ	1.7 J	10 J
METALS (MG/KG)									
ALUMINUM	--	6540	12700	5240	--	--	4060	10100	7240
ANTIMONY	--	0.21 J	1.2 U	1.1 U	--	--	1 U	1.2 U	0.31 J
ARSENIC	--	14.5	6.9	22.9	--	--	18.1	7.7	22.7
BARIUM	--	61.7	62.6	74.7	--	--	49.1	92	106
BERYLLIUM	--	0.26 J	0.71	0.54 J	--	--	0.17 J	0.8	0.4 J
CADMIUM	--	0.54 U	0.58 U	0.081 J	--	--	0.52 U	0.085 J	0.56 U
CALCIUM	--	286 J	1310	692	--	--	325 J	2470	350 J
CHROMIUM	--	5.9	11.3	10.8	--	--	4.8	13.9	14.7
COBALT	--	2.3	11.6	11.9	--	--	2.4	10.2	6.1
COPPER	--	22.2	18.7	42	--	--	26.1	16.3	43.8
CYANIDE	--	0.56 R	0.6 R	0.96 J-	--	--	0.51 R	0.62 R	0.56 R
IRON	--	16400	28600	15800	--	--	16400	21700	19700
LEAD	--	13.5	25.7	32.1	--	--	15.3	25.8	31.7
MAGNESIUM	--	1900	1020	650	--	--	1110	754	1520
MANGANESE	--	61.4	350	372	--	--	54.3	472	170
MERCURY	--	0.14	0.076 J	0.13	--	--	0.3	0.05 J	0.12
NICKEL	--	5.6	12.9	14.5	--	--	4.9	12.7	11.8
POTASSIUM	--	1880	1350	1220	--	--	1510	1270	1980
SELENIUM	--	1.9 J	2.9 U	2.8 U	--	--	2.6 U	0.89 J	0.6 J
SILVER	--	0.54 U	0.58 U	0.55 U	--	--	0.52 U	0.61 U	0.053 J
SODIUM	--	107 J	30.6 J	51.2 J	--	--	360 J	21.5 J	84.9 J
THALLIUM	--	0.11 J	0.58 U	0.55 U	--	--	0.52 U	0.084 J	0.2 J
VANADIUM	--	6.6	17.3	14.5	--	--	4.1	20.4	15.1
ZINC	--	20.5	43.2	40	--	--	13.8	43.5	37.7
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	85	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	22600	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	88	--	--	89	93	85	--	--	88

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-368	SB-368	SB-368	SB-370	SB-370	SB-370	SB-370	SB-370	SB-370
SAMPLE ID	SB368-20191111-168192	SB368-20191111-2448	SB368-20191111-6084	SB370-20191111-0006	SB370-20191111-0624	SB370-20191111-180204	SB370-20191111-4872	SB370-20191111-7296	SB370-20191111-96120
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SB	SB	SB
TOP DEPTH	14	2	5	0	0.5	15	4	6	8
BOTTOM DEPTH	16	4	7	0.5	2	17	6	8	10
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	0.0068 UJ	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 R	--
1,1,2,2-TETRACHLOROETHANE	--	0.0068 UJ	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 R	--
1,1,2-TRICHLOROETHANE	--	0.0068 UJ	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 R	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	0.0068 U	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 UJ	--
1,1-DICHLOROETHANE	--	0.0068 U	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 UJ	--
1,1-DICHLOROETHENE	--	0.0068 U	--	0.0051 UJ	0.0054 UJ	0.0057 U	--	0.0084 UJ	--
1,2,3-TRICHLOROBENZENE	--	0.0068 R	--	0.0051 UJ	0.0054 UJ	0.0057 U	--	0.0084 R	--
1,2,4-TRICHLOROBENZENE	--	0.0068 R	--	0.0051 UJ	0.0054 UJ	0.0057 U	--	0.0084 R	--
1,2-DIBROMO-3-CHLOROPROPANE	--	0.0068 R	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 R	--
1,2-DIBROMOETHANE	--	0.0068 UJ	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 R	--
1,2-DICHLOROBENZENE	--	0.0068 R	--	0.0051 UJ	0.0054 UJ	0.0057 U	--	0.0084 R	--
1,2-DICHLOROETHANE	--	0.0068 U	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 UJ	--
1,2-DICHLOROPROPANE	--	0.0068 UJ	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 R	--
1,3-DICHLOROBENZENE	--	0.0068 R	--	0.0051 UJ	0.0054 UJ	0.0057 U	--	0.0084 R	--
1,4-DICHLOROBENZENE	--	0.0068 R	--	0.0051 UJ	0.0054 UJ	0.0057 U	--	0.0084 R	--
2-BUTANONE	--	0.014 U	--	0.01 U	0.011 U	0.011 U	--	0.017 UJ	--
2-HEXANONE	--	0.014 UJ	--	0.01 U	0.011 U	0.011 U	--	0.017 R	--
4-METHYL-2-PENTANONE	--	0.014 UJ	--	0.01 U	0.011 U	0.011 U	--	0.017 R	--
ACETONE	--	0.014 U	--	0.01 U	0.011 U	0.011 U	--	0.029 J+	--
BENZENE	--	0.0068 UJ	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 R	--
BROMOCHLOROMETHANE	--	0.0068 U	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 UJ	--
BROMODICHLOROMETHANE	--	0.0068 UJ	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 UJ	--
BROMOFORM	--	0.0068 R	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 R	--
BROMOMETHANE	--	0.0068 U	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 UJ	--
CARBON DISULFIDE	--	0.0068 U	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 UJ	--
CARBON TETRACHLORIDE	--	0.0068 UJ	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 R	--
CHLOROBENZENE	--	0.0068 UJ	--	0.0051 UJ	0.0054 UJ	0.0057 U	--	0.0084 R	--
CHLORODIBROMOMETHANE	--	0.0068 UJ	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 R	--
CHLOROETHANE	--	0.0068 U	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 UJ	--
CHLOROFORM	--	0.0068 U	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 UJ	--
CHLOROMETHANE	--	0.0068 U	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 UJ	--
CIS-1,2-DICHLOROETHENE	--	0.0068 U	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 UJ	--
CIS-1,3-DICHLOROPROPENE	--	0.0068 UJ	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 R	--
CYCLOHEXANE	--	0.0068 UJ	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 R	--
DICHLORODIFLUOROMETHANE	--	0.0068 U	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 UJ	--
ETHYLBENZENE	--	0.0068 UJ	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 R	--
ISOPROPYLBENZENE	--	0.0068 UJ	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 R	--
M+P-XYLENES	--	0.0068 UJ	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 R	--
METHYL ACETATE	--	0.0068 U	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 UJ	--
METHYL CYCLOHEXANE	--	0.0045 J	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.056 J+	--
METHYL TERT-BUTYL ETHER	--	0.0068 U	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 UJ	--
METHYLENE CHLORIDE	--	0.0068 U	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 UJ	--
O-XYLENE	--	0.0068 UJ	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 R	--
STYRENE	--	0.0068 UJ	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 R	--
TETRACHLOROETHENE	--	0.0068 UJ	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 R	--
TOLUENE	--	0.0068 UJ	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 R	--
TRANS-1,2-DICHLOROETHENE	--	0.0068 U	--	0.0051 UJ	0.0054 UJ	0.0057 U	--	0.0084 UJ	--
TRANS-1,3-DICHLOROPROPENE	--	0.0068 UJ	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 R	--
TRICHLOROETHENE	--	0.0068 UJ	--	0.0051 R	0.0054 R	0.0057 U	--	0.0084 R	--
TRICHLOROFLUOROMETHANE	--	0.0068 U	--	0.0051 U	0.0054 UJ	0.0057 U	--	0.0084 UJ	--
VINYL CHLORIDE	--	0.0068 U	--	0.0051 U	0.0054 U	0.0057 U	--	0.0084 UJ	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	0.054 J	--	0.2 U	0.015 J	0.22 U	--	0.038 J	--
1,2,4,5-TETRACHLOROBENZENE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
1,4-DIOXANE	--	0.075 U	--	0.079 U	0.075 U	0.085 U	--	0.073 U	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
2,3,4,6-TETRACHLOROPHENOL	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
2,4,5-TRICHLOROPHENOL	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
2,4,6-TRICHLOROPHENOL	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
2,4-DICHLOROPHENOL	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
2,4-DIMETHYLPHENOL	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
2,4-DINITROPHENOL	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
2,4-DINITROTOLUENE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
2,6-DINITROTOLUENE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
2-CHLORONAPHTHALENE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
2-CHLOROPHENOL	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
2-METHYLNAPHTHALENE	--	0.15 J	--	0.2 U	0.042 J	0.22 U	--	0.11 J	--
2-METHYLPHENOL	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
2-NITROANILINE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
2-NITROPHENOL	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
3&4-METHYLPHENOL	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
3,3'-DICHLOROBENZIDINE	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
3-NITROANILINE	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
4,6-DINITRO-2-METHYLPHENOL	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
4-BROMOPHENYL PHENYL ETHER	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
4-CHLORO-3-METHYLPHENOL	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
4-CHLOROANILINE	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
4-CHLOROPHENYL PHENYL ETHER	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
4-NITROANILINE	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
4-NITROPHENOL	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
ACENAPHTHENE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
ACENAPHTHYLENE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--

LOCATION	SB-368	SB-368	SB-368	SB-370	SB-370	SB-370	SB-370	SB-370	SB-370
SAMPLE ID	SB368-20191111-168192	SB368-20191111-2448	SB368-20191111-6084	SB370-20191111-0006	SB370-20191111-0624	SB370-20191111-180204	SB370-20191111-4872	SB370-20191111-7296	SB370-20191111-96120
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SB	SB	SB
TOP DEPTH	14	2	5	0	0.5	15	4	6	8
BOTTOM DEPTH	16	4	7	0.5	2	17	6	8	10
ACETOPHENONE	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
ANTHRACENE	--	0.19 U	--	0.2 U	0.022 J	0.22 U	--	0.033 J	--
ATRAZINE	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
BAP EQUIVALENT-HALFND	--	0.21578	--	0.154102	0.20257	0.22 U	--	0.16767	--
BAP EQUIVALENT-POS	--	0.00583	--	0.054102	0.10757	0.22 U	--	0.07267	--
BENZALDEHYDE	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.024 J	--
BENZO(A)ANTHRACENE	--	0.19 U	--	0.036 J	0.079 J	0.22 U	--	0.072 J	--
BENZO(A)PYRENE	--	0.19 U	--	0.041 J	0.079 J	0.22 U	--	0.051 J	--
BENZO(B)FLUORANTHENE	--	0.057 J	--	0.064 J	0.15 J	0.22 U	--	0.11 J	--
BENZO(G,H,I)PERYLENE	--	0.019 J	--	0.03 J	0.054 J	0.22 U	--	0.039 J	--
BENZO(K)FLUORANTHENE	--	0.19 U	--	0.025 J	0.041 J	0.22 U	--	0.027 J	--
BIS(2-CHLOROETHOXY)METHANE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
BIS(2-CHLOROETHYL)ETHER	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
BUTYL BENZYL PHTHALATE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
CAPROLACTAM	--	0.37 U	--	0.39 UJ	0.37 UJ	0.42 UJ	--	0.36 UJ	--
CARBAZOLE	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
CHRYSENE	--	0.13 J	--	0.052 J	0.16 J	0.22 U	--	0.2	--
DIBENZO(A,H)ANTHRACENE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
DIBENZOFURAN	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
DIETHYL PHTHALATE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
DIMETHYL PHTHALATE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
DI-N-BUTYL PHTHALATE	--	0.19 U	--	0.2 U	0.045 J	0.22 U	--	0.19 U	--
DI-N-OCTYL PHTHALATE	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
FLUORANTHENE	--	0.05 J	--	0.1 J	0.18 J	0.42 U	--	0.15 J	--
FLUORENE	--	0.021 J	--	0.2 U	0.19 U	0.22 U	--	0.028 J	--
HEXACHLOROBENZENE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
HEXACHLOROBUTADIENE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
HEXACHLOROCYCLOPENTADIENE	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
HEXACHLOROETHANE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
HIGH MOLECULAR WEIGHT PAHS	--	0.252	--	0.367	0.784	0 U	--	0.679	--
INDENO(1,2,3-CD)PYRENE	--	0.19 U	--	0.028 J	0.051 J	0.22 U	--	0.03 J	--
ISOPHORONE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
LOW MOLECULAR WEIGHT PAHS	--	0.318	--	0.16	0.397	0 U	--	0.473	--
NAPHTHALENE	--	0.037 J	--	0.2 U	0.015 J	0.22 U	--	0.022 J	--
NITROBENZENE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
N-NITROSO-DI-N-PROPYLAMINE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.19 U	--
N-NITROSODIPHENYLAMINE	--	0.19 U	--	0.2 U	0.19 U	0.22 U	--	0.026 J	--
PENTACHLOROPHENOL	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
PHENANTHRENE	--	0.21	--	0.06 J	0.18 J	0.22 U	--	0.24	--
PHENOL	--	0.37 U	--	0.39 U	0.37 U	0.42 U	--	0.36 U	--
PYRENE	--	0.046 J	--	0.091 J	0.17 J	0.22 U	--	0.15 J	--
TOTAL PAHS	--	0.57	--	0.527	1.181	0 U	--	1.152	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	0.0075 U	--	0.0078 U	0.0075 U	0.0085 U	--	0.0073 U	--
2-METHYLNAPHTHALENE	--	0.16 J	--	0.0034 J	0.053	0.0019 J	--	0.13	--
ACENAPHTHENE	--	0.01	--	0.00087 J	0.0063	0.0042 U	--	0.014	--
ACENAPHTHYLENE	--	0.0032 J	--	0.004	0.01	0.00063 J	--	0.0048	--
ANTHRACENE	--	0.016	--	0.0056	0.02	0.0042 U	--	0.033	--
BAP EQUIVALENT-HALFND	--	0.02085	--	0.048512	0.07824	0.003709	--	0.05447	--
BAP EQUIVALENT-POS	--	0.02085	--	0.046562	0.07639	0.001588	--	0.05267	--
BENZO(A)ANTHRACENE	--	0.017	--	0.029	0.078	0.0015 J	--	0.056	--
BENZO(A)PYRENE	--	0.008	--	0.036	0.054	0.00094 J	--	0.036	--
BENZO(B)FLUORANTHENE	--	0.04	--	0.058	0.12	0.0039 J	--	0.093 J-	--
BENZO(G,H,I)PERYLENE	--	0.01	--	0.014	0.019	0.0024 J	--	0.014	--
BENZO(K)FLUORANTHENE	--	0.007	--	0.022 J	0.033 J	0.0042 U	--	0.027 J	--
CHRYSENE	--	0.1	--	0.042	0.16	0.008	--	0.2	--
DIBENZO(A,H)ANTHRACENE	--	0.0064	--	0.0039 U	0.0037 U	0.0042 U	--	0.0036 U	--
FLUORANTHENE	--	0.035	--	0.1	0.16	0.0024 J	--	0.13	--
FLUORENE	--	0.02	--	0.0019 J	0.013	0.00059 J	--	0.024	--
HIGH MOLECULAR WEIGHT PAHS	--	0.2262	--	0.297	0.595	0.02034	--	0.549	--
INDENO(1,2,3-CD)PYRENE	--	0.0058	--	0.016	0.021	0.001 J	--	0.013	--
LOW MOLECULAR WEIGHT PAHS	--	0.3102	--	0.16687	0.3863	0.01412	--	0.4758	--
NAPHTHALENE	--	0.046	--	0.0025 J	0.017	0.002 J	--	0.03	--
PENTACHLOROPHENOL	--	0.0075 U	--	0.0079 UJ	0.0076 UJ	0.0085 UJ	--	0.0073 UJ	--
PHENANTHRENE	--	0.18 J	--	0.052	0.16	0.0085	--	0.24	--
PYRENE	--	0.032	--	0.08	0.11	0.0026 J	--	0.11	--
TOTAL PAHS	--	0.1	--	0.042	0.16	0.008	--	0.2	--
PESTICIDES (MG/KG)									
4,4'-DDD	--	0.002 J	--	0.004 U	0.0034 J	0.0042 U	--	0.0039	--
4,4'-DDE	--	0.00057 J	--	0.004 U	0.0039 U	0.0042 U	--	0.0037 U	--
4,4'-DDT	--	0.0036 U	--	0.004 U	0.0039 U	0.0042 U	--	0.0037 U	--
ALDRIN	--	0.0019 U	--	0.0021 U	0.002 U	0.0021 U	--	0.0019 U	--
ALPHA-BHC	--	0.0019 U	--	0.0021 U	0.002 U	0.0021 U	--	0.0019 U	--
ALPHA-CHLORDANE	--	0.0019 U	--	0.0021 U	0.002 U	0.0021 U	--	0.0019 U	--
BETA-BHC	--	0.0019 U	--	0.0021 U	0.002 U	0.0021 U	--	0.0019 U	--
DELTA-BHC	--	0.0019 U	--	0.0021 U	0.002 U	0.0021 U	--	0.0019 U	--
DIELDRIN	--	0.0036 U	--	0.004 U	0.0039 U	0.0042 U	--	0.0037 U	--
ENDOSULFAN I	--	0.0019 U	--	0.0021 U	0.002 U	0.0021 U	--	0.0019 U	--
ENDOSULFAN II	--	0.0036 U	--	0.004 U	0.00069 J	0.0042 U	--	0.0037 U	--
ENDOSULFAN SULFATE	--	0.0036 U	--	0.004 U	0.0039 U	0.0042 U	--	0.0037 U	--
ENDRIN	--	0.00049 J	--	0.004 U	0.00071 J	0.0042 U	--	0.00082 J	--
ENDRIN ALDEHYDE	--	0.0036 U	--	0.004 U	0.0039 U	0.0042 U	--	0.0037 U	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-368	SB-368	SB-368	SB-370	SB-370	SB-370	SB-370	SB-370	SB-370
SAMPLE ID	SB368-20191111-168192	SB368-20191111-2448	SB368-20191111-6084	SB370-20191111-0006	SB370-20191111-0624	SB370-20191111-180204	SB370-20191111-4872	SB370-20191111-7296	SB370-20191111-96120
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SB	SB	SB
TOP DEPTH	14	2	5	0	0.5	15	4	6	8
BOTTOM DEPTH	16	4	7	0.5	2	17	6	8	10
ENDRIN KETONE	--	0.0036 U	--	0.004 U	0.0039 U	0.0042 U	--	0.0037 U	--
GAMMA-BHC (LINDANE)	--	0.0017 J	--	0.0021 U	0.0023 J	0.0021 U	--	0.0022 J	--
GAMMA-CHLORDANE	--	0.0019 U	--	0.0021 U	0.002 U	0.0021 U	--	0.0019 U	--
HEPTACHLOR	--	0.0019 U	--	0.0021 U	0.002 U	0.0021 U	--	0.0019 U	--
HEPTACHLOR EPOXIDE	--	0.0019 U	--	0.0021 U	0.002 U	0.0021 U	--	0.0019 U	--
METHOXYCHLOR	--	0.019 U	--	0.021 U	0.02 U	0.021 U	--	0.019 U	--
TOXAPHENE	--	0.19 U	--	0.21 U	0.2 U	0.21 U	--	0.19 U	--
PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	0.309 U	--	0.278 U	--	0.291 U	--	0.275 U	0.281 U	0.278 U
AROCLOR-1221	0.617 U	--	0.556 U	--	0.581 U	--	0.549 U	0.562 U	0.556 U
AROCLOR-1232	0.309 U	--	0.278 U	--	0.291 U	--	0.275 U	0.281 U	0.278 U
AROCLOR-1242	0.309 U	--	0.278 U	--	0.291 U	--	0.275 U	0.281 U	0.278 U
AROCLOR-1248	0.309 U	--	0.278 U	--	0.291 U	--	0.275 U	0.281 U	0.278 U
AROCLOR-1254	0.309 U	--	0.278 U	--	0.291 U	--	0.275 U	0.281 U	0.278 U
AROCLOR-1260	0.309 U	--	0.278 U	--	0.291 U	--	0.275 U	0.116 J	0.278 U
AROCLOR-1262	0.309 U	--	0.278 U	--	0.291 U	--	0.275 U	0.281 U	0.278 U
AROCLOR-1268	0.309 U	--	0.278 U	--	0.291 U	--	0.275 U	0.281 U	0.278 U
TOTAL AROCLOR	0 U	--	0 U	--	0 U	--	0 U	0.116	0 U
TOTAL AROCLOR HALFND	1.5445	--	1.39	--	1.4545	--	1.3745	1.3805	1.39
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	0.000039 J	--	0.00013 J	0.000041 J	0 UJ	--	0.000022 J	--
HEPTACHLOROBIPHENYLS	--	0.00064 J	--	0.00074 J	0.0045 J	0.000017 J	--	0.00051 J	--
HEXACHLOROBIPHENYLS	--	0.00051 J	--	0.00071 J	0.0042 J	0.000013 J	--	0.00014 J	--
MONOCHLOROBIPHENYLS	--	0.000019 J	--	0 UJ	0.000016 J	0 UJ	--	0.000017 J	--
NONACHLOROBIPHENYLS	--	0.00023 J	--	0.00015 J	0.0014 J	0 UJ	--	0.00029 J	--
OCTACHLOROBIPHENYLS	--	0.00056 J	--	0.00019 J	0.0012 J	0.0000014 J	--	0.00064 J	--
PCB-1	--	0.0000049	--	0.000002 U	0.0000037	0.000002 U	--	0.0000036	--
PCB-10	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-100	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-101/90	--	0.00009	--	0.000056	0.00039	0.000002 J	--	0.000025	--
PCB-103	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-104	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-105	--	0.000027	--	0.0000086	0.00005	0.00000063 U	--	0.0000071	--
PCB-108/107	--	0.0000063	--	0.0000024 J	0.000011	0.000004 U	--	0.0000013 J	--
PCB-109	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-11	--	0.000005	--	0.00013	0.000012	0.000002 U	--	0.0000036	--
PCB-110	--	0.000076	--	0.000036	0.00024	0.0000015 J	--	0.000024	--
PCB-111/115	--	0.0000021 J	--	0.000004 U	0.0000026 J	0.000004 U	--	0.000004 U	--
PCB-113	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-114	--	0.0000019 J	--	0.0000012 U	0.0000015 J	0.00000083 U	--	0.00000083 U	--
PCB-118/106	--	0.000074	--	0.000028	0.00017	0.0000012 J	--	0.000019	--
PCB-119	--	0.000002	--	0.000002 U	0.0000024	0.000002 U	--	0.000002 U	--
PCB-12	--	0.000003	--	0.000002 U	0.0000024	0.000002 U	--	0.0000021	--
PCB-120	--	0.000002 U	--	0.000002 U	0.000017	0.000002 U	--	0.000002 U	--
PCB-121	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-122	--	0.0000012 J	--	0.000002 U	0.0000017 J	0.000002 U	--	0.000002 U	--
PCB-123	--	0.0000012 J	--	0.0000013 U	0.0000018 J	0.00000061 U	--	0.00000082 U	--
PCB-124	--	0.0000038	--	0.000002	0.0000053	0.000002 U	--	0.000002 U	--
PCB-126	--	0.0000017 J	--	0.0000015 U	0.0000034	0.00000085 U	--	0.00000082 U	--
PCB-127	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-128/162	--	0.000016	--	0.000013	0.000068	0.000004 U	--	0.0000041	--
PCB-129	--	0.0000052	--	0.000002 U	0.000016	0.000002 U	--	0.000002 U	--
PCB-13	--	0.000004	--	0.000002 U	0.0000022	0.000002 U	--	0.0000022	--
PCB-130	--	0.0000071	--	0.0000071	0.000038	0.000002 U	--	0.0000019 J	--
PCB-131/133	--	0.0000028 J	--	0.0000038 J	0.000017	0.000004 U	--	0.000004 U	--
PCB-132/161	--	0.000022	--	0.00002	0.00019	0.000004 U	--	0.0000056	--
PCB-134/143	--	0.000005	--	0.0000051	0.000031	0.000004 U	--	0.000004 U	--
PCB-135	--	0.000015	--	0.000019	0.00011	0.000002 U	--	0.0000032	--
PCB-136	--	0.000014	--	0.000019	0.00014	0.000002 U	--	0.000004	--
PCB-137	--	0.0000055	--	0.0000034	0.0000063	0.000002 U	--	0.0000017 J	--
PCB-138/163/164	--	0.00011	--	0.00017	0.00092	0.0000039 J	--	0.000023	--
PCB-139/149	--	0.000082	--	0.00011	0.00075	0.0000038 J	--	0.000023	--
PCB-14	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-140	--	0.000002 U	--	0.000002 U	0.0000018 J	0.000002 U	--	0.000002 U	--
PCB-141	--	0.000023	--	0.000036	0.00024	0.0000012 J	--	0.0000064	--
PCB-142	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-144	--	0.0000039	--	0.0000062	0.000034	0.000002 U	--	0.0000011 J	--
PCB-145	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-146/165	--	0.000018	--	0.000022	0.00011	0.000004 U	--	0.0000042	--
PCB-147	--	0.0000022	--	0.0000012 J	0.0000032	0.000002 U	--	0.000002 U	--
PCB-148	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-368	SB-368	SB-368	SB-370	SB-370	SB-370	SB-370	SB-370	SB-370
SAMPLE ID	SB368-20191111-168192	SB368-20191111-2448	SB368-20191111-6084	SB370-20191111-0006	SB370-20191111-0624	SB370-20191111-180204	SB370-20191111-4872	SB370-20191111-7296	SB370-20191111-96120
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SB	SB	SB
TOP DEPTH	14	2	5	0	0.5	15	4	6	8
BOTTOM DEPTH	16	4	7	0.5	2	17	6	8	10
PCB-15	--	0.000012	--	0.000002 U	0.000011	0.000002 U	--	0.0000036	--
PCB-150	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-151	--	0.000026	--	0.000046	0.00031	0.000002 U	--	0.000011	--
PCB-152	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-153	--	0.00012	--	0.00019	0.00099	0.0000045	--	0.000042	--
PCB-154	--	0.000002 U	--	0.000002 U	0.0000039	0.000002 U	--	0.000002 U	--
PCB-155	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-156	--	0.00001	--	0.00001	0.00006	0.00000075 U	--	0.0000023	--
PCB-157	--	0.000003	--	0.0000025	0.0000088	0.0000008 U	--	0.00000081 U	--
PCB-158/160	--	0.000011	--	0.000015	0.000085	0.000004 U	--	0.0000025 J	--
PCB-159	--	0.0000046	--	0.0000035	0.000015	0.000002 U	--	0.0000038	--
PCB-16	--	0.0000037	--	0.0000016 J	0.0000039	0.000002 U	--	0.0000021	--
PCB-166	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-167	--	0.0000068	--	0.0000058	0.000028	0.0000008 U	--	0.0000019 J	--
PCB-168	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-169	--	0.0000013 U	--	0.000001 U	0.00000092 U	0.00000081 U	--	0.00000071 U	--
PCB-17	--	0.0000044	--	0.000002 U	0.0000041	0.000002 U	--	0.0000026	--
PCB-170	--	0.000039	--	0.000084	0.00048	0.0000024	--	0.000018	--
PCB-171	--	0.000014	--	0.000022	0.00014	0.000002 U	--	0.000006	--
PCB-172	--	0.000012	--	0.000019	0.000096	0.000002 U	--	0.0000065	--
PCB-173	--	0.000002 U	--	0.0000032	0.000011	0.000002 U	--	0.000002 U	--
PCB-174	--	0.000062	--	0.000076	0.00048	0.0000023	--	0.000041	--
PCB-175	--	0.0000031	--	0.0000041	0.00002	0.0000023	--	0.000002 U	--
PCB-176	--	0.0000072	--	0.0000072	0.000055	0.000002 U	--	0.0000048	--
PCB-177	--	0.00003	--	0.000054	0.0003	0.0000013 J	--	0.000017	--
PCB-178	--	0.000017	--	0.000021	0.00011	0.000002 U	--	0.000013	--
PCB-179	--	0.000031	--	0.00003	0.00019	0.0000011 J	--	0.000025	--
PCB-18	--	0.0000091	--	0.0000003	0.0000072	0.000002 U	--	0.0000046	--
PCB-180	--	0.00021	--	0.00021	0.0014	0.0000043	--	0.0002	--
PCB-181	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-182/187	--	0.00013	--	0.00011	0.00063	0.0000021 J	--	0.00012	--
PCB-183	--	0.000044	--	0.000041	0.00028	0.0000016 J	--	0.000039	--
PCB-184	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-185	--	0.000012	--	0.000012	0.000052	0.000002 U	--	0.0000075	--
PCB-186	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-188	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-189	--	0.0000029	--	0.0000036	0.000018	0.00000058 U	--	0.0000009 U	--
PCB-19	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-190	--	0.000011	--	0.000023	0.00012	0.000002 U	--	0.0000073	--
PCB-191	--	0.0000023	--	0.0000038	0.000023	0.000002 U	--	0.000002 U	--
PCB-192	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-193	--	0.0000085	--	0.000015	0.000067	0.000002 U	--	0.0000053	--
PCB-194	--	0.000097	--	0.00004	0.00023	0.000002 U	--	0.00012	--
PCB-195	--	0.000024	--	0.00002	0.00011	0.000002 U	--	0.000029	--
PCB-196/203	--	0.00018	--	0.000052	0.00033	0.0000014 J	--	0.00021	--
PCB-197	--	0.0000052	--	0.0000015 J	0.00001	0.000002 U	--	0.0000046	--
PCB-198	--	0.0000087	--	0.0000034	0.000018	0.000002 U	--	0.0000061	--
PCB-199	--	0.00016	--	0.000052	0.00032	0.000002 U	--	0.00018	--
PCB-2	--	0.0000068	--	0.000002 U	0.0000052	0.000002 U	--	0.0000067	--
PCB-20/21/33	--	0.0000095	--	0.0000022 J	0.0000071	0.000006 U	--	0.0000044 J	--
PCB-200	--	0.000017	--	0.0000054	0.000033	0.000002 U	--	0.000016	--
PCB-201	--	0.000018	--	0.0000043	0.000034	0.000002 U	--	0.000021	--
PCB-202	--	0.000043	--	0.000012	0.00009	0.000002 U	--	0.000046	--
PCB-204	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-205	--	0.0000039	--	0.0000034	0.000014	0.000002 U	--	0.0000055	--
PCB-206	--	0.00016	--	0.00009	0.00093	0.000002 U	--	0.00022	--
PCB-207	--	0.000027	--	0.000011	0.000088	0.000002 U	--	0.000024	--
PCB-208	--	0.000047	--	0.000044	0.00042	0.000002 U	--	0.000049	--
PCB-209	--	0.00035	--	0.00037	0.0031	0.000002 U	--	0.000053	--
PCB-22	--	0.0000064	--	0.0000029	0.0000058	0.0000011 J	--	0.000002 U	--
PCB-23	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-24	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-25	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-26	--	0.0000026	--	0.000002 U	0.0000022	0.000002 U	--	0.000002 U	--
PCB-27	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-28	--	0.000012	--	0.0000067	0.000014	0.0000023	--	0.0000039	--
PCB-29	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-3	--	0.0000076	--	0.000002 U	0.0000075	0.000002 U	--	0.0000068	--
PCB-30	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-31	--	0.000014	--	0.000004	0.000017	0.0000017 J	--	0.0000068	--
PCB-32	--	0.0000033	--	0.0000018 J	0.0000034	0.000002 U	--	0.000002	--
PCB-34	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-35	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-36	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-37	--	0.000012	--	0.0000029	0.000011	0.000002 U	--	0.0000039	--
PCB-38	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-39	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-4	--	0.0000041	--	0.000002 U	0.0000024	0.000002 U	--	0.0000016 J	--
PCB-40	--	0.000003	--	0.000002 U	0.0000029	0.000002 U	--	0.000002 U	--
PCB-41/64/71/72	--	0.000015	--	0.0000059 J	0.000017	0.0000023 J	--	0.0000056 J	--
PCB-42/59	--	0.0000064	--	0.0000027 J	0.0000062	0.0000011 J	--	0.0000022 J	--
PCB-43/49	--	0.000018	--	0.0000072	0.000017	0.0000017 J	--	0.0000054	--
PCB-44	--	0.000019	--	0.0000068	0.00002	0.000002	--	0.0000073	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-368	SB-368	SB-368	SB-370	SB-370	SB-370	SB-370	SB-370	SB-370
SAMPLE ID	SB368-20191111-168192	SB368-20191111-2448	SB368-20191111-6084	SB370-20191111-0006	SB370-20191111-0624	SB370-20191111-180204	SB370-20191111-4872	SB370-20191111-7296	SB370-20191111-96120
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SB	SB	SB
TOP DEPTH	14	2	5	0	0.5	15	4	6	8
BOTTOM DEPTH	16	4	7	0.5	2	17	6	8	10
PCB-45	--	0.0000019 J	--	0.000002 U	0.0000016 J	0.000002 U	--	0.000002 U	--
PCB-46	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-47	--	0.0000088	--	0.0000027	0.0000085	0.0000014 J	--	0.0000028	--
PCB-48/75	--	0.0000031 J	--	0.000004 U	0.0000024 J	0.000004 U	--	0.0000012 J	--
PCB-5	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-50	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-51	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-52/69	--	0.000033	--	0.0000097	0.000034	0.0000021 J	--	0.000012	--
PCB-53	--	0.0000019 J	--	0.000002 U	0.0000017 J	0.000002 U	--	0.000002 U	--
PCB-54	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-55	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-56/60	--	0.000018	--	0.0000072	0.000022	0.0000018 J	--	0.0000057	--
PCB-57	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-58	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-6	--	0.0000028	--	0.000002 U	0.000003	0.000002 U	--	0.0000022	--
PCB-61/70	--	0.000046	--	0.0000086	0.000049	0.0000018 J	--	0.000016	--
PCB-62	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-63	--	0.0000013 J	--	0.000002 U	0.0000011 J	0.000002 U	--	0.000002 U	--
PCB-65	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-66/76	--	0.000028	--	0.0000086	0.000037	0.0000017 J	--	0.0000096	--
PCB-67	--	0.0000013 J	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-68	--	0.0000011 J	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-7	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000001 J	--
PCB-73	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-74	--	0.000014	--	0.0000043	0.000015	0.00000096 J	--	0.0000053	--
PCB-77	--	0.0000064	--	0.0000022	0.0000084	0.00000064 U	--	0.0000016 J	--
PCB-78	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-79	--	0.0000015 J	--	0.000002 U	0.0000015 J	0.000002 U	--	0.000002 U	--
PCB-8	--	0.0000079	--	0.000002 U	0.0000081	0.000002 U	--	0.000006	--
PCB-80	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-81	--	0.000001 J	--	0.00000079 U	0.0000032	0.00000051 U	--	0.00000067 U	--
PCB-82	--	0.0000089	--	0.000002 U	0.000013	0.000002 U	--	0.0000032	--
PCB-83/112	--	0.0000036 J	--	0.000004 U	0.0000048	0.000004 U	--	0.000004 U	--
PCB-84/92	--	0.000028	--	0.00001	0.000064	0.000004 U	--	0.0000096	--
PCB-85/116	--	0.000013	--	0.0000048	0.00002	0.000004 U	--	0.0000046	--
PCB-86	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-87/117/125	--	0.000029	--	0.00001	0.000063	0.000006 U	--	0.0000098	--
PCB-88/91	--	0.0000075	--	0.0000024 J	0.0000096	0.000004 U	--	0.0000028 J	--
PCB-89	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-9	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-93	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-94	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-95	--	0.000044	--	0.000026	0.0002	0.0000016 J	--	0.000017	--
PCB-96	--	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-97	--	0.000025	--	0.0000061	0.000038	0.000002 U	--	0.000009	--
PCB-98/102	--	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--
PCB-99	--	0.000034	--	0.000011	0.000044	0.000002 U	--	0.000007	--
PENTACHLOROBIPHENYLS	--	0.00048 J	--	0.0002 J	0.0014 J	0.0000063 J	--	0.00014 J	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	5.94299E-07	--	1.12204E-07	1.09251E-06	0.00000063 U	--	8.0959E-08	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	5.94949E-07	--	2.2727E-07	1.09297E-06	0.00000063 U	--	1.55903E-07	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	9.903E-09	--	3.72E-10	2.028E-08	0.00000063 U	--	2.15E-10	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	9.935E-09	--	4.35E-09	2.0303E-08	0.00000063 U	--	2.457E-09	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	1.72524E-07	--	1.135E-09	3.46843E-07	0.00000063 U	--	4.99E-10	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	1.92024E-07	--	9.129E-08	3.60643E-07	0.00000063 U	--	5.2298E-08	--
TETRACHLOROBIPHENYLS	--	0.00023 J	--	0.000066 J	0.00025 J	0.000017 J	--	0.000075 J	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	0.0000619	--	0.0000327	0.0001831	0 U	--	0.0000129	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	0.003072	--	0.0025481	0.0159267	0.00006046	--	0.0019072	--
TOTAL PCB CONGENERS ZEROND	--	0.0031339	--	0.0025808	0.0161098	0.00006046	--	0.0019201	--
TOTAL PCB CONGENERS-NOAA	--	0.001459	--	0.0013844	0.0093583	0.0000285	--	0.0008036	--
TOTAL PCB CONGENERS-NOAA HALFND	--	0.00319555	--	0.002671695	0.01616926	0.000216365	--	0.00200688	--
TOTAL PCB CONGENERS-NOAA X2	--	0.002918	--	0.0027688	0.0187166	0.000057	--	0.0016072	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	0.002918	--	0.0027708	0.0187166	0.00007163	--	0.0016072	--
TRICHLOROBIPHENYLS	--	0.000077 J	--	0.000025 J	0.000076 J	0.0000051 J	--	0.00003 J	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	17	--	2100	1500	1800	--	68	--
1,2,3,4,6,7,8,9-OCDF	--	1.1 J	--	0.96 U	2.4 J	0.32 U	--	0.85 J	--
1,2,3,4,6,7,8-HPCDD	--	1.9 J	--	23	13	19	--	1.9 J	--
1,2,3,4,6,7,8-HPCDF	--	0.85 J	--	0.84 J	2.6 J	0.19 U	--	1.4 J	--
1,2,3,4,7,8,9-HPCDF	--	0.16 U	--	0.36 U	0.17 J	0.27 U	--	0.19 U	--
1,2,3,4,7,8-HXCDD	--	0.21 U	--	0.41 U	0.24 J	0.25 J	--	0.39 U	--
1,2,3,4,7,8-HXCDF	--	0.21 U	--	0.21 U	0.63 J	0.21 U	--	0.42 J	--
1,2,3,6,7,8-HXCDD	--	0.22 U	--	0.38 U	0.39 J	0.35 J	--	0.36 U	--
1,2,3,6,7,8-HXCDF	--	0.2 U	--	0.23 U	0.47 J	0.2 U	--	0.35 J	--
1,2,3,7,8,9-HXCDD	--	0.2 U	--	0.36 U	0.31 J	0.56 J	--	0.34 U	--
1,2,3,7,8,9-HXCDF	--	0.25 U	--	0.44 U	0.17 U	0.2 U	--	0.23 U	--
1,2,3,7,8-PECDD	--	0.18 U	--	0.3 U	0.24 U	0.24 U	--	0.19 U	--
1,2,3,7,8-PECDF	--	0.15 U	--	0.33 U	0.39 J	0.18 U	--	0.19 U	--
2,3,4,6,7,8-HXCDF	--	0.21 U	--	0.38 U	0.44 J	0.14 U	--	0.43 J	--
2,3,4,7,8-PECDF	--	0.32 J	--	0.36 U	0.67 J	0.18 U	--	0.72 J	--
2,3,7,8-TCDD	--	0.073 U	--	0.16 U	0.074 U	0.11 U	--	0.083 U	--
2,3,7,8-TCDF	--	0.34 J	--	0.21 U	0.77 J	0.095 U	--	0.37 J	--
TEQ DIOXINS (BIRD)	--	0.67221	--	0.2414	1.87084	0.271	--	1.232785	--
TEQ DIOXINS (BIRD) HALFND	--	0.86686	--	0.867898	2.03634	0.632316	--	1.419785	--

LOCATION	SB-368	SB-368	SB-368	SB-370	SB-370	SB-370	SB-370	SB-370	SB-370
SAMPLE ID	SB368-20191111-168192	SB368-20191111-2448	SB368-20191111-6084	SB370-20191111-0006	SB370-20191111-0624	SB370-20191111-180204	SB370-20191111-4872	SB370-20191111-7296	SB370-20191111-96120
SAMPLE DATE	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111	20191111
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SB	SS	SS	SB	SB	SB	SB
TOP DEPTH	14	2	5	0	0.5	15	4	6	8
BOTTOM DEPTH	16	4	7	0.5	2	17	6	8	10
TEQ DIOXINS (FISH)	--	0.18921	--	0.2414	0.86494	0.3331	--	0.521285	--
TEQ DIOXINS (FISH) HALFND	--	0.41836	--	0.745948	1.03044	0.599791	--	0.775985	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	0.16293	--	0.8684	1.14612	0.846	--	0.426655	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	0.36748	--	1.290294	1.31162	1.095298	--	0.632955	--
TOTAL HPCDD	--	4 J	--	49 J	25 J	33 J	--	4.2 J	--
TOTAL HPCDF	--	1.5 J	--	1.3 J	4.5 J	0 UJ	--	2.1 J	--
TOTAL HXCDD	--	1.4 J	--	5.1 J	5.5 J	3.3 J	--	1.6 J	--
TOTAL HXCDF	--	0.92 J	--	0.6 J	4.6 J	0 UJ	--	5.5 J	--
TOTAL PECDD	--	0.25 J	--	0.55 J	3.1 J	0 UJ	--	0.63 J	--
TOTAL PECDF	--	2.8 J	--	0 UJ	6.9 J	0 UJ	--	6.8 J	--
TOTAL TCDD	--	0.52 J	--	0.99 J	3.5 J	0 UJ	--	1 J	--
TOTAL TCDF	--	5.8 J	--	0 UJ	12 J	0 UJ	--	7.5 J	--
METALS (MG/KG)									
ALUMINUM	--	6210	--	12000	10200	13800	--	5130	--
ANTIMONY	--	0.22 J	--	1.2 U	0.54 J	1.2 U	--	0.34 J	--
ARSENIC	--	18.5	--	8	12.4	4.6	--	35.7	--
BARIUM	--	65.5	--	54.4	69.9	56.7	--	45.8	--
BERYLLIUM	--	0.23 J	--	0.66	1.1	0.62	--	0.19 J	--
CADMIUM	--	0.088 J	--	0.59 U	0.27 J	0.6 U	--	0.55 U	--
CALCIUM	--	254 J	--	1210	769	288 J	--	245 J	--
CHROMIUM	--	8.1	--	13.4	14.8	11.3	--	5.6	--
COBALT	--	2.9	--	9.6	14.7	13.9	--	1.6	--
COPPER	--	27.8	--	13.9	38.9	9.7	--	27.4	--
CYANIDE	--	0.52 R	--	0.57 R	0.57 R	1.1 J-	--	0.53 R	--
IRON	--	16500	--	20300	19300	13200	--	15700	--
LEAD	--	15.2	--	21.5	54.7	13.5	--	14.1	--
MAGNESIUM	--	995	--	928	1510	1140	--	1190	--
MANGANESE	--	76.4	--	310	485	298	--	33.5	--
MERCURY	--	0.12	--	0.057 J	0.14	0.029 J	--	0.1	--
NICKEL	--	7.2	--	11.7	22.2	8.9	--	4.3	--
POTASSIUM	--	1790	--	1360	1730	1120	--	1670	--
SELENIUM	--	1.9 J	--	0.55 J	1.1 J	0.91 J	--	2.2 J	--
SILVER	--	0.54 U	--	0.59 U	0.56 U	0.6 U	--	0.55 U	--
SODIUM	--	106 J	--	27.2 J	71.4 J	24.3 J	--	80.4 J	--
THALLIUM	--	0.15 J	--	0.083 J	0.13 J	0.11 J	--	0.09 J	--
VANADIUM	--	5.9	--	17.8	14	16.7	--	4.9	--
ZINC	--	21.4	--	41	401	32.5	--	14	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	81	--	90	--	86	--	91	89	90

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-371	SB-371	SB-371	SB-371	SB-371	SB-372	SB-372	SB-372	SB-372
SAMPLE ID	SB371-20191114-0006	SB371-20191114-0624	SB371-20191114-144168	SB371-20191114-168192	SB371-20191114-84108	SB372-20191114-0006	SB372-20191114-0624	SB372-20191114-132156	SB372-20191114-2448
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SS	SS	SB	SB	SB	SS	SS	SB	SB
TOP DEPTH	0	0.5	12	14	7	0	0.5	11	2
BOTTOM DEPTH	0.5	2	14	16	9	0.5	2	13	4
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
1,1,2,2-TETRACHLOROETHANE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
1,1,2-TRICHLOROETHANE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
1,1-DICHLOROETHANE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 U	0.0046 U	--
1,1-DICHLOROETHENE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 U	0.0046 U	--
1,2,3-TRICHLOROBENZENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 R	0.005 UJ	0.0055 R	0.0046 U	--
1,2,4-TRICHLOROBENZENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 R	0.005 UJ	0.0055 R	0.0046 U	--
1,2-DIBROMO-3-CHLOROPROPANE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 R	0.005 UJ	0.0055 R	0.0046 U	--
1,2-DIBROMOETHANE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
1,2-DICHLOROBENZENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 R	0.005 UJ	0.0055 R	0.0046 U	--
1,2-DICHLOROETHANE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
1,2-DICHLOROPROPANE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
1,3-DICHLOROBENZENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 R	0.005 UJ	0.0055 R	0.0046 U	--
1,4-DICHLOROBENZENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 R	0.005 UJ	0.0055 R	0.0046 U	--
2-BUTANONE	0.011 U	0.012 U	--	0.0096 U	0.013 UJ	0.01 U	0.011 U	0.0092 U	--
2-HEXANONE	0.011 U	0.012 UJ	--	0.0096 U	0.013 UJ	0.01 U	0.011 UJ	0.0092 U	--
4-METHYL-2-PENTANONE	0.011 U	0.012 UJ	--	0.0096 U	0.013 UJ	0.01 U	0.011 UJ	0.0092 U	--
ACETONE	0.011 U	0.012 U	--	0.0096 U	0.013 J+	0.01 U	0.011 U	0.0092 U	--
BENZENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
BROMOCHLOROMETHANE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 U	0.0046 U	--
BROMODICHLOROMETHANE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
BROMOFORM	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 R	0.005 UJ	0.0055 R	0.0046 U	--
BROMOMETHANE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 U	0.0046 U	--
CARBON DISULFIDE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 U	0.0046 U	--
CARBON TETRACHLORIDE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
CHLOROBENZENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 UJ	0.0055 UJ	0.0046 U	--
CHLORODIBROMOMETHANE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
CHLOROETHANE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 U	0.0046 U	--
CHLOROFORM	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 U	0.0046 U	--
CHLOROMETHANE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 U	0.0046 U	--
CIS-1,2-DICHLOROETHENE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 U	0.0046 U	--
CIS-1,3-DICHLOROPROPENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
CYCLOHEXANE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
DICHLORODIFLUOROMETHANE	0.0055 UJ	0.0059 UJ	--	0.0048 UJ	0.0063 UJ	0.005 UJ	0.0055 UJ	0.0046 UJ	--
ETHYLBENZENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
ISOPROPYLBENZENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
M+P-XYLENES	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
METHYL ACETATE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
METHYL CYCLOHEXANE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0091 J+	0.005 U	0.0055 UJ	0.0046 U	--
METHYL TERT-BUTYL ETHER	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
METHYLENE CHLORIDE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
O-XYLENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
STYRENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
TETRACHLOROETHENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
TOLUENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
TRANS-1,2-DICHLOROETHENE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 U	0.0046 U	--
TRANS-1,3-DICHLOROPROPENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
TRICHLOROETHENE	0.0055 U	0.0059 UJ	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
TRICHLOROFLUOROMETHANE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 UJ	0.0046 U	--
VINYL CHLORIDE	0.0055 U	0.0059 U	--	0.0048 U	0.0063 UJ	0.005 U	0.0055 U	0.0046 U	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.22 U	0.2 U	--	0.2 U	0.023 J	0.2 U	0.022 J	0.19 U	--
1,2,4,5-TETRACHLOROBENZENE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
1,4-DIOXANE	0.085 U	0.077 U	--	0.078 U	0.073 U	0.078 U	0.076 U	0.074 U	--
2,2'-OXYBIS(1-CHLOROPROPANE)	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
2,3,4,6-TETRACHLOROPHENOL	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
2,4,5-TRICHLOROPHENOL	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
2,4,6-TRICHLOROPHENOL	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
2,4-DICHLOROPHENOL	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
2,4-DIMETHYLPHENOL	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
2,4-DINITROPHENOL	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
2,4-DINITROTOLUENE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
2,6-DINITROTOLUENE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
2-CHLORONAPHTHALENE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
2-CHLOROPHENOL	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
2-METHYLNAPHTHALENE	0.22 U	0.028 J	--	0.2 U	0.044 J	0.2 U	0.046 J	0.19 U	--
2-METHYLPHENOL	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
2-NITROANILINE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
2-NITROPHENOL	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
3&4-METHYLPHENOL	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
3,3'-DICHLOROBENZIDINE	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
3-NITROANILINE	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
4,6-DINITRO-2-METHYLPHENOL	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
4-BROMOPHENYL PHENYL ETHER	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
4-CHLORO-3-METHYLPHENOL	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
4-CHLOROANILINE	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
4-CHLOROPHENYL PHENYL ETHER	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
4-NITROANILINE	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
4-NITROPHENOL	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
ACENAPHTHENE	0.22 U	0.021 J	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
ACENAPHTHYLENE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-371	SB-371	SB-371	SB-371	SB-371	SB-372	SB-372	SB-372	SB-372
SAMPLE ID	SB371-20191114-0006	SB371-20191114-0624	SB371-20191114-144168	SB371-20191114-168192	SB371-20191114-84108	SB372-20191114-0006	SB372-20191114-0624	SB372-20191114-132156	SB372-20191114-2448
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SS	SS	SB	SB	SB	SS	SS	SB	SB
TOP DEPTH	0	0.5	12	14	7	0	0.5	11	2
BOTTOM DEPTH	0.5	2	14	16	9	0.5	2	13	4
ACETOPHENONE	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
ANTHRACENE	0.22 U	0.07 J	--	0.2 U	0.03 J	0.2 U	0.027 J	0.19 U	--
ATRAZINE	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
BAP EQUIVALENT-HALFND	0.16523	0.2735	--	0.2 U	0.15044	0.15708	0.23311	0.19 U	--
BAP EQUIVALENT-POS	0.04313	0.1735	--	0.2 U	0.04499	0.04708	0.13811	0.19 U	--
BENZALDEHYDE	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
BENZO(A)ANTHRACENE	0.029 J	0.15 J	--	0.2 U	0.048 J	0.041 J	0.096 J	0.19 U	--
BENZO(A)PYRENE	0.035 J	0.13 J	--	0.2 U	0.028 J	0.038 J	0.1 J	0.19 U	--
BENZO(B)FLUORANTHENE	0.052 J	0.2	--	0.2 U	0.12 J	0.047 J	0.2	0.19 U	--
BENZO(G,H,I)PERYLENE	0.22 U	0.061 J	--	0.2 U	0.19 U	0.2 U	0.036 J	0.19 U	--
BENZO(K)FLUORANTHENE	0.22 U	0.061 J	--	0.2 U	0.19 U	0.024 J	0.064 J	0.19 U	--
BIS(2-CHLOROETHOXY)METHANE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
BIS(2-CHLOROETHYL)ETHER	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
BUTYL BENZYL PHTHALATE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
CAPROLACTAM	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
CARBAZOLE	0.42 U	0.048 J	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
CHRYSENE	0.03 J	0.19 J	--	0.2 U	0.19	0.04 J	0.27	0.19 U	--
DIBENZO(A,H)ANTHRACENE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
DIBENZOFURAN	0.22 U	0.026 J	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
DIETHYL PHTHALATE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
DIMETHYL PHTHALATE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
DI-N-BUTYL PHTHALATE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
DI-N-OCTYL PHTHALATE	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
FLUORANTHENE	0.065 J	0.36 J	--	0.38 U	0.1 J	0.095 J	0.31 J	0.37 U	--
FLUORENE	0.22 U	0.023 J	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
HEXACHLOROBENZENE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
HEXACHLOROBUTADIENE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
HEXACHLOROCYCLOPENTADIENE	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
HEXACHLOROETHANE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
HIGH MOLECULAR WEIGHT PAHS	0.205	1.169	--	0 U	0.506	0.283	1.112	0 U	--
INDENO(1,2,3-CD)PYRENE	0.22 U	0.077 J	--	0.2 U	0.19 U	0.2 U	0.076 J	0.19 U	--
ISOPHORONE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
LOW MOLECULAR WEIGHT PAHS	0.096	0.828	--	0 U	0.4	0.155	0.627	0 U	--
NAPHTHALENE	0.22 U	0.024 J	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
NITROBENZENE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
N-NITROSO-DI-N-PROPYLAMINE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
N-NITROSODIPHENYLAMINE	0.22 U	0.2 U	--	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	--
PENTACHLOROPHENOL	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
PHENANTHRENE	0.031 J	0.33	--	0.2 U	0.27	0.06 J	0.29	0.19 U	--
PHENOL	0.42 U	0.38 U	--	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U	--
PYRENE	0.059 J	0.3	--	0.2 U	0.12 J	0.093 J	0.27	0.19 U	--
TOTAL PAHS	0.301	1.997	--	0 U	0.906	0.438	1.739	0 U	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	0.0084 U	0.0077 U	--	0.0077 U	0.0072 U	0.0077 U	0.0074 U	0.0074 U	--
2-METHYLNAPHTHALENE	0.0024 J	0.034	--	0.0038	0.051	0.0051	0.049	0.00099 J	--
ACENAPHTHENE	0.0042 U	0.017	--	0.0038 U	0.01	0.0024 J	0.0069	0.0037 U	--
ACENAPHTHYLENE	0.002 J	0.006	--	0.0038 U	0.003 J	0.0017 J	0.011	0.0037 U	--
ANTHRACENE	0.0025 J	0.05	--	0.0038 U	0.0045	0.01	0.019	0.0037 U	--
BAP EQUIVALENT-HALFND	0.030446	0.14999	--	0.004389	0.0323	0.048426	0.13172	0.004273	--
BAP EQUIVALENT-POS	0.028346	0.14809	--	0	0.0305	0.046526	0.12987	0	--
BENZO(A)ANTHRACENE	0.019	0.14	--	0.0038 U	0.03	0.038	0.091	0.0037 U	--
BENZO(A)PYRENE	0.022	0.11	--	0.0038 U	0.017	0.035	0.095	0.0037 U	--
BENZO(B)FLUORANTHENE	0.032	0.18	--	0.0038 U	0.092	0.05	0.2	0.0037 U	--
BENZO(G,H,I)PERYLENE	0.0083	0.04	--	0.0038 UJ	0.012	0.015 J	0.023 J	0.0037 UJ	--
BENZO(K)FLUORANTHENE	0.012	0.071	--	0.0038 U	0.015	0.018	0.054	0.0037 U	--
CHRYSENE	0.026	0.18	--	0.00069 J	0.21	0.046	0.23	0.0006 J	--
DIBENZO(A,H)ANTHRACENE	0.0042 U	0.0038 U	--	0.0038 U	0.0036 U	0.0038 U	0.0037 U	0.0037 U	--
FLUORANTHENE	0.04	0.29	--	0.0038 U	0.089	0.12	0.28	0.00048 J	--
FLUORENE	0.0042 U	0.023	--	0.0038 U	0.016	0.003 J	0.012	0.0037 U	--
HIGH MOLECULAR WEIGHT PAHS	0.1673	1.033	--	0.00069	0.4514	0.32	0.993	0.0006	--
INDENO(1,2,3-CD)PYRENE	0.011	0.052	--	0.0038 U	0.0094	0.025	0.05	0.0037 U	--
LOW MOLECULAR WEIGHT PAHS	0.0665	0.705	--	0.0017	0.3505	0.1871	0.6149	0.00147	--
NAPHTHALENE	0.0042 U	0.029	--	0.0038 U	0.018	0.0038 U	0.016	0.0037 U	--
PENTACHLOROPHENOL	0.0085 U	0.0077 U	--	0.0078 U	0.0073 U	0.0078 U	0.0076 U	0.0074 U	--
PHENANTHRENE	0.022	0.29	--	0.0017 J	0.21	0.05	0.27	0.00099 J	--
PYRENE	0.037	0.26	--	0.0038 U	0.066	0.093	0.25	0.0037 U	--
TOTAL PAHS	0.026	0.18	--	0.00069	0.21	0.046	0.23	0.0006	--
PESTICIDES (MG/KG)									
4,4'-DDD	0.0042 U	0.0038 U	--	0.0038 U	0.0022 J	0.0038 U	0.00056 J	0.0037 U	--
4,4'-DDE	0.0042 U	0.002 J	--	0.0038 U	0.00034 R	0.0038 U	0.00053 R	0.0037 U	--
4,4'-DDT	0.0042 U	0.0022 J	--	0.0038 U	0.00089 R	0.00053 J	0.0019 J	0.0037 U	--
ALDRIN	0.0021 U	0.002 U	--	0.0019 U	0.00029 J	0.002 U	0.0019 U	0.0019 U	--
ALPHA-BHC	0.0021 U	0.002 U	--	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.0019 U	--
ALPHA-CHLORDANE	0.0021 U	0.0003 J	--	0.0019 U	0.0015 J	0.002 U	0.00038 J	0.0019 U	--
BETA-BHC	0.0021 U	0.002 U	--	0.0019 U	0.00037 J	0.00034 J	0.00033 J	0.0019 U	--
DELTA-BHC	0.0021 U	0.002 U	--	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.0019 U	--
DIELDRIN	0.0042 U	0.0038 U	--	0.0038 U	0.00085 J	0.0038 U	0.0037 U	0.0037 U	--
ENDOSULFAN I	0.00033 J	0.00086 J	--	0.0019 U	0.0019 U	0.002 U	0.00093 J	0.0019 U	--
ENDOSULFAN II	0.0042 U	0.0038 U	--	0.0038 U	0.0013 J	0.0038 U	0.0037 U	0.0037 U	--
ENDOSULFAN SULFATE	0.0028 J	0.00039 J	--	0.0038 U	0.0036 U	0.0038 U	0.0013 J	0.0037 U	--
ENDRIN	0.0042 U	0.00057 J	--	0.0038 U	0.0011 R	0.0038 U	0.0005 J	0.0037 U	--
ENDRIN ALDEHYDE	0.0042 U	0.00055 J	--	0.0038 U	0.0019 J	0.0038 U	0.00087 J	0.0037 U	--

LOCATION	SB-371	SB-371	SB-371	SB-371	SB-371	SB-372	SB-372	SB-372	SB-372
SAMPLE ID	SB371-20191114-0006	SB371-20191114-0624	SB371-20191114-144168	SB371-20191114-168192	SB371-20191114-84108	SB372-20191114-0006	SB372-20191114-0624	SB372-20191114-132156	SB372-20191114-2448
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SS	SS	SB	SB	SB	SS	SS	SB	SB
TOP DEPTH	0	0.5	12	14	7	0	0.5	11	2
BOTTOM DEPTH	0.5	2	14	16	9	0.5	2	13	4
ENDRIN KETONE	0.0042 U	0.0014 R	--	0.0038 U	0.0011 R	0.0011 J	0.0018 R	0.0037 U	--
GAMMA-BHC (LINDANE)	0.0021 U	0.002 U	--	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.0019 U	--
GAMMA-CHLORDANE	0.0021 U	0.002 U	--	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.0019 U	--
HEPTACHLOR	0.0021 U	0.002 U	--	0.0019 U	0.00069 R	0.002 U	0.0019 U	0.0019 U	--
HEPTACHLOR EPOXIDE	0.0021 U	0.002 U	--	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.0019 U	--
METHOXYCHLOR	0.0017 J	0.0069 J	--	0.019 U	0.021	0.0029 J	0.019 U	0.019 U	--
TOXAPHENE	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	--
PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	0.291 U	0.263 U	0.309 U	--	--	0.287 U	--	0.287 U
AROCLOR-1221	--	0.581 U	0.526 U	0.617 U	--	--	0.575 U	--	0.575 U
AROCLOR-1232	--	0.291 U	0.263 U	0.309 U	--	--	0.287 U	--	0.287 U
AROCLOR-1242	--	0.291 U	0.263 U	0.309 U	--	--	0.287 U	--	0.287 U
AROCLOR-1248	--	0.291 U	0.263 U	0.309 U	--	--	0.287 U	--	0.287 U
AROCLOR-1254	--	0.291 U	0.263 U	0.309 U	--	--	0.287 U	--	0.287 U
AROCLOR-1260	--	0.291 U	0.263 U	0.309 U	--	--	0.287 U	--	0.287 U
AROCLOR-1262	--	0.291 U	0.263 U	0.309 U	--	--	0.287 U	--	0.287 U
AROCLOR-1268	--	0.291 U	0.263 U	0.309 U	--	--	0.287 U	--	0.287 U
TOTAL AROCLOR	--	0 U	0 U	0 U	--	--	0 U	--	0 U
TOTAL AROCLOR HALFND	--	1.4545	1.315	1.5445	--	--	1.4355	--	1.4355
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	0.00019 J	0.000013 J	--	0 UJ	0.000008 J	0.00014 J	0.000035 J	0 UJ	--
HEPTACHLOROBIPHENYLS	0.0004 J	0.00049 J	--	0 UJ	0.000074 J	0.0033 J	0.006 J	0 UJ	--
HEXACHLOROBIPHENYLS	0.00039 J	0.00067 J	--	0 UJ	0.000063 J	0.0031 J	0.0055 J	0 UJ	--
MONOCHLOROBIPHENYLS	0.0000041 J	0.000015 J	--	0 UJ	0.000014 J	0.0000015 J	0.000011 J	0 UJ	--
NONACHLOROBIPHENYLS	0.0003 J	0.0025 J	--	0 UJ	0.000039 J	0.00036 J	0.00056 J	0 UJ	--
OCTACHLOROBIPHENYLS	0.00014 J	0.00056 J	--	0 UJ	0.000072 J	0.00085 J	0.0016 J	0 UJ	--
PCB-1	0.000002 U	0.0000033	--	0.000002 U	0.000002 U	0.000002 U	0.0000024	0.0000021 U	--
PCB-10	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-100	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-101/90	0.000027	0.00008	--	0.000004 U	0.0000089	0.00021	0.00044	0.0000041 U	--
PCB-103	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-104	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-105	0.0000075	0.000026	--	0.00000074 U	0.0000023	0.000044	0.000091	0.0000011 U	--
PCB-108/107	0.0000015 J	0.0000055	--	0.000004 U	0.000004 U	0.0000083	0.000017	0.0000041 U	--
PCB-109	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-11	0.00019	0.0000081	--	0.000002 U	0.0000035	0.00013	0.0000085	0.0000021 U	--
PCB-110	0.000018	0.000084	--	0.000002 U	0.0000066	0.00013	0.00028	0.0000021 U	--
PCB-111/115	0.000004 U	0.0000037 U	--	0.000004 U	0.000004 U	0.000004 U	0.0000027 J	0.0000041 U	--
PCB-113	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-114	0.00000089 U	0.00000093 U	--	0.00000083 U	0.0000015 U	0.0000034	0.0000046	0.0000011 U	--
PCB-118/106	0.000019	0.000064	--	0.00000074 U	0.0000065	0.00013	0.00025	0.00000098 U	--
PCB-119	0.000002 U	0.0000014 J	--	0.000002 U	0.000002 U	0.0000018 J	0.0000031	0.0000021 U	--
PCB-12	0.000002 U	0.0000018 U	--	0.000002 U	0.0000021	0.000002 U	0.0000017 J	0.0000021 U	--
PCB-120	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.0000024	0.0000021 U	--
PCB-121	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-122	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.0000016 J	0.0000041	0.0000021 U	--
PCB-123	0.00000073 U	0.0000019	--	0.00000053 U	0.0000013 U	0.0000013 J	0.0000052	0.00000081 U	--
PCB-124	0.0000018 J	0.0000043	--	0.000002 U	0.000002 U	0.0000089	0.000015	0.0000021 U	--
PCB-126	0.0000012 U	0.0000016 J	--	0.0000012 U	0.0000016 U	0.0000025	0.0000045	0.0000016 U	--
PCB-127	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-128/162	0.0000073	0.000021	--	0.000004 U	0.000004 U	0.000056	0.000091	0.0000041 U	--
PCB-129	0.0000019 J	0.0000055	--	0.000002 U	0.000002 U	0.000015	0.000022	0.0000021 U	--
PCB-13	0.000002 U	0.0000018 U	--	0.000002 U	0.0000024	0.000002 U	0.0000024	0.0000021 U	--
PCB-130	0.0000034	0.000012	--	0.000002 U	0.000002 U	0.000035	0.000048	0.0000021 U	--
PCB-131/133	0.0000023 J	0.0000036 J	--	0.000004 U	0.000004 U	0.000012	0.000018	0.0000041 U	--
PCB-132/161	0.0000094	0.000021	--	0.000004 U	0.0000042	0.000097	0.00023	0.0000041 U	--
PCB-134/143	0.0000017 J	0.0000046	--	0.000004 U	0.000004 U	0.000019	0.000036	0.0000041 U	--
PCB-135	0.0000088	0.000017	--	0.000002 U	0.0000031	0.00009	0.00016	0.0000021 U	--
PCB-136	0.0000068	0.000014	--	0.000002 U	0.0000042	0.00007	0.00022	0.0000021 U	--
PCB-137	0.0000027	0.0000056	--	0.000002 U	0.000002 U	0.000011	0.000019	0.0000021 U	--
PCB-138/163/164	0.000092	0.00014	--	0.000006 U	0.000013	0.00068	0.0011	0.0000062 U	--
PCB-139/149	0.000055	0.0001	--	0.000004 U	0.000012	0.00051	0.00093	0.0000041 U	--
PCB-14	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-140	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-141	0.00002	0.000033	--	0.000002 U	0.0000039	0.00018	0.00033	0.0000021 U	--
PCB-142	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-144	0.0000039	0.0000043	--	0.000002 U	0.000002 U	0.000027	0.000049	0.0000021 U	--
PCB-145	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-146/165	0.000014	0.000025	--	0.000004 U	0.0000024 J	0.0001	0.00015	0.0000041 U	--
PCB-147	0.000002 U	0.0000021	--	0.000002 U	0.000002 U	0.0000034	0.0000045	0.0000021 U	--
PCB-148	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-371	SB-371	SB-371	SB-371	SB-371	SB-372	SB-372	SB-372	SB-372
SAMPLE ID	SB371-20191114-0006	SB371-20191114-0624	SB371-20191114-144168	SB371-20191114-168192	SB371-20191114-84108	SB372-20191114-0006	SB372-20191114-0624	SB372-20191114-132156	SB372-20191114-2448
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SS	SS	SB	SB	SB	SS	SS	SB	SB
TOP DEPTH	0	0.5	12	14	7	0	0.5	11	2
BOTTOM DEPTH	0.5	2	14	16	9	0.5	2	13	4
PCB-15	0.0000028	0.0000026	--	0.000002 U	0.000002 U	0.000008	0.000012	0.0000021 U	--
PCB-150	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-151	0.000021	0.000035	--	0.000002 U	0.0000052	0.0002	0.00038	0.0000021 U	--
PCB-152	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-153	0.00012	0.00018	--	0.000002 U	0.000015	0.00085	0.0014	0.0000021 U	--
PCB-154	0.000002 U	0.0000018	--	0.000002 U	0.000002 U	0.0000028	0.0000043	0.0000021 U	--
PCB-155	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-156	0.0000076	0.000013	--	0.00000075 U	0.0000012 U	0.000049	0.000089	0.00000084 U	--
PCB-157	0.0000014 J	0.0000035	--	0.00000067 U	0.0000012 U	0.0000074	0.0000097	0.00000076 U	--
PCB-158/160	0.0000085	0.000015	--	0.000004 U	0.000004 U	0.00007	0.00012	0.0000041 U	--
PCB-159	0.0000019 J	0.0000021	--	0.000002 U	0.000002 U	0.000011	0.000016	0.0000021 U	--
PCB-16	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.0000027	0.0000026	0.0000021 U	--
PCB-166	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-167	0.0000047	0.0000083	--	0.00000079 U	0.0000012 U	0.000028	0.000041	0.00000082 U	--
PCB-168	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-169	0.0000011 U	0.0000012 U	--	0.00000081 U	0.0000011 U	0.00000087 U	0.0000013 U	0.00000089 U	--
PCB-17	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.0000032	0.0000041	0.0000021 U	--
PCB-170	0.00005	0.000055	--	0.000002 U	0.000008	0.00042	0.00074	0.0000021 U	--
PCB-171	0.000011	0.000012	--	0.000002 U	0.0000029	0.0001	0.00019	0.0000021 U	--
PCB-172	0.00001	0.000013	--	0.000002 U	0.000002 U	0.000078	0.00014	0.0000021 U	--
PCB-173	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.0000092	0.000014	0.0000021 U	--
PCB-174	0.000043	0.000055	--	0.000002 U	0.0000086	0.00039	0.00069	0.0000021 U	--
PCB-175	0.000002 U	0.0000019	--	0.000002 U	0.000002 U	0.000014	0.000002 U	0.0000021 U	--
PCB-176	0.0000031	0.0000045	--	0.000002 U	0.000002 U	0.000031	0.000081	0.0000021 U	--
PCB-177	0.000031	0.000036	--	0.000002 U	0.0000064	0.00027	0.00043	0.0000021 U	--
PCB-178	0.000014	0.000018	--	0.000002 U	0.000002 U	0.000096	0.00015	0.0000021 U	--
PCB-179	0.000015	0.000025	--	0.000002 U	0.0000046	0.00014	0.00028	0.0000021 U	--
PCB-18	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.0000052	0.0000077	0.0000021 U	--
PCB-180	0.000096	0.00012	--	0.000002 U	0.000022	0.00086	0.0016	0.0000021 U	--
PCB-181	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-182/187	0.00007	0.000088	--	0.000004 U	0.000015	0.00049	0.00086	0.0000041 U	--
PCB-183	0.000022	0.000029	--	0.000002 U	0.0000062	0.00018	0.0004	0.0000021 U	--
PCB-184	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-185	0.0000064	0.0000075	--	0.000002 U	0.000002 U	0.000051	0.000083	0.0000021 U	--
PCB-186	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-188	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-189	0.0000022	0.0000024	--	0.0000007 U	0.0000012 U	0.000015	0.000023	0.00000089 U	--
PCB-19	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-190	0.000013	0.000013	--	0.000002 U	0.000002 U	0.00011	0.00016	0.0000021 U	--
PCB-191	0.000002 U	0.0000026	--	0.000002 U	0.000002 U	0.000019	0.000032	0.0000021 U	--
PCB-192	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-193	0.0000093	0.0000091	--	0.000002 U	0.000002 U	0.00007	0.000083	0.0000021 U	--
PCB-194	0.000024	0.000042	--	0.000002 U	0.000013	0.00018	0.00034	0.0000021 U	--
PCB-195	0.000011	0.000013	--	0.000002 U	0.0000025	0.000095	0.00016	0.0000021 U	--
PCB-196/203	0.000033	0.00014	--	0.000004 U	0.000022	0.00022	0.00045	0.0000041 U	--
PCB-197	0.000002 U	0.0000032	--	0.000002 U	0.000002 U	0.0000058	0.000012	0.0000021 U	--
PCB-198	0.0000023	0.00001	--	0.000002 U	0.000002 U	0.000011	0.000021	0.0000021 U	--
PCB-199	0.00005	0.00024	--	0.000002 U	0.000025	0.00024	0.00043	0.0000021 U	--
PCB-2	0.0000021	0.0000063	--	0.000002 U	0.0000074	0.000002 U	0.0000039	0.0000021 U	--
PCB-20/21/33	0.0000014 J	0.0000017 J	--	0.000006 U	0.0000059 U	0.0000065	0.0000094	0.0000062 U	--
PCB-200	0.0000034	0.0000067	--	0.000002 U	0.000002 U	0.000024	0.000046	0.0000021 U	--
PCB-201	0.0000031	0.000016	--	0.000002 U	0.0000031	0.000019	0.000048	0.0000021 U	--
PCB-202	0.000014	0.000083	--	0.000002 U	0.0000063	0.000041	0.00008	0.0000021 U	--
PCB-204	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-205	0.0000018 J	0.0000035	--	0.000002 U	0.000002 U	0.000012	0.000018	0.0000021 U	--
PCB-206	0.00019	0.0016	--	0.000002 U	0.000026	0.00024	0.00037	0.0000021 U	--
PCB-207	0.000023	0.00016	--	0.000002 U	0.0000044	0.000026	0.000043	0.0000021 U	--
PCB-208	0.000089	0.00074	--	0.000002 U	0.0000087	0.000097	0.00015	0.0000021 U	--
PCB-209	0.00086	0.0052	--	0.000002 U	0.000013	0.0007	0.00094	0.0000021 U	--
PCB-22	0.0000015 J	0.0000014 J	--	0.000002 U	0.000002 U	0.000012	0.000008	0.0000021 U	--
PCB-23	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-24	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-25	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.0000022	0.0000017 J	0.0000021 U	--
PCB-26	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.0000035	0.000003	0.0000021 U	--
PCB-27	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-28	0.0000032	0.0000031	--	0.000002 U	0.000002 U	0.000025	0.000019	0.0000021 U	--
PCB-29	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-3	0.000002	0.0000055	--	0.000002 U	0.0000067	0.0000015 J	0.0000046	0.0000021 U	--
PCB-30	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-31	0.0000029	0.0000031	--	0.000002 U	0.000002 U	0.000019	0.000019	0.0000021 U	--
PCB-32	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.0000039	0.0000036	0.0000021 U	--
PCB-34	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-35	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.0000022	0.000002 U	0.0000021 U	--
PCB-36	0.0000017 J	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-37	0.0000021	0.0000032	--	0.000002 U	0.000002 U	0.000015	0.000018	0.0000021 U	--
PCB-38	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-39	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-4	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.0000021	0.0000021 U	--
PCB-40	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000004	0.0000034	0.0000021 U	--
PCB-41/64/71/72	0.000003 J	0.0000043 J	--	0.000008 U	0.0000079 U	0.00003	0.00002	0.0000082 U	--
PCB-42/59	0.000001 J	0.0000037 U	--	0.000004 U	0.000004 U	0.0000088	0.0000052	0.0000041 U	--
PCB-43/49	0.0000032 J	0.0000063	--	0.000004 U	0.000004 U	0.000032	0.000023	0.0000041 U	--
PCB-44	0.000002	0.0000046	--	0.000002 U	0.000002 U	0.000022	0.000021	0.0000021 U	--

LOCATION	SB-371	SB-371	SB-371	SB-371	SB-371	SB-372	SB-372	SB-372	SB-372
SAMPLE ID	SB371-20191114-0006	SB371-20191114-0624	SB371-20191114-144168	SB371-20191114-168192	SB371-20191114-84108	SB372-20191114-0006	SB372-20191114-0624	SB372-20191114-132156	SB372-20191114-2448
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SS	SS	SB	SB	SB	SS	SS	SB	SB
TOP DEPTH	0	0.5	12	14	7	0	0.5	11	2
BOTTOM DEPTH	0.5	2	14	16	9	0.5	2	13	4
PCB-45	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000003	0.0000021	0.0000021 U	--
PCB-46	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-47	0.0000016 J	0.0000032	--	0.000002 U	0.000002 U	0.000013	0.00001	0.0000021 U	--
PCB-48/75	0.000004 U	0.0000037 U	--	0.000004 U	0.000004 U	0.0000035 J	0.0000023 J	0.0000041 U	--
PCB-5	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-50	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-51	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-52/69	0.0000032 J	0.000011	--	0.000004 U	0.0000022 J	0.000036	0.000043	0.0000041 U	--
PCB-53	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002	0.0000019 J	0.0000021 U	--
PCB-54	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-55	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.0000013 J	0.0000021 U	--
PCB-56/60	0.0000034 J	0.0000045	--	0.000004 U	0.000004 U	0.00003	0.000024	0.0000041 U	--
PCB-57	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-58	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-6	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002	0.0000021 U	--
PCB-61/70	0.0000056	0.000016	--	0.000004 U	0.0000023 J	0.000046	0.000071	0.0000041 U	--
PCB-62	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-63	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.0000023	0.0000012 J	0.0000021 U	--
PCB-65	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-66/76	0.0000048	0.0000081	--	0.000004 U	0.0000018 J	0.000048	0.000047	0.0000041 U	--
PCB-67	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.0000017 J	0.0000015 J	0.0000021 U	--
PCB-68	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-7	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-73	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-74	0.0000025	0.0000037	--	0.000002 U	0.000002 U	0.000022	0.00002	0.0000021 U	--
PCB-77	0.0000016 J	0.0000039	--	0.00000096 U	0.0000013 U	0.0000079	0.000011	0.0000017 U	--
PCB-78	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-79	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.0000018 J	0.0000021 U	--
PCB-8	0.000002 U	0.0000021	--	0.000002 U	0.000002 U	0.0000037	0.0000062	0.0000021 U	--
PCB-80	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-81	0.0000011 U	0.00000073 U	--	0.00000079 U	0.0000013 U	0.0000018 J	0.0000031	0.0000013 U	--
PCB-82	0.000002 U	0.0000067	--	0.000002 U	0.000002 U	0.0000078	0.000016	0.0000021 U	--
PCB-83/112	0.000004 U	0.0000026 J	--	0.000004 U	0.000004 U	0.0000035 J	0.000006	0.0000041 U	--
PCB-84/92	0.0000055	0.000024	--	0.000004 U	0.0000025 J	0.000042	0.000078	0.0000041 U	--
PCB-85/116	0.0000037 J	0.000014	--	0.000004 U	0.000004 U	0.000016	0.000011	0.0000041 U	--
PCB-86	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-87/117/125	0.0000055 J	0.000023	--	0.000006 U	0.0000024 J	0.000041	0.000077	0.0000062 U	--
PCB-88/91	0.000004 U	0.0000081	--	0.000004 U	0.000004 U	0.0000088	0.000015	0.0000041 U	--
PCB-89	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-9	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-93	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-94	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-95	0.000011	0.000042	--	0.000002 U	0.000005	0.00011	0.00026	0.0000021 U	--
PCB-96	0.000002 U	0.0000018 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000021 U	--
PCB-97	0.0000031	0.000014	--	0.000002 U	0.000002 U	0.000021	0.000042	0.0000021 U	--
PCB-98/102	0.000004 U	0.0000037 U	--	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.0000041 U	--
PCB-99	0.0000076	0.000028	--	0.000002 U	0.000002	0.000038	0.000067	0.0000021 U	--
PENTACHLOROBIPHENYLS	0.00011 J	0.00043 J	--	0 UJ	0.000036 J	0.00083 J	0.0017 J	0 UJ	--
TEQ DIOXIN-LIKE PCBs (BIRD)	8.1719E-08	3.59376E-07	--	0.00000074 U	2.3E-10	8.35823E-07	1.33012E-06	0.0000011 U	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.97316E-07	3.96522E-07	--	0.00000074 U	1.78493E-07	8.36258E-07	1.33077E-06	0.0000011 U	--
TEQ DIOXIN-LIKE PCBs (FISH)	2.76E-10	8.664E-09	--	0.00000074 U	1.1E-11	1.493E-08	2.6467E-08	0.0000011 U	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	3.581E-09	8.878E-09	--	0.00000074 U	4.446E-09	1.4951E-08	2.6499E-08	0.0000011 U	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	8.62E-10	1.62043E-07	--	0.00000074 U	6.9E-11	2.55773E-07	4.59935E-07	0.0000011 U	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	7.755E-08	1.80165E-07	--	0.00000074 U	9.6942E-08	2.68823E-07	4.79435E-07	0.0000011 U	--
TETRACHLOROBIPHENYLS	0.000032 J	0.000066 J	--	0 UJ	0.0000063 J	0.00031 J	0.00031 J	0 UJ	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.000025	0.0000606	--	0 U	0.0000023	0.0001603	0.0002821	0 U	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.0024227	0.0098933	--	0 U	0.000323	0.0096048	0.0163967	0 U	--
TOTAL PCB CONGENERS ZEROND	0.0024477	0.0099539	--	0 U	0.0003253	0.0097651	0.0166788	0 U	--
TOTAL PCB CONGENERS-NOAA	0.001563	0.0076159	--	0 U	0.0001362	0.0049149	0.0081859	0 U	--
TOTAL PCB CONGENERS-NOAA HALFND	0.00254321	0.01003023	--	0.000200755	0.00047265	0.009832535	0.01673745	0.000210745	--
TOTAL PCB CONGENERS-NOAA X2	0.003126	0.0152318	--	0 U	0.0002724	0.0098298	0.0163718	0 U	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.00313	0.0152336	--	0.00004748	0.0002844	0.0098298	0.0163718	0.00004978	--
TRICHLOROBIPHENYLS	0.000013 J	0.000013 J	--	0 UJ	0 UJ	0.0001 J	0.000096 J	0 UJ	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	3000	2200	--	5900 J	21	1800	1600	4200 J	--
1,2,3,4,6,7,8,9-OCDF	1.2 J	3.3 J	--	0.31 U	0.38 U	1.9 JZ	1.5 JZ	0.49 U	--
1,2,3,4,6,7,8-HPCDD	27	30	--	41	0.27 U	35	12	27	--
1,2,3,4,6,7,8-HPCDF	1.2 JZ	3.1 J	--	0.18 U	0.18 U	1.5 J	0.91 JZ	0.18 U	--
1,2,3,4,7,8,9-HPCDF	0.18 U	0.18 U	--	0.18 U	0.18 U	0.18 U	0.28 U	0.21 U	--
1,2,3,4,7,8-HXCDD	0.28 JZ	0.14 U	--	0.26 JZ	0.14 U	0.36 U	0.26 U	0.35 JZ	--
1,2,3,4,7,8-HXCDF	0.16 J	0.37 J	--	0.13 U	0.13 U	0.22 JZ	0.25 U	0.13 U	--
1,2,3,6,7,8-HXCDD	0.33 J	0.4 JZ	--	0.16 U	0.14 U	0.61 J	0.23 U	0.24 J	--
1,2,3,6,7,8-HXCDF	0.15 JZ	0.38 J	--	0.093 U	0.17 U	0.097 U	0.25 U	0.093 U	--
1,2,3,7,8,9-HXCDD	0.47 JZ	0.35 JZ	--	0.3 J	0.15 U	0.67 JZ	0.25 U	0.32 J	--
1,2,3,7,8,9-HXCDF	0.21 U	0.21 U	--	0.21 U	0.21 U	0.21 U	0.29 U	0.21 U	--
1,2,3,7,8-PECDD	0.2 JZ	0.27 J	--	0.18 U	0.18 U	0.21 JZ	0.26 U	0.18 U	--
1,2,3,7,8-PECDF	0.17 U	0.39 JZ	--	0.17 U	0.17 U	0.29 U	0.31 U	0.18 U	--
2,3,4,6,7,8-HXCDF	0.13 JZ	0.33 JZ	--	0.091 U	0.11 U	0.13 J	0.25 U	0.091 U	--
2,3,4,7,8-PECDF	0.16 U	0.44 JZ	--	0.16 U	0.16 U	0.42 JZ	0.31 U	0.17 U	--
2,3,7,8-TCDD	0.15 U	0.14 U	--	0.18 U	0.17 U	0.18 U	0.29 U	0.23 U	--
2,3,7,8-TCDF	0.21 U	0.59 JZ	--	0.2 U	0.25 U	0.21 JZ	0.41 U	0.33 U	--
TEQ DIOXINS (BIRD)	0.64742	1.76733	--	0.674	0.0021	1.17829	0.18125	0.4989	--
TEQ DIOXINS (BIRD) HALFND	0.92732	1.85223	--	1.0713155	0.435254	1.30804	0.9053	0.9910745	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-371	SB-371	SB-371	SB-371	SB-371	SB-372	SB-372	SB-372	SB-372
SAMPLE ID	SB371-20191114-0006	SB371-20191114-0624	SB371-20191114-144168	SB371-20191114-168192	SB371-20191114-84108	SB372-20191114-0006	SB372-20191114-0624	SB372-20191114-132156	SB372-20191114-2448
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SS	SS	SB	SB	SB	SS	SS	SB	SB
TOP DEPTH	0	0.5	12	14	7	0	0.5	11	2
BOTTOM DEPTH	0.5	2	14	16	9	0.5	2	13	4
TEQ DIOXINS (FISH)	0.73112	0.93583	--	0.764	0.0021	0.70849	0.18125	0.6276	--
TEQ DIOXINS (FISH) HALFND	0.86702	1.05223	--	1.0220655	0.297004	0.91199	0.67255	0.9160245	--
TEQ DIOXINS (HUMANS/MAMMALS)	1.53436	1.64769	--	2.236	0.0063	1.42557	0.60955	1.621	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	1.65781	1.73609	--	2.4885965	0.276057	1.55417	1.0466	1.8989235	--
TOTAL HPCDD	51 J	53 J	--	74 J	0 UJ	67 J	20 J	52 J	--
TOTAL HPCDF	0.74 J	6.1 J	--	0 UJ	0 UJ	3.4 J	0.73 J	0 UJ	--
TOTAL HXCDD	2.6 J	2.4 J	--	0.3 J	0 UJ	2.3 J	0.52 J	2 J	--
TOTAL HXCDF	1.1 J	2.4 J	--	0 UJ	0 UJ	1.7 J	0.27 J	0 UJ	--
TOTAL PECDD	0.45 J	1 J	--	0 UJ	0 UJ	0.28 J	0 UJ	0 UJ	--
TOTAL PECDF	0.66 J	1.1 J	--	0 UJ	0 UJ	0.6 J	0.67 J	0 UJ	--
TOTAL TCDD	0 UJ	2.6 J	--	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ	--
TOTAL TCDF	0.67 J	4.7 J	--	0 UJ	0 UJ	0.87 J	0 UJ	0 UJ	--
METALS (MG/KG)									
ALUMINUM	10500	10100	--	8150	4770	8260	9560	9720	--
ANTIMONY	1.2 U	0.53 J	--	1.2	0.97 J	1.1 U	1.1 U	1.1 U	--
ARSENIC	9.7	16.5	--	17.9	10.5	9.2	8.7	10.5	--
BARIUM	38.4	130	--	80	184	53.9	43.6	50.6	--
BERYLLIUM	0.19 J	1.4	--	0.49 J	1.1	0.46 J	0.33 J	0.15 J	--
CADMIUM	0.6 U	0.14 J	--	0.087 J	0.17 J	0.56 U	0.55 U	0.53 U	--
CALCIUM	1600	704	--	136 J	405 J	738	663	171 J	--
CHROMIUM	3.2	24	--	8.3	28	17.2	6.3	5.1	--
COBALT	1.4	18.5	--	11.4	11.6	7.3	4.9	2.3	--
COPPER	18.9	27.9	--	125	25.3	8.5	16.5	24	--
CYANIDE	0.64 R	0.57 R	--	0.55 R	0.54 R	0.57 R	0.059 J	0.55 R	--
IRON	29000	26700	--	11700	29000	34700	29400	21400	--
LEAD	10.6	49.2	--	28.4	73.5	13.9	17.6	9.6	--
MAGNESIUM	820	1070	--	556	1510	900	1720	826	--
MANGANESE	37.3	882	--	352	1310	345	172	64.1	--
MERCURY	0.12 UJ	0.18	--	0.12 UJ	0.11 UJ	0.11 UJ	0.11 UJ	0.11 UJ	--
NICKEL	3.5	21.2	--	14	11.5	7.2	8	4.6	--
POTASSIUM	1290	1390	--	947	1320	1180	1850	1110	--
SELENIUM	1.2 J	1.3 J	--	1.7 J	1 J	1 J	1 J	1 J	--
SILVER	0.6 U	0.56 U	--	0.55 U	0.54 U	0.56 U	0.55 U	0.53 U	--
SODIUM	20.8 J	59.8 J	--	12.6 J	66.4 J	20.8 J	81.9 J	16.5 J	--
THALLIUM	0.6 U	0.27 J	--	0.081 J	0.17 J	0.12 J	0.13 J	0.087 J	--
VANADIUM	3.9	38.8	--	8	17.7	25.9	7.9	4.3	--
ZINC	14.7	97.2	--	40.3	72.1	27.3	31.2	15.8	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	86	95	81	--	--	87	--	87

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-372	SB-372	SB-373	SB-373	SB-373	SB-373	SB-373	SB-373	SB-373
SAMPLE ID	SB372-20191114-7296	SB372-20191114-96120	SB373-20191114-0006	SB373-20191114-0624	SB373-20191114-120144	SB373-20191114-192216	SB373-20191114-4872	SB373-20191114-7296	SB373-20191114-7296-D
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									SB373-20191114-7296
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SB	SB
TOP DEPTH	6	8	0	0.5	10	16	4	6	6
BOTTOM DEPTH	8	10	0.5	2	12	18	6	8	8
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
1,1,2,2-TETRACHLOROETHANE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
1,1,2-TRICHLOROETHANE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	--	0.0049 U	0.006 UJ	0.0055 U	--	0.005 U	--	0.0059 UJ	0.0062 UJ
1,1-DICHLOROETHANE	--	0.0049 U	0.006 U	0.0055 U	--	0.005 U	--	0.0059 UJ	0.0062 UJ
1,1-DICHLOROETHENE	--	0.0049 U	0.006 U	0.0055 U	--	0.005 UJ	--	0.0059 UJ	0.0062 UJ
1,2,3-TRICHLOROBENZENE	--	0.0049 R	0.006 R	0.0055 R	--	0.005 UJ	--	0.0059 R	0.0062 R
1,2,4-TRICHLOROBENZENE	--	0.0049 R	0.006 R	0.0055 R	--	0.005 UJ	--	0.0059 R	0.0062 R
1,2-DIBROMO-3-CHLOROPROPANE	--	0.0049 R	0.006 R	0.0055 R	--	0.005 U	--	0.0059 R	0.0062 R
1,2-DIBROMOETHANE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
1,2-DICHLOROBENZENE	--	0.0049 R	0.006 R	0.0055 R	--	0.005 UJ	--	0.0059 R	0.0062 R
1,2-DICHLOROETHANE	--	0.0049 U	0.006 UJ	0.0055 U	--	0.005 U	--	0.0059 UJ	0.0062 UJ
1,2-DICHLOROPROPANE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 UJ	--	0.0059 UJ	0.0062 UJ
1,3-DICHLOROBENZENE	--	0.0049 R	0.006 R	0.0055 R	--	0.005 UJ	--	0.0059 R	0.0062 R
1,4-DICHLOROBENZENE	--	0.0049 R	0.006 R	0.0055 R	--	0.005 UJ	--	0.0059 R	0.0062 R
2-BUTANONE	--	0.0097 U	0.012 U	0.011 U	--	0.01 U	--	0.012 UJ	0.012 UJ
2-HEXANONE	--	0.0097 UJ	0.012 UJ	0.011 UJ	--	0.01 U	--	0.012 UJ	0.012 UJ
4-METHYL-2-PENTANONE	--	0.0097 UJ	0.012 UJ	0.011 UJ	--	0.01 U	--	0.012 UJ	0.012 UJ
ACETONE	--	0.0097 U	0.012 U	0.011 U	--	0.01 U	--	0.012 UJ	0.012 UJ
BENZENE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
BROMOCHLOROMETHANE	--	0.0049 U	0.006 U	0.0055 U	--	0.005 U	--	0.0059 UJ	0.0062 UJ
BROMODICHLOROMETHANE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 UJ	--	0.0059 UJ	0.0062 UJ
BROMOFORM	--	0.0049 R	0.006 R	0.0055 R	--	0.005 U	--	0.0059 R	0.0062 R
BROMOMETHANE	--	0.0049 U	0.006 U	0.0055 U	--	0.005 U	--	0.0059 UJ	0.0062 UJ
CARBON DISULFIDE	--	0.0049 U	0.006 U	0.0055 U	--	0.005 U	--	0.0059 UJ	0.0062 UJ
CARBON TETRACHLORIDE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
CHLOROBENZENE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 UJ	--	0.0059 UJ	0.0062 UJ
CHLORODIBROMOMETHANE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
CHLOROETHANE	--	0.0049 U	0.006 U	0.0055 U	--	0.005 U	--	0.0059 UJ	0.0062 UJ
CHLOROFORM	--	0.0049 U	0.006 U	0.0055 U	--	0.005 U	--	0.0059 UJ	0.0062 UJ
CHLOROMETHANE	--	0.0049 U	0.006 U	0.0055 U	--	0.005 U	--	0.0059 UJ	0.0062 UJ
CIS-1,2-DICHLOROETHENE	--	0.0049 U	0.006 U	0.0055 U	--	0.005 UJ	--	0.0059 UJ	0.0062 UJ
CIS-1,3-DICHLOROPROPENE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
CYCLOHEXANE	--	0.0049 UJ	0.0039 J	0.0055 UJ	--	0.005 UJ	--	0.0059 UJ	0.0042 J
DICHLORODIFLUOROMETHANE	--	0.0049 U	0.006 UJ	0.0055 U	--	0.005 UJ	--	0.0059 UJ	0.0062 UJ
ETHYLBENZENE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
ISOPROPYLBENZENE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
M+P-XYLENES	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
METHYL ACETATE	--	0.0049 U	0.006 UJ	0.0055 U	--	0.005 U	--	0.0059 UJ	0.0062 UJ
METHYL CYCLOHEXANE	--	0.0049 UJ	0.0049 J	0.0055 UJ	--	0.005 UJ	--	0.0059 J+	0.0073 J+
METHYL TERT-BUTYL ETHER	--	0.0049 U	0.006 UJ	0.0055 U	--	0.005 U	--	0.0059 UJ	0.0062 UJ
METHYLENE CHLORIDE	--	0.0049 U	0.006 UJ	0.0055 U	--	0.005 U	--	0.0059 UJ	0.0062 UJ
O-XYLENE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
STYRENE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
TETRACHLOROETHENE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
TOLUENE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
TRANS-1,2-DICHLOROETHENE	--	0.0049 U	0.006 U	0.0055 U	--	0.005 UJ	--	0.0059 UJ	0.0062 UJ
TRANS-1,3-DICHLOROPROPENE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
TRICHLOROETHENE	--	0.0049 UJ	0.006 UJ	0.0055 UJ	--	0.005 U	--	0.0059 UJ	0.0062 UJ
TRICHLOROFLUOROMETHANE	--	0.0049 U	0.006 UJ	0.0055 U	--	0.005 U	--	0.0059 UJ	0.0062 UJ
VINYL CHLORIDE	--	0.0049 U	0.006 U	0.0055 U	--	0.005 U	--	0.0059 UJ	0.0062 UJ
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	0.048 J	0.21 U	0.032 J	--	0.2 U	--	0.035 J	0.028 J
1,2,4,5-TETRACHLOROBENZENE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
1,4-DIOXANE	--	0.074 U	0.084 U	0.074 U	--	0.08 U	--	0.074 U	0.077 U
2,2'-OXYBIS(1-CHLOROPROPANE)	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
2,3,4,6-TETRACHLOROPHENOL	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
2,4,5-TRICHLOROPHENOL	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
2,4,6-TRICHLOROPHENOL	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
2,4-DICHLOROPHENOL	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
2,4-DIMETHYLPHENOL	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
2,4-DINITROPHENOL	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
2,4-DINITROTOLUENE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
2,6-DINITROTOLUENE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
2-CHLORONAPHTHALENE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
2-CHLOROPHENOL	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
2-METHYLNAPHTHALENE	--	0.1 J	0.21 U	0.081 J	--	0.2 U	--	0.086 J	0.065 J
2-METHYLPHENOL	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
2-NITROANILINE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
2-NITROPHENOL	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
3&4-METHYLPHENOL	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
3,3'-DICHLOROBENZIDINE	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
3-NITROANILINE	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
4,6-DINITRO-2-METHYLPHENOL	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
4-BROMOPHENYL PHENYL ETHER	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
4-CHLORO-3-METHYLPHENOL	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
4-CHLOROANILINE	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
4-CHLOROPHENYL PHENYL ETHER	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
4-NITROANILINE	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
4-NITROPHENOL	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
ACENAPHTHENE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
ACENAPHTHYLENE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-372	SB-372	SB-373	SB-373	SB-373	SB-373	SB-373	SB-373	SB-373
SAMPLE ID	SB372-20191114-7296	SB372-20191114-96120	SB373-20191114-0006	SB373-20191114-0624	SB373-20191114-120144	SB373-20191114-192216	SB373-20191114-4872	SB373-20191114-7296	SB373-20191114-7296-D
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									SB373-20191114-7296
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SB	SB
TOP DEPTH	6	8	0	0.5	10	16	4	6	6
BOTTOM DEPTH	8	10	0.5	2	12	18	6	8	8
ACETOPHENONE	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
ANTHRACENE	--	0.024 J	0.21 U	0.041 J	--	0.2 U	--	0.027 J	0.029 J
ATRAZINE	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
BAP EQUIVALENT-HALFND	--	0.16737	0.156418	0.25946	--	0.2 U	--	0.1721	0.18385
BAP EQUIVALENT-POS	--	0.07237	0.051418	0.16446	--	0.2 U	--	0.0771	0.08885
BENZALDEHYDE	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
BENZO(A)ANTHRACENE	--	0.064 J	0.043 J	0.14 J	--	0.2 U	--	0.073 J	0.081 J
BENZO(A)PYRENE	--	0.051 J	0.039 J	0.12 J	--	0.2 U	--	0.054 J	0.062 J
BENZO(B)FLUORANTHENE	--	0.11 J	0.053 J	0.22	--	0.2 U	--	0.12 J	0.14 J
BENZO(G,H,I)PERYLENE	--	0.032 J	0.21 U	0.036 J	--	0.2 U	--	0.19 U	0.032 J
BENZO(K)FLUORANTHENE	--	0.032 J	0.027 J	0.074 J	--	0.2 U	--	0.039 J	0.043 J
BIS(2-CHLOROETHOXY)METHANE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
BIS(2-CHLOROETHYL)ETHER	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
BIS(2-ETHYLHEXYL)PHTHALATE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.021 J
BUTYL BENZYL PHTHALATE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
CAPROLACTAM	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
CARBAZOLE	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
CHRYSENE	--	0.15 J	0.048 J	0.32	--	0.2 U	--	0.21	0.22
DIBENZO(A,H)ANTHRACENE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
DIBENZOFURAN	--	0.19 U	0.21 U	0.024 J	--	0.2 U	--	0.019 J	0.19 U
DIETHYL PHTHALATE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
DIMETHYL PHTHALATE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
DI-N-BUTYL PHTHALATE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
DI-N-OCTYL PHTHALATE	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
FLUORANTHENE	--	0.15 J	0.087 J	0.41	--	0.39 U	--	0.16 J	0.22 J
FLUORENE	--	0.19 U	0.21 U	0.023 J	--	0.2 U	--	0.19 U	0.19 U
HEXACHLOROBENZENE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
HEXACHLOROBUTADIENE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
HEXACHLOROCYCLOPENTADIENE	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
HEXACHLOROETHANE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
HIGH MOLECULAR WEIGHT PAHS	--	0.604	0.314	1.324	--	0 U	--	0.688	0.809
INDENO(1,2,3-CD)PYRENE	--	0.035 J	0.025 J	0.074 J	--	0.2 U	--	0.032 J	0.041 J
ISOPHORONE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
LOW MOLECULAR WEIGHT PAHS	--	0.453	0.143	0.924	--	0 U	--	0.487	0.519
NAPHTHALENE	--	0.019 J	0.21 U	0.03 J	--	0.2 U	--	0.03 J	0.19 U
NITROBENZENE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
N-NITROSO-DI-N-PROPYLAMINE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
N-NITROSODIPHENYLAMINE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
PENTACHLOROPHENOL	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
PHENANTHRENE	--	0.26	0.056 J	0.42	--	0.2 U	--	0.27	0.27
PHENOL	--	0.36 U	0.42 U	0.36 U	--	0.39 U	--	0.36 U	0.38 U
PYRENE	--	0.13 J	0.079 J	0.34	--	0.2 U	--	0.16 J	0.19
TOTAL PAHS	--	1.057	0.457	2.248	--	0 U	--	1.175	1.328
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	0.0072 U	0.0083 U	0.0073 U	--	0.008 U	--	0.0074 U	0.0075 U
2-METHYLNAPHTHALENE	--	0.11	0.0057	0.086	--	0.0009 J	--	0.097	0.066
ACENAPHTHENE	--	0.0086	0.0019 J	0.014	--	0.0022 J	--	0.012	0.012
ACENAPHTHYLENE	--	0.0052	0.005	0.0099	--	0.0055	--	0.0081	0.007
ANTHRACENE	--	0.011	0.0066	0.033	--	0.0039 U	--	0.016	0.017
BAP EQUIVALENT-HALFND	--	0.06081	0.053229	0.16977	--	0.004509	--	0.07856	0.08889
BAP EQUIVALENT-POS	--	0.05901	0.051129	0.16797	--	0.000005	--	0.07676	0.08699
BENZO(A)ANTHRACENE	--	0.045	0.033	0.16	--	0.0039 U	--	0.057	0.083
BENZO(A)PYRENE	--	0.041	0.039	0.12	--	0.0039 U	--	0.056	0.061
BENZO(B)FLUORANTHENE	--	0.11	0.064	0.26	--	0.0039 U	--	0.12	0.14
BENZO(G,H,I)PERYLENE	--	0.017 J	0.0097 J	0.022 J	--	0.0039 UJ	--	0.0088 J	0.021 J
BENZO(K)FLUORANTHENE	--	0.023	0.018	0.072	--	0.0039 U	--	0.035	0.039
CHRYSENE	--	0.18	0.049	0.35 J	--	0.0054	--	0.21	0.2
DIBENZO(A,H)ANTHRACENE	--	0.0036 U	0.0042 U	0.0036 U	--	0.0039 U	--	0.0036 U	0.0038 U
FLUORANTHENE	--	0.13	0.1	0.41 J	--	0.0024 J	--	0.19	0.2
FLUORENE	--	0.017	0.0033 J	0.024	--	0.0071	--	0.019	0.017
HIGH MOLECULAR WEIGHT PAHS	--	0.547	0.3197	1.313	--	0.0164	--	0.6218	0.695
INDENO(1,2,3-CD)PYRENE	--	0.021	0.022	0.049	--	0.0039 U	--	0.025	0.031
LOW MOLECULAR WEIGHT PAHS	--	0.4438	0.1678	0.9269	--	0.0172	--	0.5601	0.546
NAPHTHALENE	--	0.022	0.0042 U	0.036	--	0.0039 U	--	0.035	0.023
PENTACHLOROPHENOL	--	0.0074 U	0.0084 U	0.0074 U	--	0.008 U	--	0.0074 U	0.0077 U
PHENANTHRENE	--	0.25	0.051	0.4 J	--	0.0039 U	--	0.28	0.27
PYRENE	--	0.11	0.085	0.28	--	0.011	--	0.11	0.12
TOTAL PAHS	--	0.18	0.049	0.35	--	0.0054	--	0.21	0.2
PESTICIDES (MG/KG)									
4,4'-DDD	--	0.0004 R	0.0042 U	0.002 R	--	0.004 U	--	0.003 J	0.0018 J
4,4'-DDE	--	0.0036 U	0.00062 J	0.00034 R	--	0.004 U	--	0.00034 R	0.0038 U
4,4'-DDT	--	0.0004 J	0.00054 J	0.0011 R	--	0.004 U	--	0.0031 J	0.0014 R
ALDRIN	--	0.00022 J	0.0021 U	0.00026 R	--	0.002 U	--	0.00044 J	0.00024 J
ALPHA-BHC	--	0.0019 U	0.0021 U	0.0019 U	--	0.002 U	--	0.0019 U	0.0019 U
ALPHA-CHLORDANE	--	0.00086 J	0.0021 U	0.0013 J	--	0.002 U	--	0.0022 J	0.0013 J
BETA-BHC	--	0.00065 J	0.00043 J	0.00061 J	--	0.00033 J	--	0.00073 J	0.0019 U
DELTA-BHC	--	0.0019 U	0.0021 U	0.0019 U	--	0.002 U	--	0.0019 U	0.0019 U
DIELDRIN	--	0.00037 R	0.0042 U	0.00078 R	--	0.004 U	--	0.001 R	0.00067 R
ENDOSULFAN I	--	0.0019 U	0.0021 U	0.0019 U	--	0.002 U	--	0.0019 U	0.0019 U
ENDOSULFAN II	--	0.0036 U	0.0042 U	0.0014 J	--	0.004 U	--	0.002 J	0.0011 J
ENDOSULFAN SULFATE	--	0.0036 U	0.0042 U	0.0036 U	--	0.004 U	--	0.00047 R	0.0038 U
ENDRIN	--	0.00028 R	0.0042 U	0.0019 J	--	0.004 U	--	0.0046 J	0.0018 J
ENDRIN ALDEHYDE	--	0.001 J	0.0042 U	0.002 J	--	0.004 U	--	0.0051	0.0017 J

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-372	SB-372	SB-373	SB-373	SB-373	SB-373	SB-373	SB-373	SB-373
SAMPLE ID	SB372-20191114-7296	SB372-20191114-96120	SB373-20191114-0006	SB373-20191114-0624	SB373-20191114-120144	SB373-20191114-192216	SB373-20191114-4872	SB373-20191114-7296	SB373-20191114-7296-D
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									SB373-20191114-7296
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SB	SB
TOP DEPTH	6	8	0	0.5	10	16	4	6	6
BOTTOM DEPTH	8	10	0.5	2	12	18	6	8	8
ENDRIN KETONE	--	0.0036 U	0.0042 U	0.0016 R	--	0.004 U	--	0.0012 R	0.005 R
GAMMA-BHC (LINDANE)	--	0.0019 U	0.0021 U	0.0019 U	--	0.002 U	--	0.0019 U	0.0019 U
GAMMA-CHLORDANE	--	0.0019 U	0.0021 U	0.0019 U	--	0.002 U	--	0.00035 R	0.0019 U
HEPTACHLOR	--	0.00024 R	0.0021 U	0.00028 J	--	0.002 U	--	0.00057 J	0.00056 R
HEPTACHLOR EPOXIDE	--	0.0019 U	0.0021 U	0.0019 U	--	0.002 U	--	0.0019 U	0.0019 U
METHOXYCHLOR	--	0.013 J	0.0048 J	0.024	--	0.02 U	--	0.025	0.02
TOXAPHENE	--	0.19 U	0.21 U	0.19 U	--	0.2 U	--	0.19 U	0.19 U
PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	0.275 U	--	--	0.284 U	0.275 U	--	0.287 U	--	--
AROCLOR-1221	0.549 U	--	--	0.568 U	0.549 U	--	0.575 U	--	--
AROCLOR-1232	0.275 U	--	--	0.284 U	0.275 U	--	0.287 U	--	--
AROCLOR-1242	0.275 U	--	--	0.284 U	0.275 U	--	0.287 U	--	--
AROCLOR-1248	0.275 U	--	--	0.284 U	0.275 U	--	0.287 U	--	--
AROCLOR-1254	0.275 U	--	--	0.284 U	0.275 U	--	0.287 U	--	--
AROCLOR-1260	0.275 U	--	--	0.284 U	0.275 U	--	0.287 U	--	--
AROCLOR-1262	0.275 U	--	--	0.284 U	0.275 U	--	0.287 U	--	--
AROCLOR-1268	0.275 U	--	--	0.284 U	0.275 U	--	0.287 U	--	--
TOTAL AROCLOR	0 U	--	--	0 U	0 U	--	0 U	--	--
TOTAL AROCLOR HALFND	1.3745	--	--	1.42	1.3745	--	1.4355	--	--
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	0.000006 J	0.00032 J	0.000018 J	--	0 UJ	--	0.000058 J	0.000048 J
HEPTACHLOROBIPHENYLS	--	0.0000088 J	0.00043 J	0.0005 J	--	0.002 J	--	0.0017 J	0.0016 J
HEXACHLOROBIPHENYLS	--	0.0000097 J	0.00048 J	0.00054 J	--	0.0021 J	--	0.0018 J	0.0015 J
MONOCHLOROBIPHENYLS	--	0.0000089 J	0.0000015 J	0.000014 J	--	0 UJ	--	0.000032 J	0.000024 J
NONACHLOROBIPHENYLS	--	0.0000082 J	0.00028 J	0.00021 J	--	0.000033 J	--	0.0002 J	0.00018 J
OCTACHLOROBIPHENYLS	--	0.0000099 J	0.00015 J	0.00021 J	--	0.00043 J	--	0.00063 J	0.00065 J
PCB-1	--	0.0000019 J	0.000002 U	0.0000033	--	0.000002 U	--	0.0000091	0.0000061
PCB-10	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-100	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-101/90	--	0.000004 U	0.000037	0.000062	--	0.00022	--	0.00023	0.00017
PCB-103	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-104	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-105	--	0.0000014 U	0.000013	0.000015	--	0.000016	--	0.000028	0.000022
PCB-108/107	--	0.000004 U	0.0000028 J	0.0000037 J	--	0.000004 U	--	0.0000066	0.0000051
PCB-109	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-11	--	0.000006	0.00032	0.0000051	--	0.000002 U	--	0.0000042	0.0000057
PCB-110	--	0.000002 U	0.000026	0.000036	--	0.000092	--	0.00011	0.000087
PCB-111/115	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	0.000004 U	0.000001 J
PCB-113	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-114	--	0.0000014 U	0.0000011 U	0.0000011 U	--	0.0000019 U	--	0.0000018 J	0.000002
PCB-118/106	--	0.0000013 U	0.000033	0.000038	--	0.000059	--	0.000084	0.000071
PCB-119	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.0000014 J
PCB-12	--	0.000002 U	0.000002 U	0.0000012 J	--	0.000002 U	--	0.0000031	0.0000034
PCB-120	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000013 J	0.000002 U
PCB-121	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-122	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000014 J	0.000002 U
PCB-123	--	0.00000099 U	0.00000081 U	0.00000079 U	--	0.0000014 U	--	0.00000092 U	0.00000071 U
PCB-124	--	0.000002 U	0.0000022	0.0000022	--	0.000002 U	--	0.000006	0.0000046
PCB-126	--	0.0000015 U	0.0000013 U	0.0000015 J	--	0.0000018 U	--	0.0000028	0.0000019 J
PCB-127	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-128/162	--	0.000004 U	0.000011	0.000012	--	0.000034	--	0.000028	0.000024
PCB-129	--	0.000002 U	0.0000032	0.0000032	--	0.000011	--	0.0000088	0.0000072
PCB-13	--	0.000002 U	0.000002 U	0.0000019 J	--	0.000002 U	--	0.0000028	0.0000024
PCB-130	--	0.000002 U	0.0000053	0.0000056	--	0.000017	--	0.000013	0.000016
PCB-131/133	--	0.000004 U	0.0000027 J	0.0000032 J	--	0.0000087	--	0.0000075	0.0000059
PCB-132/161	--	0.000004 U	0.000011	0.000018	--	0.00012	--	0.000078	0.000073
PCB-134/143	--	0.000004 U	0.0000024 J	0.0000039 J	--	0.000019	--	0.000015	0.000012
PCB-135	--	0.000002 U	0.000011	0.000014	--	0.00005	--	0.000061	0.000048
PCB-136	--	0.000002 U	0.0000068	0.000014	--	0.000085	--	0.000086	0.000068
PCB-137	--	0.000002 U	0.0000026	0.0000035	--	0.0000051	--	0.000009	0.000005
PCB-138/163/164	--	0.0000029 J	0.00011	0.00011	--	0.00039	--	0.00033	0.00029
PCB-139/149	--	0.0000029 J	0.00007	0.0001	--	0.00037	--	0.00035	0.00027
PCB-14	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-140	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-141	--	0.000002 U	0.000023	0.000029	--	0.00012	--	0.00011	0.000096
PCB-142	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-144	--	0.000002 U	0.0000039	0.0000047	--	0.000032	--	0.000014	0.000014
PCB-145	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-146/165	--	0.000004 U	0.00002	0.000021	--	0.000051	--	0.000053	0.000044
PCB-147	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000021	--	0.000002 U	0.0000012 J
PCB-148	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-372	SB-372	SB-373	SB-373	SB-373	SB-373	SB-373	SB-373	SB-373
SAMPLE ID	SB372-20191114-7296	SB372-20191114-96120	SB373-20191114-0006	SB373-20191114-0624	SB373-20191114-120144	SB373-20191114-192216	SB373-20191114-4872	SB373-20191114-7296	SB373-20191114-7296-D
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									SB373-20191114-7296
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SB	SB
TOP DEPTH	6	8	0	0.5	10	16	4	6	6
BOTTOM DEPTH	8	10	0.5	2	12	18	6	8	8
PCB-15	--	0.000002 U	0.000002 U	0.0000042	--	0.000002 U	--	0.000014	0.000012
PCB-150	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-151	--	0.000002 U	0.000027	0.000036	--	0.00018	--	0.00014	0.00011
PCB-152	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-153	--	0.0000039	0.00014	0.00013	--	0.00048	--	0.00039	0.00036
PCB-154	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000027	0.0000018 J
PCB-155	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-156	--	0.0000014 U	0.0000098	0.0000078	--	0.000039	--	0.000026	0.000022
PCB-157	--	0.0000013 U	0.0000024	0.0000026	--	0.0000017 U	--	0.0000031	0.0000028
PCB-158/160	--	0.000004 U	0.000012	0.000011	--	0.000045	--	0.000035	0.00003
PCB-159	--	0.000002 U	0.0000018 J	0.0000022	--	0.0000066	--	0.000006	0.0000062
PCB-16	--	0.000002 U	0.000002 U	0.0000015 J	--	0.000002 U	--	0.0000074	0.0000052
PCB-166	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-167	--	0.0000015 U	0.0000053	0.0000059	--	0.000016	--	0.000014	0.000012
PCB-168	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-169	--	0.0000014 U	0.0000011 U	0.0000014 U	--	0.0000019 U	--	0.0000014 U	0.0000011 U
PCB-17	--	0.000002 U	0.000002 U	0.0000022	--	0.000002 U	--	0.0000097	0.0000056
PCB-170	--	0.000002 U	0.000053	0.000052	--	0.00027	--	0.00019	0.00018
PCB-171	--	0.000002 U	0.000011	0.000014	--	0.000073	--	0.000053	0.000049
PCB-172	--	0.000002 U	0.000012	0.000015	--	0.000048	--	0.00004	0.000035
PCB-173	--	0.000002 U	0.000002 U	0.000002 U	--	0.000011	--	0.0000035	0.000005
PCB-174	--	0.000002 U	0.000046	0.000054	--	0.00025	--	0.00022	0.00019
PCB-175	--	0.000002 U	0.0000019 J	0.000002 U	--	0.000017	--	0.0000079	0.0000096
PCB-176	--	0.000002 U	0.0000035	0.000006	--	0.000034	--	0.000027	0.000022
PCB-177	--	0.000002 U	0.000034	0.000036	--	0.00014	--	0.00013	0.00012
PCB-178	--	0.000002 U	0.000016	0.000016	--	0.000047	--	0.000049	0.000042
PCB-179	--	0.000002 U	0.000017	0.000025	--	0.000093	--	0.000094	0.000078
PCB-18	--	0.000002 U	0.000002 U	0.0000047	--	0.0000036	--	0.000022	0.000013
PCB-180	--	0.0000057	0.000098	0.00012	--	0.00049	--	0.00043	0.00043
PCB-181	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-182/187	--	0.0000031 J	0.000077	0.000093	--	0.00024	--	0.00028	0.00025
PCB-183	--	0.000002 U	0.000023	0.000033	--	0.00014	--	0.00012	0.00012
PCB-184	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-185	--	0.000002 U	0.0000067	0.0000072	--	0.000032	--	0.000022	0.000022
PCB-186	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-188	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-189	--	0.0000015 U	0.0000025	0.0000028	--	0.0000082	--	0.0000059	0.0000053
PCB-19	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000021	0.000002 U
PCB-190	--	0.000002 U	0.000014	0.000012	--	0.000061	--	0.000041	0.000038
PCB-191	--	0.000002 U	0.0000021	0.0000028	--	0.000015	--	0.000009	0.0000081
PCB-192	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-193	--	0.000002 U	0.0000096	0.0000081	--	0.000028	--	0.00002	0.000022
PCB-194	--	0.0000034	0.000028	0.000037	--	0.00011	--	0.00013	0.00011
PCB-195	--	0.000002 U	0.000011	0.000011	--	0.00005	--	0.000044	0.000041
PCB-196/203	--	0.0000034 J	0.000037	0.000064	--	0.00012	--	0.00019	0.0002
PCB-197	--	0.000002 U	0.000002 U	0.0000019 J	--	0.0000042	--	0.0000059	0.0000053
PCB-198	--	0.000002 U	0.000003	0.0000045	--	0.0000069	--	0.000009	0.0000092
PCB-199	--	0.0000031	0.000049	0.000063	--	0.000088	--	0.00016	0.0002
PCB-2	--	0.0000041	0.000002 U	0.0000057	--	0.000002 U	--	0.0000091	0.0000068
PCB-20/21/33	--	0.000006 U	0.0000013 J	0.0000031 J	--	0.000006 U	--	0.000014	0.000011
PCB-200	--	0.000002 U	0.0000034	0.0000056	--	0.000013	--	0.00002	0.000019
PCB-201	--	0.000002 U	0.0000043	0.0000076	--	0.000013	--	0.000024	0.000021
PCB-202	--	0.000002 U	0.000015	0.000018	--	0.000017	--	0.000045	0.000041
PCB-204	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-205	--	0.000002 U	0.0000022	0.0000022	--	0.0000077	--	0.000006	0.0000043
PCB-206	--	0.0000059	0.00017	0.00014	--	0.000025	--	0.00014	0.00013
PCB-207	--	0.000002 U	0.000024	0.000012	--	0.0000031	--	0.000018	0.000016
PCB-208	--	0.0000023	0.000088	0.000055	--	0.0000052	--	0.00004	0.000038
PCB-209	--	0.0000078	0.00079	0.00024	--	0.000002 U	--	0.000065	0.000063
PCB-22	--	0.000002 U	0.0000016 J	0.0000028	--	0.000002 U	--	0.00001	0.0000074
PCB-23	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-24	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-25	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000024	0.0000016 J
PCB-26	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000045	0.0000033
PCB-27	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-28	--	0.000002 U	0.0000036	0.0000054	--	0.0000037	--	0.0000086	0.000014
PCB-29	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-3	--	0.0000029	0.0000015 J	0.0000051	--	0.000002 U	--	0.000014	0.000011
PCB-30	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-31	--	0.000002 U	0.0000024	0.0000066	--	0.000002 U	--	0.000022	0.00002
PCB-32	--	0.000002 U	0.000002 U	0.0000015 J	--	0.000002 U	--	0.000008	0.0000042
PCB-34	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-35	--	0.000002 U	0.0000033	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-36	--	0.000002 U	0.0000029	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-37	--	0.000002 U	0.0000025	0.0000047	--	0.000002 U	--	0.000014	0.00001
PCB-38	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-39	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-4	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000065	0.0000053
PCB-40	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000054	0.0000033
PCB-41/64/71/72	--	0.000008 U	0.0000028 J	0.0000055 J	--	0.0000054 J	--	0.000023	0.000015
PCB-42/59	--	0.000004 U	0.0000013 J	0.0000024 J	--	0.000004 U	--	0.000009	0.0000055
PCB-43/49	--	0.000004 U	0.0000049	0.0000083	--	0.0000061	--	0.000024	0.000017
PCB-44	--	0.000002 U	0.0000024	0.0000064	--	0.0000094	--	0.000027	0.000019

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-372	SB-372	SB-373	SB-373	SB-373	SB-373	SB-373	SB-373	SB-373
SAMPLE ID	SB372-20191114-7296	SB372-20191114-96120	SB373-20191114-0006	SB373-20191114-0624	SB373-20191114-120144	SB373-20191114-192216	SB373-20191114-4872	SB373-20191114-7296	SB373-20191114-7296-D
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									SB373-20191114-7296
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SB	SB
TOP DEPTH	6	8	0	0.5	10	16	4	6	6
BOTTOM DEPTH	8	10	0.5	2	12	18	6	8	8
PCB-45	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000042	0.0000032
PCB-46	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-47	--	0.000002 U	0.0000017 J	0.0000042	--	0.000002 U	--	0.000008	0.0000078
PCB-48/75	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	0.0000058	0.0000024 J
PCB-5	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-50	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-51	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-52/69	--	0.000004 U	0.0000042	0.0000095	--	0.000024	--	0.000041	0.000031
PCB-53	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000032	0.0000025
PCB-54	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-55	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-56/60	--	0.000004 U	0.0000048	0.0000063	--	0.0000061	--	0.00002	0.000014
PCB-57	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-58	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-6	--	0.000002 U	0.000002 U	0.00000096 J	--	0.000002 U	--	0.000004	0.0000033
PCB-61/70	--	0.000004 U	0.0000088	0.000017	--	0.000013	--	0.00005	0.000036
PCB-62	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-63	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000015 J	0.000002 U
PCB-65	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-66/76	--	0.000004 U	0.0000064	0.000012	--	0.0000096	--	0.000037	0.000026
PCB-67	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000022	0.000002 U
PCB-68	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-7	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000018 J	0.0000015 J
PCB-73	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-74	--	0.000002 U	0.0000029	0.0000058	--	0.000002 U	--	0.000018	0.000012
PCB-77	--	0.0000014 U	0.0000028	0.0000041	--	0.0000018 U	--	0.0000082	0.0000057
PCB-78	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-79	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-8	--	0.000002 U	0.000002 U	0.0000044	--	0.000002 U	--	0.00002	0.000013
PCB-80	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-81	--	0.0000016 U	0.00000093 U	0.00000088 U	--	0.0000018 U	--	0.0000017 J	0.0000012 J
PCB-82	--	0.000002 U	0.000002 U	0.0000035	--	0.000002 U	--	0.0000085	0.0000065
PCB-83/112	--	0.000004 U	0.000004 U	0.0000017 J	--	0.000004 U	--	0.0000036 J	0.0000024 J
PCB-84/92	--	0.000004 U	0.0000095	0.000013	--	0.000034	--	0.000051	0.000034
PCB-85/116	--	0.000004 U	0.000006	0.0000073	--	0.000004 U	--	0.000014	0.0000093
PCB-86	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-87/117/125	--	0.000006 U	0.0000076	0.000014	--	0.000031	--	0.000037	0.000029
PCB-88/91	--	0.000004 U	0.0000018 J	0.0000043	--	0.000004 U	--	0.000011	0.0000076
PCB-89	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000014 J	0.000002 U
PCB-9	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.0000015 J	0.0000012 J
PCB-93	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-94	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-95	--	0.000002 U	0.000011	0.000027	--	0.00017	--	0.00015	0.00011
PCB-96	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U
PCB-97	--	0.000002 U	0.0000043	0.0000074	--	0.000011	--	0.00002	0.000017
PCB-98/102	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	0.000004 U	0.000004 U
PCB-99	--	0.000002 U	0.000013	0.000013	--	0.000012	--	0.000026	0.000021
PENTACHLOROBIPHENYLS	--	0 UJ	0.00017 J	0.00025 J	--	0.00065 J	--	0.00079 J	0.0006 J
TEQ DIOXIN-LIKE PCBs (BIRD)	--	0.0000014 U	1.42598E-07	3.57627E-07	--	5.742E-09	--	8.66089E-07	6.00053E-07
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	0.0000014 U	2.54707E-07	4.02385E-07	--	2.31879E-07	--	8.66793E-07	6.00606E-07
TEQ DIOXIN-LIKE PCBs (FISH)	--	0.0000014 U	4.44E-10	8.08E-09	--	3.96E-10	--	1.6063E-08	0.000000011
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	0.0000014 U	3.957E-09	8.338E-09	--	5.494E-09	--	1.61E-08	1.1028E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	0.0000014 U	1.27E-09	1.51433E-07	--	2.376E-09	--	2.83694E-07	1.92913E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	0.0000014 U	8.2937E-08	1.72592E-07	--	1.2131E-07	--	3.04707E-07	2.09423E-07
TETRACHLOROBIPHENYLS	--	0 UJ	0.000043 J	0.000082 J	--	0.000074 J	--	0.00029 J	0.0002 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	0 U	0.0000358	0.0000397	--	0.0000792	--	0.0000915	0.0000749
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	0.0000593	0.0026469	0.00205206	--	0.0051885	--	0.0056262	0.0049394
TOTAL PCB CONGENERS ZEROND	--	0.0000593	0.0026827	0.00209176	--	0.0052677	--	0.0057177	0.0050143
TOTAL PCB CONGENERS-NOAA	--	0.0000293	0.0015596	0.0010654	--	0.0023243	--	0.0023946	0.002147
TOTAL PCB CONGENERS-NOAA HALFND	--	0.000243645	0.00277532	0.002171845	--	0.00538185	--	0.00577786	0.005076205
TOTAL PCB CONGENERS-NOAA X2	--	0.0000586	0.0031192	0.0021308	--	0.0046486	--	0.0047892	0.004294
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	0.0000893	0.0031232	0.0021308	--	0.0046526	--	0.0047892	0.004294
TRICHLOROBIPHENYLS	--	0 UJ	0.000018 J	0.000033 J	--	0.0000073 J	--	0.00012 J	0.000095 J
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	420	3100	410	--	1800	--	100	100
1,2,3,4,6,7,8,9-OCDF	--	0.31 U	1.7 JZ	1.1 J	--	0.31 U	--	1.3 J	1.2 J
1,2,3,4,6,7,8-HPCDD	--	3.8 J	24	3.8 J	--	18	--	2.9 J	2.8 J
1,2,3,4,6,7,8-HPCDF	--	0.18 U	1.3 J	1.3 J	--	0.96 JZ	--	1.2 J	0.96 JZ
1,2,3,4,7,8,9-HPCDF	--	0.18 U	0.18 U	0.18 U	--	0.18 U	--	0.18 U	0.18 U
1,2,3,4,7,8-HXCDD	--	0.16 U	0.41 JZ	0.14 U	--	0.14 U	--	0.14 U	0.14 U
1,2,3,4,7,8-HXCDF	--	0.13 U	0.31 J	0.21 JZ	--	0.13 U	--	0.21 JZ	0.22 JZ
1,2,3,6,7,8-HXCDD	--	0.17 U	0.48 J	0.14 U	--	0.23 J	--	0.22 JZ	0.18 JZ
1,2,3,6,7,8-HXCDF	--	0.11 U	0.25 J	0.21 J	--	0.093 U	--	0.2 JZ	0.22 JZ
1,2,3,7,8,9-HXCDD	--	0.17 U	0.45 J	0.15 U	--	0.63 J	--	0.18 JZ	0.16 U
1,2,3,7,8,9-HXCDF	--	0.21 U	0.21 U	0.21 U	--	0.21 U	--	0.21 U	0.21 U
1,2,3,7,8-PECDD	--	0.18 U	0.18 U	0.18 U	--	0.18 U	--	0.18 U	0.2 JZ
1,2,3,7,8-PECDF	--	0.17 U	0.19 U	0.29 JZ	--	0.17 U	--	0.27 J	0.27 J
2,3,4,6,7,8-HXCDF	--	0.1 U	0.22 JZ	0.19 J	--	0.091 U	--	0.23 J	0.1 U
2,3,4,7,8-PECDF	--	0.16 U	0.4 JZ	0.37 JZ	--	0.16 U	--	0.38 JZ	0.18 U
2,3,7,8-TCDD	--	0.26 U	0.14 U	0.25 JZ	--	0.15 U	--	0.14 U	0.19 U
2,3,7,8-TCDF	--	0.46 U	0.28 J	0.38 JZ	--	0.17 U	--	0.38 J	0.67 J
TEQ DIOXINS (BIRD)	--	0.0458	1.17547	1.14791	--	0.2729	--	0.89623	0.96532
TEQ DIOXINS (BIRD) HALFND	--	0.6269655	1.35637	1.26101	--	0.6420155	--	1.07113	1.17822

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-372	SB-372	SB-373	SB-373	SB-373	SB-373	SB-373	SB-373	SB-373
SAMPLE ID	SB372-20191114-7296	SB372-20191114-96120	SB373-20191114-0006	SB373-20191114-0624	SB373-20191114-120144	SB373-20191114-192216	SB373-20191114-4872	SB373-20191114-7296	SB373-20191114-7296-D
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									SB373-20191114-7296
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SB	SB	SS	SS	SB	SB	SB	SB	SB
TOP DEPTH	6	8	0	0.5	10	16	4	6	6
BOTTOM DEPTH	8	10	0.5	2	12	18	6	8	8
TEQ DIOXINS (FISH)	--	0.0458	0.85347	0.58741	--	0.2162	--	0.31553	0.31532
TEQ DIOXINS (FISH) HALFND	--	0.3925655	1.02962	0.72526	--	0.4918155	--	0.52193	0.50752
TEQ DIOXINS (HUMANS/MAMMALS)	--	0.164	1.54351	0.64303	--	0.8156	--	0.33549	0.40506
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	0.4878965	1.71776	0.76593	--	1.0497965	--	0.51389	0.55846
TOTAL HPCDD	--	6.8 J	44 J	6.9 J	--	31 J	--	2.9 J	5.3 J
TOTAL HPCDF	--	0 UJ	2.3 J	1.7 J	--	0 UJ	--	1.8 J	0 UJ
TOTAL HXCDD	--	0 UJ	3.7 J	0 UJ	--	1.7 J	--	0.92 J	0.45 J
TOTAL HXCDF	--	0 UJ	1.5 J	0.57 J	--	0 UJ	--	1.1 J	0.45 J
TOTAL PECDD	--	0 UJ	0.38 J	0.18 J	--	0 UJ	--	0.25 J	0 UJ
TOTAL PECDF	--	0 UJ	1.1 J	1.6 J	--	0 UJ	--	1 J	1.1 J
TOTAL TCDD	--	0 UJ	0 UJ	0.24 J	--	0 UJ	--	0.18 J	0 UJ
TOTAL TCDF	--	0 UJ	0.28 J	1 J	--	0 UJ	--	2.2 J	0.67 J
METALS (MG/KG)									
ALUMINUM	--	6710	13300	7040	--	11400	--	5400 J	6430
ANTIMONY	--	0.43 J	1.3 U	0.43 J	--	1.1 U	--	1.1 UJ	0.24 J
ARSENIC	--	33.5	9.2	19.7	--	8.7	--	8.1 R	15.3
BARIUM	--	170	80.4	85.3	--	47.5	--	45.3 R	103
BERYLLIUM	--	0.75	0.87	0.51 J	--	0.56	--	0.86	1.3
CADMIUM	--	0.099 J	0.14 J	0.57 U	--	0.56 U	--	0.55 U	0.11 J
CALCIUM	--	189 J	2090	403 J	--	122 J	--	294 J	259 J
CHROMIUM	--	14.3	14.9	9.3	--	19.8	--	23.7 R	36.7
COBALT	--	5.9	15.3	5.9	--	3.4	--	13.9 R	22.8
COPPER	--	54.4	17.3	38.9	--	8.6	--	11 J	25.6
CYANIDE	--	0.53 R	0.045 J	0.086 J	--	0.6 R	--	0.55 R	0.56 R
IRON	--	22200	34100	19000	--	13800	--	17700 J	17100
LEAD	--	36.8	32.4	35.1	--	18.1	--	19.8 R	45.3
MAGNESIUM	--	1750	923	1590	--	680	--	1310 J	1690
MANGANESE	--	231	594	180	--	137	--	569 R	928
MERCURY	--	0.1 UJ	0.12 UJ	0.2	--	0.12 UJ	--	0.29 J	0.11 UJ
NICKEL	--	13.3	13.3	12.2	--	6.5	--	10.8 R	19.7
POTASSIUM	--	1990	1560	1840	--	916	--	1560 J	1820
SELENIUM	--	3.6	0.53 J	1.9 J	--	0.56 J	--	0.68 J	0.71 J
SILVER	--	0.082 J	0.63 U	0.57 U	--	0.56 U	--	0.55 U	0.57 U
SODIUM	--	95.6 J	28.4 J	114 J	--	13.9 J	--	61.4 J	76.6 J
THALLIUM	--	0.24 J	0.13 J	0.3 J	--	0.15 J	--	0.11 J	0.14 J
VANADIUM	--	14.4	24	11.1	--	36.3	--	26.4 J	38
ZINC	--	62.2	52.6	39.4	--	24.6	--	36.8 R	72.9
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	91	--	--	88	91	--	87	--	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-033	SS-034	SS-035	SS-036	SS-037	SS-040	SS-202
SAMPLE ID	SS-033	SS-034	SS-035	SS-036	SS-037	SS-040	SS-202
SAMPLE DATE	20170613	20170613	20170613	20170613	20170613	20170613	20180320
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6
VOLATILES (MG/KG)							
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)							
1,1-BIPHENYL	--	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--
2,4-DINITROPHENOL	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--
2-CHLOROPHENOL	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--
2-METHYLPHENOL	--	--	--	--	--	--	--
2-NITROANILINE	--	--	--	--	--	--	--
2-NITROPHENOL	--	--	--	--	--	--	--
3&4-METHYLPHENOL	--	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--
3-NITROANILINE	--	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--
4-CHLOROANILINE	--	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--
4-NITROANILINE	--	--	--	--	--	--	--
4-NITROPHENOL	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-033	SS-034	SS-035	SS-036	SS-037	SS-040	SS-202
SAMPLE ID	SS-033	SS-034	SS-035	SS-036	SS-037	SS-040	SS-202
SAMPLE DATE	20170613	20170613	20170613	20170613	20170613	20170613	20180320
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6
ACETOPHENONE	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--
ATRAZINE	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--
BENZALDEHYDE	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--
CAPROLACTAM	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--
DIETHYL PHTHALATE	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--
HEXACHLOROBENZENE	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--
HEXACHLOROETHANE	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--
ISOPHORONE	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K							
1,4-DIOXANE	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--
PESTICIDES (MG/KG)							
4,4'-DDD	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--
ALDRIN	--	--	--	--	--	--	--
ALPHA-BHC	--	--	--	--	--	--	--
ALPHA-CHLORDANE	--	--	--	--	--	--	--
BETA-BHC	--	--	--	--	--	--	--
DELTA-BHC	--	--	--	--	--	--	--
DIELDRIN	--	--	--	--	--	--	--
ENDOSULFAN I	--	--	--	--	--	--	--
ENDOSULFAN II	--	--	--	--	--	--	--
ENDOSULFAN SULFATE	--	--	--	--	--	--	--
ENDRIN	--	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	--	--	--	--	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-033	SS-034	SS-035	SS-036	SS-037	SS-040	SS-202
SAMPLE ID	SS-033	SS-034	SS-035	SS-036	SS-037	SS-040	SS-202
SAMPLE DATE	20170613	20170613	20170613	20170613	20170613	20170613	20180320
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6
ENDRIN KETONE	--	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--
GAMMA-CHLORDANE	--	--	--	--	--	--	--
HEPTACHLOR	--	--	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--
METHOXYCHLOR	--	--	--	--	--	--	--
TOXAPHENE	--	--	--	--	--	--	--
PCBS (MG/KG)							
AROCLOR-1016	0.041 U	0.04 U	0.042 U	0.041 U	0.041 U	0.039 U	0.044 U
AROCLOR-1221	0.041 U	0.04 U	0.042 U	0.041 U	0.041 U	0.039 U	0.044 U
AROCLOR-1232	0.041 U	0.04 U	0.042 U	0.041 U	0.041 U	0.039 U	0.044 U
AROCLOR-1242	0.041 U	0.04 U	0.042 U	0.041 U	0.041 U	0.039 U	0.044 U
AROCLOR-1248	0.041 U	0.04 U	0.042 U	0.041 U	0.041 U	0.039 U	0.044 U
AROCLOR-1254	0.041 U	0.04 U	0.042 U	0.041 U	0.041 U	0.039 U	0.044 U
AROCLOR-1260	0.017 J	0.0035 J	0.0052 J	0.002 J	0.0018 J	0.0032 J	0.044 U
AROCLOR-1262	0.041 U	0.04 U	0.042 U	0.041 U	0.041 U	0.039 U	0.044 U
AROCLOR-1268	0.041 U	0.04 U	0.042 U	0.041 U	0.041 U	0.039 U	0.044 U
TOTAL AROCLOR	0.017	0.0035	0.0052	0.002	0.0018	0.0032	0 U
TOTAL AROCLOR HALFND	0.181	0.1635	0.1732	0.166	0.1658	0.1592	0.198
MOBILE LAB PESTICIDES/PCBS (MG/KG)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--
PCB CONGENERS (MG/KG)							
DICHLOROBIPHENYLS	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--
PCB-14	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--

TABLE 4

SOIL ANALYTICAL DATA - POSSIBLE TRANSFORMER STORAGE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-033	SS-034	SS-035	SS-036	SS-037	SS-040	SS-202
SAMPLE ID	SS-033	SS-034	SS-035	SS-036	SS-037	SS-040	SS-202
SAMPLE DATE	20170613	20170613	20170613	20170613	20170613	20170613	20180320
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6
PCB-15	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--
PCB-198	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--
PCB-201	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--

LOCATION	SS-033	SS-034	SS-035	SS-036	SS-037	SS-040	SS-202
SAMPLE ID	SS-033	SS-034	SS-035	SS-036	SS-037	SS-040	SS-202
SAMPLE DATE	20170613	20170613	20170613	20170613	20170613	20170613	20180320
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6
PCB-45	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--
PCB-74	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--
PCB-80	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)							
1,2,3,4,6,7,8,9-OCDD	2200	2400	1500	1800	1100	2400	--
1,2,3,4,6,7,8,9-OCDF	1.5 J	1.1 Z	1.4 J	1.1 J	0.69 J	1 J	--
1,2,3,4,6,7,8-HPCDD	21	18	14	21	15	19	--
1,2,3,4,6,7,8-HPCDF	1.3 J	1.1 J	1.1 J	1 Z	0.65 J	1.2 J	--
1,2,3,4,7,8,9-HPCDF	0.15 U	0.18 U	0.19 U	0.16 U	0.16 U	0.19 U	--
1,2,3,4,7,8-HXCDD	0.34 J	0.32 U	0.23 J	0.37 J	0.2 U	0.2 U	--
1,2,3,4,7,8-HXCDF	0.37 U	0.38 U	0.38 U	0.4 U	0.41 U	0.39 U	--
1,2,3,6,7,8-HXCDD	0.37 J	0.32 U	0.32 U	0.46 J	0.34 U	0.33 U	--
1,2,3,6,7,8-HXCDF	0.19 J	0.19 U	0.19 U	0.2 U	0.2 U	0.21 Z	--
1,2,3,7,8,9-HXCDD	0.46 Z	0.33 U	0.4 J	0.53 Z	0.33 J	0.28 Z	--
1,2,3,7,8,9-HXCDF	0.19 U	0.14 U	0.15 U	0.26 U	0.14 U	0.18 U	--
1,2,3,7,8-PECDD	0.16 U	0.19 U	0.16 U	0.18 U	0.17 U	0.17 U	--
1,2,3,7,8-PECDF	0.21 U	0.21 U	0.21 U	0.22 U	0.23 U	0.22 U	--
2,3,4,6,7,8-HXCDF	0.14 U	0.19 Z	0.12 J	0.21 U	0.13 U	0.19 J	--
2,3,4,7,8-PECDF	0.25 J	0.25 J	0.16 U	0.17 U	0.17 U	0.27 J	--
2,3,7,8-TCDD	0.18 U	0.19 U	0.18 U	0.2 U	0.2 U	0.19 U	--
2,3,7,8-TCDF	0.22 J	0.29 U	0.16 U	0.29 U	0.2 U	0.37 U	--
TEQ DIOXINS (BIRD)	0.80985	0.53811	0.23864	0.28721	0.164569	0.6091	--
TEQ DIOXINS (BIRD) HALFND	1.0261	0.94611	0.61769	0.77251	0.597569	1.0212	--

LOCATION	SS-033	SS-034	SS-035	SS-036	SS-037	SS-040	SS-202
SAMPLE ID	SS-033	SS-034	SS-035	SS-036	SS-037	SS-040	SS-202
SAMPLE DATE	20170613	20170613	20170613	20170613	20170613	20170613	20180320
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)
AREA	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer	Possible Transformer
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6
TEQ DIOXINS (FISH)	0.58745	0.41311	0.30614	0.40601	0.134869	0.4489	--
TEQ DIOXINS (FISH) HALFND	0.79845	0.73526	0.56394	0.70556	0.469619	0.72475	--
TEQ DIOXINS (HUMANS/MAMMALS)	1.11645	1.00533	0.67642	0.89633	0.519707	1.0713	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	1.32535	1.29788	0.93452	1.18393	0.815457	1.32905	--
TOTAL HPCDD	43 J	35 J	30 J	46 J	31 J	38 J	--
TOTAL HPCDF	2.1 J	1.9 J	1.1 J	0.53 J	1 J	2 J	--
TOTAL HXCDD	5.3 J	2.4 J	4 J	5.6 J	1.9 J	0.57 J	--
TOTAL HXCDF	1.3 J	0.22 J	0.69 J	0.48 J	0.47 J	1.3 J	--
TOTAL PECDD	1.3 J	0.85 J	0.71 J	0.53 J	0.7 J	0.24 J	--
TOTAL PECDF	2.7 J	2.6 J	0.89 J	1 J	0.41 J	1.4 J	--
TOTAL TCDD	0.31 J	0.15 UJ	0.27 J	0.23 J	0.081 UJ	0.82 J	--
TOTAL TCDF	2 J	2.7 J	0.49 J	0.4 J	0.26 J	1 J	--
METALS (MG/KG)							
ALUMINUM	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--
CYANIDE	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--
MISCELLANEOUS (%)							
TOTAL SOLIDS	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)							
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)							
PERCENT SOLIDS	--	--	--	--	--	--	--

APPENDIX G.4

BRITT BATH HOUSE ANALYTICAL DATA

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-337	SB-337	SB-337	SB-338	SB-338	SB-338	SB-338	SB-338	SB-338	SB-338	SB-339
SAMPLE ID	SB337-20191106-0006	SB337-20191106-0624	SB337-20191106-2448	SB338-20191106-0006	SB338-20191106-0624	SB338-20191106-4872	SB338-20191106-7296	SB338-20191106-7296-D	SB338-20191125-0624	SB339-20191106-0006
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191125	20191106
DUPLICATE								SB338-20191106-7296		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SS	SB	SS	SS	SB	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	0	0.5	4	6	6	0.5	0
BOTTOM DEPTH	0.5	2	4	0.5	2	6	8	8	2	0.5
VOLATILES (MG/KG)										
1,1,1-TRICHLOROETHANE	0.0057 U	0.0054 U	0.0045 UJ	0.0056 UJ	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 UJ
1,1,2,2-TETRACHLOROETHANE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 U
1,1,2-TRICHLOROETHANE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0057 U	0.0054 U	0.0045 UJ	0.0056 UJ	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 UJ
1,1-DICHLOROETHANE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 U	--	0.0048 U	0.0049 U	--	0.0055 U
1,1-DICHLOROETHENE	0.0057 U	0.0054 U	0.0045 U	0.0056 UJ	0.0073 U	--	0.0048 U	0.0049 U	--	0.0055 UJ
1,2,3-TRICHLOROBENZENE	0.0057 UJ	0.0054 UJ	0.0045 UJ	0.0056 UJ	0.0073 R	--	0.0048 U	0.0049 U	--	0.0055 UJ
1,2,4-TRICHLOROBENZENE	0.0057 UJ	0.0054 UJ	0.0045 UJ	0.0056 UJ	0.0073 R	--	0.0048 U	0.0049 U	--	0.0055 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 R	--	0.0048 U	0.0049 U	--	0.0055 U
1,2-DIBROMOETHANE	0.0057 U	0.0054 U	0.0045 UJ	0.0056 UJ	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 UJ
1,2-DICHLOROBENZENE	0.0057 UJ	0.0054 UJ	0.0045 UJ	0.0056 UJ	0.0073 R	--	0.0048 U	0.0049 U	--	0.0055 UJ
1,2-DICHLOROETHANE	0.0057 U	0.0054 U	0.0045 UJ	0.0056 UJ	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 UJ
1,2-DICHLOROPROPANE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 UJ
1,3-DICHLOROBENZENE	0.0057 UJ	0.0054 UJ	0.0045 UJ	0.0056 UJ	0.0073 R	--	0.0048 U	0.0049 U	--	0.0055 UJ
1,4-DICHLOROBENZENE	0.0057 UJ	0.0054 UJ	0.0045 UJ	0.0056 UJ	0.0073 R	--	0.0048 U	0.0049 U	--	0.0055 UJ
2-BUTANONE	0.011 U	0.011 U	0.0089 U	0.011 U	0.015 U	--	0.0096 U	0.0098 U	--	0.011 U
2-HEXANONE	0.011 U	0.011 U	0.0089 U	0.011 U	0.015 UJ	--	0.0096 U	0.0098 U	--	0.011 U
4-METHYL-2-PENTANONE	0.011 U	0.011 U	0.0089 U	0.011 U	0.015 UJ	--	0.0096 U	0.0098 U	--	0.011 U
ACETONE	0.011 U	0.011 U	0.0089 U	0.0085 J	0.015 U	--	0.0096 U	0.0098 U	--	0.0084 J
BENZENE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 U
BROMOCHLOROMETHANE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 U	--	0.0048 U	0.0049 U	--	0.0055 U
BROMODICHLOROMETHANE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 U	--	0.0048 U	0.0049 U	--	0.0055 UJ
BROMOFORM	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 R	--	0.0048 U	0.0049 U	--	0.0055 U
BROMOMETHANE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 U	--	0.0048 U	0.0049 U	--	0.0055 U
CARBON DISULFIDE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 U	--	0.0048 U	0.0049 U	--	0.0055 U
CARBON TETRACHLORIDE	0.0057 U	0.0054 U	0.0045 UJ	0.0056 UJ	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 UJ
CHLOROBENZENE	0.0057 UJ	0.0054 UJ	0.0045 UJ	0.0056 UJ	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 UJ
CHLORODIBROMOMETHANE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 U
CHLOROETHANE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 U	--	0.0048 U	0.0049 U	--	0.0055 U
CHLOROFORM	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 U	--	0.0048 U	0.0049 U	--	0.0055 U
CHLOROMETHANE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 U	--	0.0048 U	0.0049 U	--	0.0055 U
CIS-1,2-DICHLOROETHENE	0.0057 U	0.0054 U	0.0045 U	0.0056 UJ	0.0073 U	--	0.0048 U	0.0049 U	--	0.0055 UJ
CIS-1,3-DICHLOROPROPENE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 U
CYCLOHEXANE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 UJ
DICHLORODIFLUOROMETHANE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 U	--	0.0048 U	0.0049 U	--	0.0055 U
ETHYLBENZENE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 U
ISOPROPYLBENZENE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 U
M+P-XYLENES	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 U
METHYL ACETATE	0.0057 U	0.0054 U	0.0045 UJ	0.0056 UJ	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 UJ
METHYL CYCLOHEXANE	0.0057 U	0.0023 J	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 UJ
METHYL TERT-BUTYL ETHER	0.0057 U	0.0054 U	0.0045 UJ	0.0056 UJ	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 UJ
METHYLENE CHLORIDE	0.0057 U	0.0054 U	0.0045 UJ	0.0056 UJ	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 UJ
O-XYLENE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 U
STYRENE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 U
TETRACHLOROETHENE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 U
TOLUENE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 U
TRANS-1,2-DICHLOROETHENE	0.0057 U	0.0054 U	0.0045 U	0.0056 UJ	0.0073 U	--	0.0048 U	0.0049 U	--	0.0055 UJ
TRANS-1,3-DICHLOROPROPENE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 U
TRICHLOROETHENE	0.0057 R	0.0054 R	0.0045 U	0.0056 R	0.0073 R	--	0.0048 R	0.0049 R	--	0.0055 R
TRICHLOROFLUOROMETHANE	0.0057 U	0.0054 U	0.0045 UJ	0.0056 UJ	0.0073 UJ	--	0.0048 U	0.0049 U	--	0.0055 UJ
VINYL CHLORIDE	0.0057 U	0.0054 U	0.0045 U	0.0056 U	0.0073 U	--	0.0048 U	0.0049 U	--	0.0055 U
SEMIVOLATILES (MG/KG)										
1,1-BIPHENYL	0.21 U	0.13 J	0.079 J	0.035 J	0.14 J	--	0.2 U	0.2 U	--	0.2 U
1,2,4,5-TETRACHLOROBENZENE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
1,4-DIOXANE	0.081 U	0.075 U	0.075 U	0.079 U	0.074 U	--	0.08 U	0.081 U	--	0.078 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
2,3,4,6-TETRACHLOROPHENOL	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
2,4,5-TRICHLOROPHENOL	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
2,4,6-TRICHLOROPHENOL	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
2,4-DICHLOROPHENOL	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
2,4-DIMETHYLPHENOL	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
2,4-DINITROPHENOL	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
2,4-DINITROTOLUENE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
2,6-DINITROTOLUENE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
2-CHLORONAPHTHALENE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
2-CHLOROPHENOL	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
2-METHYLNAPHTHALENE	0.034 J	0.45	0.084 J	0.08 J	0.31	--	0.2 U	0.2 U	--	0.2 U
2-METHYLPHENOL	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
2-NITROANILINE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
2-NITROPHENOL	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
3&4-METHYLPHENOL	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
3,3'-DICHLOROBENZIDINE	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
3-NITROANILINE	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
4,6-DINITRO-2-METHYLPHENOL	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
4-BROMOPHENYL PHENYL ETHER	0.21 U	0.026 J	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
4-CHLORO-3-METHYLPHENOL	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
4-CHLOROANILINE	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
4-CHLOROPHENYL PHENYL ETHER	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
4-NITROANILINE	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
4-NITROPHENOL	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-337	SB-337	SB-337	SB-338	SB-338	SB-338	SB-338	SB-338	SB-338	SB-339
SAMPLE ID	SB337-20191106-0006	SB337-20191106-0624	SB337-20191106-2448	SB338-20191106-0006	SB338-20191106-0624	SB338-20191106-4872	SB338-20191106-7296	SB338-20191106-7296-D	SB338-20191125-0624	SB339-20191106-0006
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191125	20191106
DUPLICATE								SB338-20191106-7296		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SS	SB	SS	SS	SB	SB	SB	SS	SS
ACENAPHTHENE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
ACENAPHTHYLENE	0.042 J	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
ACETOPHENONE	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
ANTHRACENE	0.042 J	0.063 J	0.033 J	0.2 U	0.027 J	--	0.2 U	0.2 U	--	0.2 U
ATRAZINE	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
BAP EQUIVALENT-HALFND	0.38134	0.18017	0.17965	0.1368	0.15333	--	0.2 U	0.2 U	--	0.2 U
BAP EQUIVALENT-POS	0.27634	0.08517	0.08465	0.0358	0.05833	--	0.2 U	0.2 U	--	0.2 U
BENZALDEHYDE	0.4 U	0.03 J	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
BENZO(A)ANTHRACENE	0.21	0.071 J	0.071 J	0.036 J	0.054 J	--	0.2 U	0.2 U	--	0.2 U
BENZO(A)PYRENE	0.21	0.059 J	0.06 J	0.023 J	0.037 J	--	0.2 U	0.2 U	--	0.2 U
BENZO(B)FLUORANTHENE	0.31	0.15 J	0.13 J	0.069 J	0.12 J	--	0.2 U	0.2 U	--	0.2 U
BENZO(G,H,I)PERYLENE	0.14 J	0.062 J	0.054 J	0.028 J	0.045 J	--	0.2 U	0.2 U	--	0.2 U
BENZO(K)FLUORANTHENE	0.11 J	0.024 J	0.033 J	0.2 U	0.03 J	--	0.2 U	0.2 U	--	0.2 U
BIS(2-CHLOROETHOXY)METHANE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
BIS(2-CHLOROETHYL)ETHER	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.025 J	0.19 U	0.19 U	0.2 U	0.02 J	--	0.2 U	0.2 U	--	0.2 U
BUTYL BENZYL PHTHALATE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
CAPROLACTAM	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
CARBAZOLE	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
CHRYSENE	0.24	0.33	0.22	0.1 J	0.23	--	0.2 U	0.2 U	--	0.2 U
DIBENZO(A,H)ANTHRACENE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
DIBENZOFURAN	0.21 U	0.052 J	0.032 J	0.2 U	0.048 J	--	0.2 U	0.2 U	--	0.2 U
DIETHYL PHTHALATE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
DIMETHYL PHTHALATE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
DI-N-BUTYL PHTHALATE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
DI-N-OCTYL PHTHALATE	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
FLUORANTHENE	0.48	0.17 J	0.19 J	0.087 J	0.11 J	--	0.39 U	0.4 U	--	0.39 U
FLUORENE	0.21 U	0.072 J	0.035 J	0.2 U	0.028 J	--	0.2 U	0.2 U	--	0.2 U
HEXACHLOROBENZENE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
HEXACHLOROBUTADIENE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
HEXACHLOROCYCLOPENTADIENE	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
HEXACHLOROETHANE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
HIGH MOLECULAR WEIGHT PAHS	1.74	0.931	0.768	0.352	0.65	--	0 U	0 U	--	0 U
INDENO(1,2,3-CD)PYRENE	0.13 J	0.035 J	0.04 J	0.022 J	0.034 J	--	0.2 U	0.2 U	--	0.2 U
ISOPHORONE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
LOW MOLECULAR WEIGHT PAHS	0.814	0.955	0.716	0.317	0.708	--	0 U	0 U	--	0 U
NAPHTHALENE	0.02 J	0.11 J	0.018 J	0.03 J	0.073 J	--	0.2 U	0.2 U	--	0.2 U
NITROBENZENE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
N-NITROSO-DI-N-PROPYLAMINE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
N-NITROSODIPHENYLAMINE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
PENTACHLOROPHENOL	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
PHENANTHRENE	0.23	0.54	0.44	0.2	0.47	--	0.2 U	0.2 U	--	0.2 U
PHENOL	0.4 U	0.37 U	0.37 U	0.39 U	0.36 U	--	0.39 U	0.4 U	--	0.39 U
PYRENE	0.39	0.2	0.16 J	0.074 J	0.1 J	--	0.2 U	0.2 U	--	0.2 U
TOTAL PAHS	2.554	1.886	1.484	0.669	1.358	--	0 U	0 U	--	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K										
1,4-DIOXANE	0.0081 U	0.0074 U	0.0076 U	0.0077 U	0.0074 U	--	0.008 U	0.008 U	--	0.0079 U
2-METHYLNAPHTHALENE	0.033	0.39 J	0.1	0.085	0.33 J	--	0.0013 J	0.00075 J	--	0.0015 J
ACENAPHTHENE	0.0065	0.022	0.014	0.0065	0.016	--	0.0039 U	0.004 U	--	0.0039 U
ACENAPHTHYLENE	0.023	0.0073	0.0072	0.0048	0.008	--	0.0039 U	0.004 U	--	0.00091 J
ANTHRACENE	0.027	0.04	0.025	0.016	0.021	--	0.0039 U	0.004 U	--	0.00048 J
BAP EQUIVALENT-HALFND	0.22345	0.046128	0.060878	0.028875	0.04986	--	0.005454	0.004 U	--	0.005981
BAP EQUIVALENT-POS	0.22145	0.04426	0.05901	0.026906	0.04806	--	0.0029	0.004 U	--	0.004031
BENZO(A)ANTHRACENE	0.18	0.051	0.055	0.032	0.042	--	0.0039 U	0.004 U	--	0.0025 J
BENZO(A)PYRENE	0.17	0.026	0.039	0.017	0.03	--	0.0029 J	0.004 U	--	0.0029 J
BENZO(B)FLUORANTHENE	0.27	0.12	0.13	0.059	0.12	--	0.0039 U	0.004 U	--	0.0071
BENZO(G,H,I)PERYLENE	0.05 J	0.017 J	0.017 J	0.0095 J	0.016 J	--	0.0039 U	0.004 UJ	--	0.0014 J
BENZO(K)FLUORANTHENE	0.094	0.0037 U	0.0037 U	0.0039 U	0.035	--	0.0039 U	0.004 U	--	0.0027 J
CHRYSENE	0.21	0.25	0.21	0.076	0.21	--	0.00098 J	0.004 U	--	0.0044
DIBENZO(A,H)ANTHRACENE	0.004 U	0.0037 U	0.0037 U	0.0039 U	0.0036 U	--	0.0039 U	0.004 U	--	0.0039 U
FLUORANTHENE	0.38 J	0.15	0.2	0.058	0.12	--	0.0039 U	0.004 U	--	0.0064
FLUORENE	0.015	0.058	0.036	0.0086	0.033	--	0.0039 U	0.004 U	--	0.0039 U
HIGH MOLECULAR WEIGHT PAHS	1.327	0.6031	0.594	0.2528	0.553	--	0.00388	0 U	--	0.0281
INDENO(1,2,3-CD)PYRENE	0.053	0.0091	0.013	0.0073	0.013	--	0.0039 U	0.004 U	--	0.0014 J
LOW MOLECULAR WEIGHT PAHS	0.6815	0.7773	0.6932	0.2989	0.671	--	0.0028	0.0012	--	0.01139
NAPHTHALENE	0.02	0.11	0.021	0.035	0.083	--	0.0011 J	0.004 U	--	0.0039 U
PENTACHLOROPHENOL	0.0081 U	0.0075 U	0.0075 U	0.0079 U	0.0074 U	--	0.008 U	0.0081 U	--	0.0078 U
PHENANTHRENE	0.21	0.39 J	0.39 J	0.17	0.39 J	--	0.0017 J	0.0012 J	--	0.0036 J
PYRENE	0.3	0.13	0.13	0.052	0.087	--	0.0039 U	0.004 U	--	0.0057
TOTAL PAHS	0.21	0.25	0.21	0.076	0.21	--	0.00098	0.004	--	0.0044
PESTICIDES (MG/KG)										
4,4'-DDD	0.00095 J	0.0025 J	0.0022 J	0.0039 U	0.0076 J	--	0.004 U	0.0039 U	--	0.0039 U
4,4'-DDE	0.0042 U	0.0036 U	0.0037 U	0.0039 U	0.0037 U	--	0.004 U	0.0039 U	--	0.0039 U
4,4'-DDT	0.0042 U	0.0036 U	0.0037 U	0.0039 U	0.0037 U	--	0.004 U	0.0039 U	--	0.0039 U
ALDRIN	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	--	0.002 U	0.002 U	--	0.002 U
ALPHA-BHC	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	--	0.002 U	0.002 U	--	0.002 U
ALPHA-CHLORDANE	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	--	0.002 U	0.002 U	--	0.002 U
BETA-BHC	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	--	0.002 U	0.002 U	--	0.002 U
DELTA-BHC	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.00084 R	--	0.002 U	0.002 U	--	0.002 U
DIELDRIN	0.0042 U	0.0036 U	0.0037 U	0.0039 U	0.0028 J	--	0.004 U	0.0039 U	--	0.0039 U
ENDOSULFAN I	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	--	0.002 U	0.002 U	--	0.002 U
ENDOSULFAN II	0.00055 J	0.00062 J	0.00033 R	0.0039 U	0.0037 U	--	0.004 U	0.0039 U	--	0.0039 U
ENDOSULFAN SULFATE	0.0042 U	0.0036 U	0.0037 U	0.0039 U	0.0037 J	--	0.004 U	0.0039 U	--	0.0039 U

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-337	SB-337	SB-337	SB-338	SB-338	SB-338	SB-338	SB-338	SB-338	SB-339
SAMPLE ID	SB337-20191106-0006	SB337-20191106-0624	SB337-20191106-2448	SB338-20191106-0006	SB338-20191106-0624	SB338-20191106-4872	SB338-20191106-7296	SB338-20191106-7296-D	SB338-20191125-0624	SB339-20191106-0006
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191125	20191106
DUPLICATE								SB338-20191106-7296		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SS	SB	SS	SS	SB	SB	SB	SS	SS
ENDRIN	0.00024 R	0.00036 J	0.0037 U	0.0039 U	0.0016 J	--	0.004 U	0.0039 U	--	0.0039 U
ENDRIN ALDEHYDE	0.0042 U	0.0036 U	0.0037 U	0.0039 U	0.0037 U	--	0.004 U	0.0039 U	--	0.0039 U
ENDRIN KETONE	0.0042 U	0.0036 U	0.0037 U	0.0039 U	0.0037 U	--	0.004 U	0.0039 U	--	0.0039 U
GAMMA-BHC (LINDANE)	0.0015 J	0.0023 J	0.0026 J	0.002 U	0.0065 J	--	0.002 U	0.002 U	--	0.002 U
GAMMA-CHLORDANE	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	--	0.002 U	0.002 U	--	0.002 U
HEPTACHLOR	0.0021 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	--	0.002 U	0.002 U	--	0.002 U
HEPTACHLOR EPOXIDE	0.0021 U	0.0019 U	0.0019 U	0.00034 R	0.0019 U	--	0.002 U	0.002 U	--	0.002 U
METHOXYCHLOR	0.021 U	0.019 U	0.019 U	0.02 U	0.019 U	--	0.02 U	0.02 U	--	0.02 U
TOXAPHENE	0.21 U	0.19 U	0.19 U	0.2 U	0.19 U	--	0.2 U	0.2 U	--	0.2 U
PCBS (MG/KG)										
AROCLOR-1016	--	0.037 U	--	--	--	--	--	--	--	--
AROCLOR-1221	--	0.037 U	--	--	--	--	--	--	--	--
AROCLOR-1232	--	0.037 U	--	--	--	--	--	--	--	--
AROCLOR-1242	--	0.037 U	--	--	--	--	--	--	--	--
AROCLOR-1248	--	0.037 U	--	--	--	--	--	--	--	--
AROCLOR-1254	--	0.037 U	--	--	--	--	--	--	--	--
AROCLOR-1260	--	0.037 U	--	--	--	--	--	--	--	--
AROCLOR-1262	--	0.037 U	--	--	--	--	--	--	--	--
AROCLOR-1268	--	0.037 U	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	0 U	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	0.1665	--	--	--	--	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)										
AROCLOR-1016	--	0.275 U	0.298 U	--	0.275 U	0.291 U	0.301 U	--	--	--
AROCLOR-1221	--	0.549 U	0.595 U	--	0.549 U	0.581 U	0.602 U	--	--	--
AROCLOR-1232	--	0.275 U	0.298 U	--	0.275 U	0.291 U	0.301 U	--	--	--
AROCLOR-1242	--	0.275 U	0.298 U	--	0.275 U	0.291 U	0.301 U	--	--	--
AROCLOR-1248	--	0.275 U	0.298 U	--	0.275 U	0.291 U	0.301 U	--	--	--
AROCLOR-1254	--	0.275 U	0.298 U	--	0.275 U	0.291 U	0.301 U	--	--	--
AROCLOR-1260	--	0.275 U	0.298 U	--	0.739	0.291 U	0.301 U	--	--	--
AROCLOR-1262	--	0.275 U	0.298 U	--	0.275 U	0.291 U	0.301 U	--	--	--
AROCLOR-1268	--	0.275 U	0.298 U	--	0.275 U	0.291 U	0.301 U	--	--	--
TOTAL AROCLOR	--	0 U	0 U	--	0.739	0 U	0 U	--	--	--
TOTAL AROCLOR HALFND	--	1.3745	1.4895	--	1.976	1.4545	1.505	--	--	--
PCB CONGENERS (MG/KG)										
DICHLOROBIPHENYLS	0.00037 J	0.000059 J	0.000014 J	0.0028 J	0.00034 J	--	0 UJ	0 UJ	--	0.000085 J
HEPTACHLOROBIPHENYLS	0.042 J	0.0019 J	0.0008 J	0.43 J	0.14 J	--	0.00022 J	0.00032 J	--	0.0011 J
HEXACHLOROBIPHENYLS	0.038 J	0.00096 J	0.00034 J	0.36 J	0.11 J	--	0.00014 J	0.00021 J	--	0.00091 J
MONOCHLOROBIPHENYLS	0.00005 J	0.00003 J	0.000018 J	0.00023 J	0.000056 J	--	0 UJ	0 UJ	--	0.0000087 J
NONACHLOROBIPHENYLS	0.00082 J	0.00088 J	0.00042 J	0.0078 J	0.003 J	--	0.0000053 J	0.0000078 J	--	0.000087 J
OCTACHLOROBIPHENYLS	0.01 J	0.0017 J	0.00078 J	0.1 J	0.035 J	--	0.000066 J	0.000097 J	--	0.00033 J
PCB-1	0.000014	0.0000086	0.0000025	0.00009	0.000017	--	0.000002 U	0.000002 U	--	0.0000023
PCB-10	0.0000013 J	0.000002 U	0.000002 U	0.000012	0.0000021	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-100	0.000002 U	0.000002 U	0.000002 U	0.0000086	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-101/90	0.0024	0.000063	0.000025	0.03	0.0091	--	0.0000071	0.000011	--	0.000062
PCB-103	0.0000031	0.000002 U	0.000002 U	0.000022	0.0000062	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-104	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-105	0.00034	0.000027	0.00001	0.0026	0.00072	--	0.0000012 J	0.0000014 J	--	0.000016
PCB-108/107	0.000078	0.0000043	0.0000017 J	0.00044	0.00011	--	0.000004 U	0.000004 U	--	0.0000031 J
PCB-109	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-11	0.000027	0.000015	0.0000032	0.000067	0.0000053	--	0.000002 U	0.000002 U	--	0.0000053
PCB-110	0.0014	0.00011	0.000039	0.014	0.004	--	0.0000035	0.0000062	--	0.000043
PCB-111/115	0.000014	0.0000023 J	0.000004 U	0.000084	0.000023	--	0.000004 U	0.000004 U	--	0.000004 U
PCB-113	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-114	0.000021	0.0000015 J	0.0000012 U	0.00024	0.000078	--	0.00000083 U	0.00000083 U	--	0.0000013 J
PCB-118/106	0.0011	0.000074	0.000025	0.009	0.0027	--	0.000003 J	0.0000048	--	0.000041
PCB-119	0.00001	0.0000015 J	0.000002 U	0.000027	0.000016	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-12	0.00001	0.0000023	0.0000026	0.000044	0.0000036	--	0.000002 U	0.000002 U	--	0.0000033
PCB-120	0.0000087	0.000002 U	0.000002 U	0.00013	0.000042	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-121	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-122	0.000014	0.0000012 J	0.000002 U	0.000048	0.000014	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-123	0.000012	0.0000018 J	0.0000013 U	0.000049	0.000015	--	0.00000086 U	0.00000072 U	--	0.0000009 J
PCB-124	0.000083	0.0000032	0.000002 U	0.00075	0.00027	--	0.000002 U	0.000002 U	--	0.0000031
PCB-126	0.000026	0.000002	0.0000013 U	0.00015	0.000036	--	0.0000012 U	0.0000011 U	--	0.00000099 J
PCB-127	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-128/162	0.00056	0.000025	0.0000093	0.0047	0.0014	--	0.000004 U	0.0000038 J	--	0.000017
PCB-129	0.000098	0.0000054	0.0000025	0.001	0.00034	--	0.000002 U	0.000002 U	--	0.000004
PCB-13	0.000011	0.0000025	0.0000019 J	0.000083	0.000011	--	0.000002 U	0.000002 U	--	0.0000028
PCB-130	0.00033	0.0000092	0.0000035	0.0023	0.00067	--	0.000002 U	0.0000011 J	--	0.000008
PCB-131/133	0.00014	0.0000058	0.0000023 J	0.0012	0.00034	--	0.000004 U	0.000004 U	--	0.0000037 J
PCB-132/161	0.00095	0.000066	0.000018	0.015	0.0052	--	0.0000053	0.0000079	--	0.000037
PCB-134/143	0.00018	0.0000081	0.0000046	0.0025	0.00079	--	0.000004 U	0.000004 U	--	0.0000048
PCB-135	0.00088	0.000024	0.0000095	0.01	0.003	--	0.000005	0.0000056	--	0.000024
PCB-136	0.00053	0.000021	0.000015	0.013	0.0046	--	0.0000041	0.000005	--	0.00002
PCB-137	0.000044	0.0000083	0.0000029	0.00059	0.00014	--	0.000002 U	0.000002 U	--	0.0000028
PCB-138/163/164	0.009	0.00019	0.000053	0.075 J	0.022	--	0.000029	0.000046	--	0.0002
PCB-139/149	0.0064	0.00018	0.00007	0.068 J	0.021	--	0.000026	0.000035	--	0.00016
PCB-14	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-140	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-141	0.0022	0.00004	0.000015	0.023 J	0.0071	--	0.0000087	0.000014	--	0.000048
PCB-142	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-144	0.00035	0.0000065	0.0000031	0.0031	0.0013	--	0.000002	0.0000027	--	0.0000086
PCB-145	0.000002 U	0.000002 U	0.000002 U	0.000002	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U
PCB-146/165	0.0012	0.000031	0.0000079	0.0098	0.0027	--	0.0000038 J	0.0000056	--	0.000031

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-337	SB-337	SB-337	SB-338	SB-338	SB-338	SB-338	SB-338	SB-338	SB-338	SB-339
SAMPLE ID	SB337-20191106-0006	SB337-20191106-0624	SB337-20191106-2448	SB338-20191106-0006	SB338-20191106-0624	SB338-20191106-4872	SB338-20191106-7296	SB338-20191106-7296-D	SB338-20191125-0624	SB338-20191106	
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191125	20191106	
DUPLICATE								SB338-20191106-7296			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	
SUBMATRIX	SS	SS	SB	SS	SS	SB	SB	SB	SS	SS	
PCB-147	0.000026	0.0000021	0.000002 U	0.00015	0.000036	--	0.000002 U	0.000002 U	--	0.0000011 J	
PCB-148	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-15	0.00017	0.000015	0.0000037	0.001	0.00011	--	0.000002 U	0.000002 U	--	0.000034	
PCB-150	0.000003	0.000002 U	0.000002 U	0.000026	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-151	0.0026	0.000075	0.000034	0.028 J	0.0086	--	0.00001	0.000013	--	0.000061	
PCB-152	0.000002 U	0.000002 U	0.000002 U	0.0000074	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-153	0.011	0.0002	0.000064	0.088 J	0.026 J	--	0.000036	0.000055	--	0.00023	
PCB-154	0.000024	0.0000017 J	0.000002 U	0.00015	0.000032	--	0.000002 U	0.000002 U	--	0.0000017 J	
PCB-155	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-156	0.00058	0.000016	0.0000041	0.0048	0.0015	--	0.0000023	0.000003	--	0.000013	
PCB-157	0.000059	0.0000032	0.0000028	0.00041	0.00013	--	0.00000087 U	0.00000097 U	--	0.0000026	
PCB-158/160	0.00075	0.000018	0.0000062	0.0067	0.002	--	0.000003 J	0.0000048	--	0.000017	
PCB-159	0.00015	0.000012	0.0000052	0.0013	0.00044	--	0.000002 U	0.0000017 J	--	0.0000055	
PCB-16	0.000036	0.000003	0.000002 U	0.00038	0.00006	--	0.000002 U	0.000002 U	--	0.0000035	
PCB-166	0.0000032	0.000002 U	0.000002 U	0.00001	0.0000067	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-167	0.00027	0.0000093	0.0000029	0.0022	0.00059	--	0.00000087 U	0.0000015 J	--	0.0000071	
PCB-168	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-169	0.0000008 U	0.0000016 U	0.0000014 U	0.00000065 U	0.0000017 U	--	0.00000094 U	0.00000098 U	--	0.00000099 U	
PCB-17	0.000051	0.0000044	0.000002 U	0.00049	0.000084	--	0.000002 U	0.000002 U	--	0.0000056	
PCB-170	0.0048	0.000089	0.00003	0.046 J	0.014	--	0.000023	0.000032	--	0.0001	
PCB-171	0.0011	0.00003	0.000012	0.013	0.004	--	0.0000073	0.00001	--	0.000027	
PCB-172	0.00087	0.000026	0.000013	0.0083	0.0026	--	0.0000053	0.0000066	--	0.000023	
PCB-173	0.000087	0.000002 U	0.000002 U	0.00098	0.00034	--	0.000002 U	0.000002 U	--	0.0000024	
PCB-174	0.0051	0.00019	0.000083	0.055 J	0.018	--	0.000029	0.000039	--	0.00013	
PCB-175	0.00015	0.000002	0.000002 U	0.0022	0.00062	--	0.000002 U	0.0000013 J	--	0.000002 U	
PCB-176	0.00034	0.000021	0.0000091	0.0058	0.0019	--	0.000003	0.000004	--	0.0000097	
PCB-177	0.003	0.000078	0.000035	0.031 J	0.0093	--	0.000017	0.000022	--	0.000077	
PCB-178	0.0011	0.000054	0.000024	0.0099	0.0029	--	0.0000055	0.0000075	--	0.000032	
PCB-179	0.0018	0.0001	0.000045	0.019	0.0062	--	0.000011	0.000015	--	0.000045	
PCB-18	0.00011	0.0000081	0.000002 U	0.00087	0.00016	--	0.000002 U	0.000002 U	--	0.00001	
PCB-180	0.012	0.00059	0.00025	0.13 J	0.042 J	--	0.000063	0.000092	--	0.0003	
PCB-181	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-182/187	0.0062	0.00047	0.0002	0.059 J	0.018	--	0.000028	0.000042	--	0.00018	
PCB-183	0.0022	0.00015	0.000067	0.029 J	0.0091	--	0.000015	0.000022	--	0.000058	
PCB-184	0.0000015 J	0.000002 U	0.000002 U	0.000015	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-185	0.00063	0.000031	0.000015	0.0061	0.0021	--	0.0000037	0.0000058	--	0.000018	
PCB-186	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-188	0.0000038	0.000002 U	0.000002 U	0.000023	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-189	0.00017	0.0000031	0.0000011 U	0.0015	0.00046	--	0.0000012 U	0.0000015 J	--	0.0000039	
PCB-19	0.0000057	0.000002 U	0.000002 U	0.000076	0.000013	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-190	0.0012	0.000021	0.0000086	0.01	0.0033	--	0.0000064	0.0000086	--	0.000031	
PCB-191	0.00018	0.0000037	0.000002 U	0.002	0.00065	--	0.000002 U	0.000002	--	0.0000057	
PCB-192	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-193	0.00063	0.000015	0.0000077	0.0057	0.0017	--	0.0000037	0.0000049	--	0.000018	
PCB-194	0.0022	0.00039	0.00016	0.023 J	0.0079	--	0.000014	0.00002	--	0.000065	
PCB-195	0.0011	0.000095	0.000035	0.011	0.0036	--	0.0000071	0.0000096	--	0.00003	
PCB-196/203	0.0027	0.00049	0.00025	0.03	0.01	--	0.000019	0.000029	--	0.000093	
PCB-197	0.000062	0.000012	0.0000071	0.00094	0.00032	--	0.000002 U	0.0000011 J	--	0.0000021	
PCB-198	0.00013	0.000014	0.0000037	0.0011	0.00048	--	0.0000016 J	0.0000014 J	--	0.0000044	
PCB-199	0.0027	0.00044	0.0002	0.025 J	0.0087	--	0.000016	0.000024	--	0.000094	
PCB-2	0.0000098	0.0000071	0.0000077	0.000043	0.000014	--	0.000002 U	0.000002 U	--	0.0000011 J	
PCB-20/21/33	0.00014	0.000013	0.0000024 J	0.0011	0.00015	--	0.000006 U	0.000006 U	--	0.000021	
PCB-200	0.0003	0.000047	0.000023	0.0033	0.0011	--	0.0000024	0.0000037	--	0.00001	
PCB-201	0.00022	0.000068	0.00003	0.003	0.001	--	0.0000022	0.0000031	--	0.0000074	
PCB-202	0.00047	0.00016	0.000067	0.0042	0.0014	--	0.0000028	0.0000041	--	0.000024	
PCB-204	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-205	0.00014	0.000013	0.0000054	0.0013	0.00042	--	0.0000013 J	0.0000013 J	--	0.0000043	
PCB-206	0.00061	0.00064	0.0003	0.0059	0.0022	--	0.0000042	0.0000055	--	0.000062	
PCB-207	0.000065	0.000084	0.000034	0.00075	0.00027	--	0.000002 U	0.00000099 J	--	0.0000052	
PCB-208	0.00014	0.00016	0.00009	0.0011	0.00048	--	0.0000011 J	0.0000013 J	--	0.00002	
PCB-209	0.00011	0.000099	0.00014	0.00038	0.00021	--	0.000002 U	0.000002 U	--	0.000029	
PCB-22	0.0001	0.0000076	0.0000011 J	0.00054	0.000075	--	0.000002 U	0.000002 U	--	0.000012	
PCB-23	0.000002 U	0.000002 U	0.000002 U	0.0000027	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-24	0.0000062	0.000002 U	0.000002 U	0.000046	0.0000082	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-25	0.000023	0.0000029	0.000002 U	0.00015	0.00002	--	0.000002 U	0.000002 U	--	0.0000031	
PCB-26	0.000043	0.0000041	0.000002 U	0.00024	0.000031	--	0.000002 U	0.000002 U	--	0.0000042	
PCB-27	0.0000059	0.000002 U	0.000002 U	0.000054	0.0000078	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-28	0.00026	0.000016	0.0000026	0.0013	0.00017	--	0.000002 U	0.0000014 J	--	0.000031	
PCB-29	0.000002 U	0.000002 U	0.000002 U	0.000013	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-3	0.000026	0.000014	0.0000082	0.000096	0.000025	--	0.000002 U	0.000002 U	--	0.0000053	
PCB-30	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-31	0.00028	0.000025	0.000003	0.0017	0.00019	--	0.000002 U	0.0000011 J	--	0.000026	
PCB-32	0.000043	0.0000043	0.000002 U	0.00041	0.000069	--	0.000002 U	0.000002 U	--	0.0000043	
PCB-34	0.000002 U	0.000002 U	0.000002 U	0.0000072	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-35	0.0000095	0.000002 U	0.000002 U	0.000041	0.0000099	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-36	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-37	0.00019	0.000012	0.0000026	0.00098	0.00011	--	0.000002 U	0.0000014 J	--	0.00002	
PCB-38	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-39	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-4	0.000022	0.000004	0.000002 U	0.00026	0.000034	--	0.000002 U	0.000002 U	--	0.000003	
PCB-40	0.000026	0.000002 U	0.000002 U	0.00024	0.000033	--	0.000002 U	0.000002 U	--	0.0000022	
PCB-41/64/71/72	0.00024	0.000011	0.0000028 J	0.0013	0.00017	--	0.000008 U	0.000008 U	--	0.000011	
PCB-42/59	0.000078	0.0000036 J	0.000004 U	0.00059	0.000069	--	0.000004 U	0.000004 U	--	0.0000046	

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-337	SB-337	SB-337	SB-338	SB-338	SB-338	SB-338	SB-338	SB-338	SB-338	SB-339
SAMPLE ID	SB337-20191106-0006	SB337-20191106-0624	SB337-20191106-2448	SB338-20191106-0006	SB338-20191106-0624	SB338-20191106-4872	SB338-20191106-7296	SB338-20191106-7296-D	SB338-20191125-0624	SB338-20191106	
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191125	20191106	
DUPLICATE								SB338-20191106-7296			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	
SUBMATRIX	SS	SS	SB	SS	SS	SB	SB	SB	SS	SS	
PCB-43/49	0.00021	0.000013	0.000004 U	0.0012	0.00018	--	0.000004 U	0.000004 U	--	0.000011	
PCB-44	0.00015	0.000013	0.0000032	0.0013	0.00023	--	0.000002 U	0.000002 U	--	0.0000096	
PCB-45	0.000015	0.0000021	0.000002 U	0.00018	0.000021	--	0.000002 U	0.000002 U	--	0.0000012 J	
PCB-46	0.000005	0.0000013 J	0.000002 U	0.000065	0.0000099	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-47	0.000071	0.0000041	0.000002 U	0.0006	0.000069	--	0.000002 U	0.000002 U	--	0.0000041	
PCB-48/75	0.00004	0.0000018 J	0.000004 U	0.00026	0.000035	--	0.000004 U	0.000004 U	--	0.0000023 J	
PCB-5	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-50	0.000002 U	0.000002 U	0.000002 U	0.0000034	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-51	0.0000038	0.000002 U	0.000002 U	0.000046	0.0000067	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-52/69	0.00026	0.000022	0.0000047	0.0021	0.00057	--	0.000004 U	0.000004 U	--	0.000011	
PCB-53	0.000011	0.0000023	0.000002 U	0.00015	0.00002	--	0.000002 U	0.000002 U	--	0.00000099 J	
PCB-54	0.000002 U	0.000002 U	0.000002 U	0.0000029	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-55	0.00001	0.000002 U	0.000002 U	0.000061	0.000011	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-56/60	0.00026	0.000014	0.0000027 J	0.0014	0.00017	--	0.000004 U	0.0000014 J	--	0.000018	
PCB-57	0.0000024	0.000002 U	0.000002 U	0.0000098	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-58	0.0000019 J	0.000002 U	0.000002 U	0.0000067	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-6	0.000025	0.0000036	0.000002 U	0.00022	0.000023	--	0.000002 U	0.000002 U	--	0.0000056	
PCB-61/70	0.00057	0.000043	0.000012	0.0032	0.00055	--	0.000004 U	0.0000021 J	--	0.000031	
PCB-62	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-63	0.000019	0.0000015 J	0.000002 U	0.00009	0.00001	--	0.000002 U	0.000002 U	--	0.0000011 J	
PCB-65	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-66/76	0.00046	0.000029	0.0000075	0.003	0.0005	--	0.000004 U	0.0000019 J	--	0.00003	
PCB-67	0.000013	0.0000013 J	0.000002 U	0.000077	0.000011	--	0.000002 U	0.000002 U	--	0.0000009 J	
PCB-68	0.0000035	0.000002 U	0.000002 U	0.0000074	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-7	0.0000064	0.0000012 J	0.000002 U	0.000052	0.000008	--	0.000002 U	0.000002 U	--	0.0000019 J	
PCB-73	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-74	0.00019	0.000013	0.0000033	0.0011	0.00017	--	0.000002 U	0.000002 U	--	0.000012	
PCB-77	0.000093	0.0000064	0.0000021	0.00039	0.00007	--	0.00000073 U	0.00000061 U	--	0.0000056	
PCB-78	0.000002 U	0.000002 U	0.000002 U	0.0000097	0.0000046	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-79	0.000008	0.000002 U	0.000002 U	0.000033	0.000011	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-8	0.000097	0.000014	0.0000028	0.001	0.00013	--	0.000002 U	0.000002 U	--	0.000027	
PCB-80	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-81	0.000016	0.00000082 U	0.0000011 U	0.00014	0.000043	--	0.00000054 U	0.00000044 U	--	0.00000073 U	
PCB-82	0.000034	0.0000053	0.0000019 J	0.00041	0.00011	--	0.000002 U	0.000002 U	--	0.0000028	
PCB-83/112	0.000013	0.0000028 J	0.000004 U	0.00016	0.00005	--	0.000004 U	0.000004 U	--	0.000004 U	
PCB-84/92	0.0003	0.000023	0.0000096	0.004	0.0012	--	0.0000013 J	0.0000013 J	--	0.000012	
PCB-85/116	0.000098	0.0000066	0.0000029 J	0.0006	0.00015	--	0.000004 U	0.000004 U	--	0.0000072	
PCB-86	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-87/117/125	0.00028	0.000017	0.0000053 J	0.0031	0.00095	--	0.000006 U	0.0000011 J	--	0.000011	
PCB-88/91	0.000044	0.0000088	0.000003 J	0.00035	0.000093	--	0.000004 U	0.000004 U	--	0.0000031 J	
PCB-89	0.000002 U	0.000002 U	0.000002 U	0.000021	0.0000063	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-9	0.0000047	0.0000013 J	0.000002 U	0.000053	0.0000086	--	0.000002 U	0.000002 U	--	0.0000019 J	
PCB-93	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-94	0.000002 U	0.000002 U	0.000002 U	0.000017	0.0000059	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-95	0.00099	0.000056	0.000026	0.019	0.0054	--	0.0000032	0.0000038	--	0.00003	
PCB-96	0.000002 U	0.000002 U	0.000002 U	0.000016	0.000005	--	0.000002 U	0.000002 U	--	0.000002 U	
PCB-97	0.00013	0.000014	0.0000052	0.0016	0.00047	--	0.000002 U	0.000002 U	--	0.0000075	
PCB-98/102	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	--	0.000004 U	
PCB-99	0.00019	0.000015	0.0000054	0.0014	0.00043	--	0.00000093 J	0.000002 U	--	0.000013	
PENTACHLOROBIPHENYLS	0.0076 J	0.00044 J	0.00016 J	0.088 J	0.026 J	--	0.00002 J	0.00003 J	--	0.00026 J	
TEQ DIOXIN-LIKE PCBs (BIRD)	8.95452E-06	5.24912E-07	1.06719E-07	4.93425E-05	1.16535E-05	--	3.5E-10	4.7E-10	--	3.82409E-07	
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	8.95492E-06	5.66712E-07	2.2749E-07	4.93428E-05	1.16543E-05	--	1.06168E-07	9.3302E-08	--	4.19404E-07	
TEQ DIOXIN-LIKE PCBs (FISH)	1.5456E-07	1.0948E-08	3.08E-10	9.17995E-07	2.25965E-07	--	1.7E-11	3.6E-11	--	5.732E-09	
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	1.5458E-07	1.1193E-08	3.876E-09	9.18011E-07	2.26007E-07	--	3.222E-09	2.955E-09	--	5.938E-09	
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	2.65766E-06	2.02497E-07	8.04E-10	1.5435E-05	3.72469E-06	--	1.05E-10	2.22E-10	--	1.00904E-07	
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	2.66966E-06	2.2662E-07	8.7022E-08	1.54447E-05	3.75019E-06	--	7.439E-08	7.0054E-08	--	1.15863E-07	
TETRACHLOROBIPHENYLS	0.0028 J	0.00018 J	0.000038 J	0.018 J	0.003 J	--	0 UJ	0.0000054 J	--	0.00016 J	
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.001587	0.0000703	0.0000219	0.012479	0.003642	--	0.0000035	0.0000074	--	0.00005139	
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.1013224	0.0062848	0.0027011	1.0111588	0.3120368	--	0.00044453	0.00065849	--	0.00301639	
TOTAL PCB CONGENERS ZEROND	0.1029094	0.0063551	0.002723	1.0236378	0.3156788	--	0.00044803	0.00066589	--	0.00306778	
TOTAL PCB CONGENERS-NOAA	0.050557	0.0026641	0.0011621	0.47115	0.14369	--	0.0002016	0.0003064	--	0.0013856	
TOTAL PCB CONGENERS-NOAA HALFND	0.1029498	0.00641531	0.0028187	1.023666125	0.31572165	--	0.00059705	0.000794715	--	0.00313364	
TOTAL PCB CONGENERS-NOAA X2	0.101114	0.0053282	0.0023242	0.9423	0.28738	--	0.0004032	0.0006128	--	0.0027712	
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.101114	0.0053282	0.0023262	0.9423	0.28738	--	0.0004252	0.0006248	--	0.0027712	
TRICHLOROBIPHENYLS	0.0013 J	0.0001 J	0.000012 J	0.0084 J	0.0012 J	--	0 UJ	0.0000039 J	--	0.00014 J	
DIOXINS/FURANS (NG/KG)											
1,2,3,4,6,7,8,9-OCDD	1100	47	110	200	44	--	210	170	--	190	
1,2,3,4,6,7,8,9-OCDF	11	1.8 J	0.51 J	8.6 J	3.3 J	--	0.34 U	0.32 U	--	1 J	
1,2,3,4,6,7,8-HPCDD	40	4 J	2 J	10	3.8 J	--	5.6	5.1	--	4.1 J	
1,2,3,4,6,7,8-HPCDF	8.7	1.2 J	0.43 J	8.2	3.3 J	--	0.17 U	0.17 U	--	0.78 J	
1,2,3,4,7,8,9-HPCDF	0.63 J	0.16 U	0.15 U	1.1 J	0.41 J	--	0.19 U	0.21 U	--	0.15 U	
1,2,3,4,7,8-HXCDD	0.97 J	0.18 U	0.21 U	0.71 J	0.29 J	--	0.29 U	0.26 U	--	0.18 U	
1,2,3,4,7,8-HXCDF	2.9 J	0.36 J	0.21 U	4.8 J	1.3 J	--	0.21 U	0.21 U	--	0.21 U	
1,2,3,6,7,8-HXCDD	2.3 J	0.59 J	0.2 U	1.6 J	0.56 J	--	0.29 U	0.28 U	--	0.21 J	
1,2,3,6,7,8-HXCDF	1.3 J	0.24 J	0.2 U	2.3 J	0.71 J	--	0.2 U	0.2 U	--	0.21 U	
1,2,3,7,8,9-HXCDD	1.8 J	0.36 J	0.19 U	1.1 J	0.35 J	--	0.36 J	0.41 J	--	0.21 J	
1,2,3,7,8,9-HXCDF	0.34 J	0.16 U	0.19 U	0.64 J	0.28 J	--	0.16 U	0.16 U	--	0.24 U	
1,2,3,7,8-PECDD	0.83 J	0.21 J	0.22 U	0.87 J	0.25 J	--	0.19 U	0.18 U	--	0.18 U	
1,2,3,7,8-PECDF	1.3 J	0.21 J	0.15 U	2.3 J	0.58 J	--	0.15 U	0.15 U	--	0.15 U	
2,3,4,6,7,8-HXCDF	1.2 J	0.27 J	0.17 U	2 J	0.84 J	--	0.13 U	0.13 U	--	0.22 U	
2,3,4,7,8-PECDF	1.8 J	0.5 J	0.28 J	3.8 J	1.3 J	--	0.14 U	0.14 U	--	0.14 U	
2,3,7,8-TCDD	0.24 J	0.095 U	0.086 U	0.17 J	0.086 U	--	0.12 U	0.097 U	--	0.068 U	
2,3,7,8-TCDF	2	0.29 J	0.23 J	3.8	0.86 J	--	0.12 U	0.082 U	--	0.091 U	

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-337	SB-337	SB-337	SB-338	SB-338	SB-338	SB-338	SB-338	SB-338	SB-338	SB-339
SAMPLE ID	SB337-20191106-0006	SB337-20191106-0624	SB337-20191106-2448	SB338-20191106-0006	SB338-20191106-0624	SB338-20191106-4872	SB338-20191106-7296	SB338-20191106-7296-D	SB338-20191125-0624	SB339-20191106-0006
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191125	20191106
DUPLICATE								SB338-20191106-7296		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SS	SB	SS	SS	SB	SB	SB	SS	SS
TEQ DIOXINS (BIRD)	6.0699	1.17078	0.527351	10.12936	2.88173	--	0.0626	0.0631	--	0.0541
TEQ DIOXINS (BIRD) HALFND	6.0699	1.23158	0.742851	10.12936	2.92473	--	0.400617	0.364916	--	0.35035
TEQ DIOXINS (FISH)	3.4794	0.60238	0.168851	4.72486	1.48473	--	0.0302	0.0262	--	0.0352
TEQ DIOXINS (FISH) HALFND	3.4794	0.70368	0.419301	4.72486	1.52773	--	0.337717	0.308816	--	0.289975
TEQ DIOXINS (HUMANS/MAMMALS)	3.7566	0.64394	0.164453	4.19958	1.26569	--	0.155	0.143	--	0.1481
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	3.7566	0.70924	0.388953	4.19958	1.30869	--	0.405101	0.372798	--	0.35365
TOTAL HPCDD	69 J	7.3 J	4.1 J	20 J	7.1 J	--	13 J	11 J	--	8 J
TOTAL HPCDF	16 J	2.2 J	0.76 J	13 J	5.5 J	--	0 UJ	0 UJ	--	1.5 J
TOTAL HXCDD	29 J	7.2 J	1.1 J	25 J	7.4 J	--	3.4 J	2.6 J	--	2.1 J
TOTAL HXCDF	17 J	2.9 J	0.75 J	26 J	8.3 J	--	0 UJ	0 UJ	--	0.45 J
TOTAL PECDD	20 J	4.4 J	0 UJ	28 J	5.5 J	--	0.65 J	0.57 J	--	0.53 J
TOTAL PECDF	24 J	4.1 J	2.1 J	42 J	10 J	--	0 UJ	0 UJ	--	0.72 J
TOTAL TCDD	20 J	2.9 J	0.23 J	29 J	4.9 J	--	0 UJ	0 UJ	--	0.82 J
TOTAL TCDF	29 J	5.5 J	3.9 J	82 J	13 J	--	0 UJ	0 UJ	--	1 J
METALS (MG/KG)										
ALUMINUM	3730	2860	2770	3780	--	--	14700	15500	7640	5280
ANTIMONY	0.28 J	0.4 J	0.56 J	0.52 J	--	--	1.1 UJ	1.1 UJ	1 U	1.1 U
ARSENIC	8.8	17.5	25.2	25.3	--	--	9.6 J	5.9 J	48	2.9
BARIUM	75.4	87.8	53.3	114	--	--	34.5	43.9	227	21.4
BERYLLIUM	0.85	0.43 J	0.65	0.89	--	--	0.33 J	0.38 J	0.63	0.2 J
CADMIUM	0.22 J	0.078 J	0.15 J	0.3 J	--	--	0.55 U	0.57 U	0.074 J	0.55 U
CALCIUM	11300	1140	727	823	--	--	208 J	244 J	304 J	1020
CHROMIUM	49.1	8.2	14.9	15.7	--	--	11.6 J	15.6 J	23.4	5.1
COBALT	7.1	4.1	3.9	10.8	--	--	2.7	3.4	4.8	3.1
COPPER	21.8	31.9	46.6	58.1	--	--	8.5	8.5	54.1	4.2
CYANIDE	0.43 J	0.43 J	0.4 J	0.42 J	--	--	0.033 J	0.025 J	0.54 R	0.016 J
IRON	10400	12800	8910	15200	--	--	19200	16400	21500	8100
LEAD	46.4	20.4	32.2	48.1	--	--	9	13	65.2	5.6
MAGNESIUM	903	813	289 J	647	--	--	1090	1150	1490	373 J
MANGANESE	636	180	68.6	333	--	--	53.1 J+	59.7 J+	104	109
MERCURY	0.055 J	0.11	0.069 J	0.09 J	--	--	0.033 J	0.046 J	0.14	0.022 J
NICKEL	13.3	10.4	7.8	20	--	--	5.6	9	14	3.6
POTASSIUM	695	1210	946	886	--	--	1430	1530	2380	833
SELENIUM	2.9 UJ	2.6 UJ	2.8 UJ	2.8 UJ	--	--	2.7 UJ	2.8 UJ	4.1	2.7 UJ
SILVER	0.58 U	0.051 J	0.077 J	0.084 J	--	--	0.55 U	0.57 U	0.13 J	0.55 U
SODIUM	54.8 J	104 J	45.2 J	54.2 J	--	--	23.4 J	25.1 J	545 UJ	11.6 J
THALLIUM	0.58 U	0.52 U	0.55 U	0.57 U	--	--	0.55 U	0.57 U	0.64	0.55 U
VANADIUM	8.5	7.3	15.7	14.5	--	--	17.5 J	26.1 J	15.8	6.9
ZINC	51.1	29.6	43.3	60.5	--	--	20 J+	26 J+	44.6	15.3
MISCELLANEOUS (%)										
TOTAL SOLIDS	72	--	--	--	--	--	83	--	--	--
MISCELLANEOUS (MG/KG)										
TOTAL ORGANIC CARBON	3760	--	--	--	--	--	1960	--	--	--
MOBILE LAB MISCELLANEOUS (%)										
PERCENT SOLIDS	--	91	84	--	91	86	83	--	--	--

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-339	SB-339	SB-339	SB-340	SB-340	SB-340	SB-340	SB-341	SB-341	SB-341
SAMPLE ID	SB339-20191106-0624	SB339-20191106-2448	SB339-20191106-4872	SB340-20191106-0006	SB340-20191106-0624	SB340-20191106-4872	SB340-20191106-96120	SB341-20191106-0006	SB341-20191106-0624	SB341-20191106-7296
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	0.5	2	4	0	0.5	4	8	0	0.5	6
BOTTOM DEPTH	2	4	6	0.5	2	6	10	0.5	2	8
VOLATILES (MG/KG)										
1,1,1-TRICHLOROETHANE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 UJ
1,1,2,2-TETRACHLOROETHANE	0.0053 U	--	0.0046 U	0.0061 U	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 UJ	0.0053 U
1,1,2-TRICHLOROETHANE	0.0053 U	--	0.0046 U	0.0061 U	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 UJ
1,1-DICHLOROETHANE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
1,1-DICHLOROETHENE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 UJ
1,2,3-TRICHLOROBENZENE	0.0053 UJ	--	0.0046 UJ	0.0061 UJ	0.007 UJ	--	0.0045 UJ	0.0055 UJ	0.0054 UJ	0.0053 UJ
1,2,4-TRICHLOROBENZENE	0.0053 UJ	--	0.0046 UJ	0.0061 UJ	0.007 UJ	--	0.0045 UJ	0.0055 UJ	0.0054 UJ	0.0053 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.0053 U	--	0.0046 U	0.0061 U	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 UJ	0.0053 U
1,2-DIBROMOETHANE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 UJ
1,2-DICHLOROBENZENE	0.0053 UJ	--	0.0046 UJ	0.0061 UJ	0.007 UJ	--	0.0045 UJ	0.0055 UJ	0.0054 UJ	0.0053 UJ
1,2-DICHLOROETHANE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 UJ
1,2-DICHLOROPROPANE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 UJ	0.0054 U	0.0053 U
1,3-DICHLOROBENZENE	0.0053 UJ	--	0.0046 UJ	0.0061 UJ	0.007 UJ	--	0.0045 UJ	0.0055 UJ	0.0054 UJ	0.0053 UJ
1,4-DICHLOROBENZENE	0.0053 UJ	--	0.0046 UJ	0.0061 UJ	0.007 UJ	--	0.0045 UJ	0.0055 UJ	0.0054 UJ	0.0053 UJ
2-BUTANONE	0.011 U	--	0.0092 U	0.012 U	0.014 U	--	0.009 U	0.011 U	0.011 U	0.011 U
2-HEXANONE	0.011 U	--	0.0092 U	0.012 U	0.014 U	--	0.009 U	0.011 U	0.011 U	0.011 U
4-METHYL-2-PENTANONE	0.011 U	--	0.0092 U	0.012 U	0.014 U	--	0.009 U	0.011 U	0.011 U	0.011 U
ACETONE	0.011 U	--	0.0093	0.012 U	0.014 U	--	0.009 U	0.011	0.013	0.012
BENZENE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
BROMOCHLOROMETHANE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
BROMODICHLOROMETHANE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 UJ	0.0054 U	0.0053 U
BROMOFORM	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
BROMOMETHANE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
CARBON DISULFIDE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
CARBON TETRACHLORIDE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 UJ
CHLOROBENZENE	0.0053 UJ	--	0.0046 UJ	0.0061 UJ	0.007 UJ	--	0.0045 UJ	0.0055 UJ	0.0054 UJ	0.0053 UJ
CHLORODIBROMOMETHANE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
CHLOROETHANE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
CHLOROFORM	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0096	0.0053 U
CHLOROMETHANE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
CIS-1,2-DICHLOROETHENE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 UJ
CIS-1,3-DICHLOROPROPENE	0.0053 U	--	0.0046 U	0.0061 U	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
CYCLOHEXANE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 UJ	0.0054 U	0.0053 U
DICHLORODIFLUOROMETHANE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
ETHYLBENZENE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
ISOPROPYLBENZENE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
M+P-XYLENES	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
METHYL ACETATE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 UJ
METHYL CYCLOHEXANE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 UJ	0.0054 U	0.0053 U
METHYL TERT-BUTYL ETHER	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 UJ
METHYLENE CHLORIDE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 UJ
O-XYLENE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
STYRENE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
TETRACHLOROETHENE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
TOLUENE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
TRANS-1,2-DICHLOROETHENE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 UJ
TRANS-1,3-DICHLOROPROPENE	0.0053 U	--	0.0046 U	0.0061 U	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
TRICHLOROETHENE	0.0053 R	--	0.0046 R	0.0061 R	0.007 R	--	0.0045 R	0.0055 R	0.0054 R	0.0053 R
TRICHLOROFLUOROMETHANE	0.0053 U	--	0.0046 U	0.0061 UJ	0.007 UJ	--	0.0045 U	0.0055 U	0.0054 U	0.0053 UJ
VINYL CHLORIDE	0.0053 U	--	0.0046 U	0.0061 U	0.007 U	--	0.0045 U	0.0055 U	0.0054 U	0.0053 U
SEMIVOLATILES (MG/KG)										
1,1-BIPHENYL	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
1,2,4,5-TETRACHLOROBENZENE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
1,4-DIOXANE	0.072 U	--	0.074 U	0.083 U	0.075 U	--	0.074 U	0.081 U	0.078 U	0.082 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
2,3,4,6-TETRACHLOROPHENOL	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
2,4,5-TRICHLOROPHENOL	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
2,4,6-TRICHLOROPHENOL	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
2,4-DICHLOROPHENOL	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
2,4-DIMETHYLPHENOL	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
2,4-DINITROPHENOL	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
2,4-DINITROTOLUENE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
2,6-DINITROTOLUENE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
2-CHLORONAPHTHALENE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
2-CHLOROPHENOL	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
2-METHYLNAPHTHALENE	0.18 U	--	0.19 U	0.21 U	0.027 J	--	0.19 U	0.21 U	0.2 U	0.018 J
2-METHYLPHENOL	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
2-NITROANILINE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
2-NITROPHENOL	0.18 U	--	0.19 U	0.21 U	0.19 R	--	0.19 U	0.21 U	0.2 U	0.21 U
3&4-METHYLPHENOL	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
3,3'-DICHLOROBENZIDINE	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
3-NITROANILINE	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
4,6-DINITRO-2-METHYLPHENOL	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
4-BROMOPHENYL PHENYL ETHER	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
4-CHLORO-3-METHYLPHENOL	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
4-CHLOROANILINE	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
4-CHLOROPHENYL PHENYL ETHER	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
4-NITROANILINE	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
4-NITROPHENOL	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-339	SB-339	SB-339	SB-340	SB-340	SB-340	SB-340	SB-341	SB-341	SB-341
SAMPLE ID	SB339-20191106-0624	SB339-20191106-2448	SB339-20191106-4872	SB340-20191106-0006	SB340-20191106-0624	SB340-20191106-4872	SB340-20191106-96120	SB341-20191106-0006	SB341-20191106-0624	SB341-20191106-7296
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS	SB
ACENAPHTHENE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
ACENAPHTHYLENE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
ACETOPHENONE	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
ANTHRACENE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
ATRAZINE	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
BAP EQUIVALENT-HALFND	0.18 U	--	0.19 U	0.208288	0.136409	--	0.19 U	0.150455	0.216626	0.227581
BAP EQUIVALENT-POS	0.18 U	--	0.19 U	0.103288	0.040459	--	0.19 U	0.0233	0.005626	0.006031
BENZALDEHYDE	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.03 J	0.024 J
BENZO(A)ANTHRACENE	0.18 U	--	0.19 U	0.067 J	0.027 J	--	0.19 U	0.21 U	0.02 J	0.021 J
BENZO(A)PYRENE	0.18 U	--	0.19 U	0.08 J	0.03 J	--	0.19 U	0.02 J	0.2 U	0.21 U
BENZO(B)FLUORANTHENE	0.18 U	--	0.19 U	0.11 J	0.053 J	--	0.19 U	0.033 J	0.036 J	0.039 J
BENZO(G,H,I)PERYLENE	0.18 U	--	0.19 U	0.062 J	0.029 J	--	0.19 U	0.21 U	0.2 U	0.21 U
BENZO(K)FLUORANTHENE	0.18 U	--	0.19 U	0.04 J	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
BIS(2-CHLOROETHOXY)METHANE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
BIS(2-CHLOROETHYL)ETHER	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
BUTYL BENZYL PHTHALATE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
CAPROLACTAM	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
CARBAZOLE	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
CHRYSENE	0.18 U	--	0.19 U	0.088 J	0.059 J	--	0.19 U	0.21 U	0.026 J	0.031 J
DIBENZO(A,H)ANTHRACENE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
DIBENZOFURAN	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
DIETHYL PHTHALATE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
DIMETHYL PHTHALATE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
DI-N-BUTYL PHTHALATE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
DI-N-OCTYL PHTHALATE	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
FLUORANTHENE	0.36 U	--	0.37 U	0.16 J	0.055 J	--	0.36 U	0.04 J	0.034 J	0.04 J
FLUORENE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
HEXACHLOROBENZENE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
HEXACHLOROBUTADIENE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
HEXACHLOROCYCLOPENTADIENE	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
HEXACHLOROETHANE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0 U	0.628	0.271	--	0 U	0.086	0.113	0.129
INDENO(1,2,3-CD)PYRENE	0.18 U	--	0.19 U	0.051 J	0.024 J	--	0.19 U	0.21 U	0.2 U	0.21 U
ISOPHORONE	0.18 U	--	0.19 U	0.21 U	0.19 R	--	0.19 U	0.21 U	0.2 U	0.21 U
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	0.236	0.166	--	0 U	0.061	0.072	0.1
NAPHTHALENE	0.18 U	--	0.19 U	0.21 U	0.023 J	--	0.19 U	0.21 U	0.2 U	0.014 J
NITROBENZENE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
N-NITROSO-DI-N-PROPYLAMINE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
N-NITROSODIPHENYLAMINE	0.18 U	--	0.19 U	0.21 U	0.19 U	--	0.19 U	0.21 U	0.2 U	0.21 U
PENTACHLOROPHENOL	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.4 U
PHENANTHRENE	0.18 U	--	0.19 U	0.076 J	0.088 J	--	0.19 U	0.021 J	0.038 J	0.046 J
PHENOL	0.36 U	--	0.37 U	0.41 U	0.37 U	--	0.36 U	0.4 U	0.39 U	0.032 J
PYRENE	0.18 U	--	0.19 U	0.13 J	0.049 J	--	0.19 U	0.033 J	0.031 J	0.038 J
TOTAL PAHS	0 U	--	0 U	0.864	0.437	--	0 U	0.147	0.185	0.229
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K										
1,4-DIOXANE	0.0073 U	--	0.0075 U	0.0083 U	0.0074 U	--	0.0076 U	0.0082 U	0.0078 U	0.0081 U
2-METHYLNAPHTHALENE	0.0036 U	--	0.0037 U	0.014	0.031	--	0.0036 U	0.0033 J	0.016	0.023
ACENAPHTHENE	0.0036 U	--	0.0037 U	0.0027 J	0.0021 J	--	0.0036 U	0.00095 J	0.0012 J	0.0023 J
ACENAPHTHYLENE	0.0036 U	--	0.0037 U	0.012	0.0057	--	0.0036 U	0.0026 J	0.0022 J	0.0026 J
ANTHRACENE	0.0036 U	--	0.0037 U	0.011	0.0077	--	0.0036 U	0.0039 J	0.0048	0.0077
BAP EQUIVALENT-HALFND	0.003246	--	0.004184	0.077646	0.031474	--	0.0036 U	0.024119	0.025199	0.023833
BAP EQUIVALENT-POS	0.001248	--	0.000281	0.075596	0.029624	--	0.0036 U	0.022119	0.023249	0.021833
BENZO(A)ANTHRACENE	0.00097 J	--	0.0012 J	0.056	0.021	--	0.0036 U	0.014	0.016	0.018
BENZO(A)PYRENE	0.00094 J	--	0.0037 U	0.058	0.022	--	0.0036 U	0.017	0.017	0.015
BENZO(B)FLUORANTHENE	0.0021 J	--	0.0016 J	0.095	0.045	--	0.0036 U	0.03	0.033	0.037
BENZO(G,H,I)PERYLENE	0.0036 UJ	--	0.0037 UJ	0.02 J	0.0094 J	--	0.0036 UJ	0.0052 J	0.013	0.013
BENZO(K)FLUORANTHENE	0.0036 U	--	0.0037 U	0.033	0.014	--	0.0036 U	0.012	0.012	0.01
CHRYSENE	0.0014 J	--	0.0012 J	0.066	0.044	--	0.0036 U	0.019	0.029	0.033
DIBENZO(A,H)ANTHRACENE	0.0036 U	--	0.0037 U	0.0041 U	0.0037 U	--	0.0036 U	0.004 U	0.0039 U	0.004 U
FLUORANTHENE	0.0024 J	--	0.0015 J	0.15	0.044	--	0.0036 U	0.03	0.033	0.037
FLUORENE	0.0036 U	--	0.0037 U	0.0073	0.0035 J	--	0.0036 U	0.0013 J	0.0065	0.005
HIGH MOLECULAR WEIGHT PAHS	0.00831	--	0.0062	0.469	0.1998	--	0.0011	0.129	0.158	0.166
INDENO(1,2,3-CD)PYRENE	0.0036 U	--	0.0037 U	0.021	0.0084	--	0.0036 U	0.0058	0.012	0.012
LOW MOLECULAR WEIGHT PAHS	0.0041	--	0.0032	0.246	0.164	--	0.00091	0.05575	0.0947	0.1096
NAPHTHALENE	0.0036 U	--	0.0037 U	0.008	0.023	--	0.0036 U	0.004 U	0.014	0.016
PENTACHLOROPHENOL	0.0072 U	--	0.0074 U	0.0083 U	0.0075 U	--	0.0074 U	0.0081 U	0.005 J	0.0082 U
PHENANTHRENE	0.0017 J	--	0.0017 J	0.055	0.078	--	0.00091 J	0.017	0.033	0.039
PYRENE	0.0029 J	--	0.0022 J	0.12	0.036	--	0.0011 J	0.026	0.026	0.028
TOTAL PAHS	0.0014	--	0.0012	0.066	0.044	--	0.0036	0.019	0.029	0.033
PESTICIDES (MG/KG)										
4,4'-DDD	0.0036 U	--	0.0037 U	0.0038 U	0.0038 U	--	0.0037 U	0.0041 UJ	0.0039 U	0.0041 UJ
4,4'-DDE	0.0036 U	--	0.0037 U	0.0038 U	0.0038 U	--	0.0037 U	0.0041 UJ	0.0039 U	0.0041 UJ
4,4'-DDT	0.0036 U	--	0.0037 U	0.0038 U	0.0038 U	--	0.0037 U	0.0041 UJ	0.0039 U	0.0041 UJ
ALDRIN	0.0019 U	--	0.0019 U	0.002 U	0.002 U	--	0.0019 U	0.0021 UJ	0.002 U	0.0021 UJ
ALPHA-BHC	0.0019 U	--	0.0019 U	0.002 U	0.002 U	--	0.0019 U	0.0021 UJ	0.002 U	0.0021 UJ
ALPHA-CHLORDANE	0.0019 U	--	0.0019 U	0.002 U	0.002 U	--	0.0019 U	0.0021 UJ	0.002 U	0.0021 UJ
BETA-BHC	0.0019 U	--	0.0019 U	0.002 U	0.002 U	--	0.0019 U	0.0021 UJ	0.002 U	0.0021 UJ
DELTA-BHC	0.0019 U	--	0.0019 U	0.002 U	0.002 U	--	0.0019 U	0.0021 UJ	0.002 U	0.0021 UJ
DIELDRIN	0.0036 U	--	0.0037 U	0.0038 U	0.0038 U	--	0.0037 U	0.0041 UJ	0.0039 U	0.0041 UJ
ENDOSULFAN I	0.0019 U	--	0.0019 U	0.002 U	0.002 U	--	0.0019 U	0.0021 UJ	0.002 U	0.0021 UJ
ENDOSULFAN II	0.0036 U	--	0.0037 U	0.0038 U	0.0038 U	--	0.0037 U	0.0041 UJ	0.0039 U	0.0041 UJ
ENDOSULFAN SULFATE	0.0036 U	--	0.0037 U	0.0038 U	0.0038 U	--	0.0037 U	0.0041 UJ	0.0039 U	0.0041 UJ

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-339	SB-339	SB-339	SB-340	SB-340	SB-340	SB-340	SB-341	SB-341	SB-341
SAMPLE ID	SB339-20191106-0624	SB339-20191106-2448	SB339-20191106-4872	SB340-20191106-0006	SB340-20191106-0624	SB340-20191106-4872	SB340-20191106-96120	SB341-20191106-0006	SB341-20191106-0624	SB341-20191106-7296
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS	SB
ENDRIN	0.0036 U	--	0.0037 U	0.0038 U	0.0038 U	--	0.0037 U	0.0041 UJ	0.0039 U	0.0041 UJ
ENDRIN ALDEHYDE	0.0036 U	--	0.0037 U	0.0038 U	0.0038 U	--	0.0037 U	0.0041 UJ	0.0039 U	0.0041 UJ
ENDRIN KETONE	0.0036 U	--	0.0037 U	0.0038 U	0.0038 U	--	0.0037 U	0.0041 UJ	0.0039 U	0.0041 UJ
GAMMA-BHC (LINDANE)	0.0019 U	--	0.0019 U	0.002 U	0.00077 J	--	0.0019 U	0.0021 UJ	0.002 U	0.0021 UJ
GAMMA-CHLORDANE	0.0019 U	--	0.0019 U	0.002 U	0.002 U	--	0.0019 U	0.0021 UJ	0.002 U	0.0021 UJ
HEPTACHLOR	0.0019 U	--	0.0019 U	0.002 U	0.002 U	--	0.0019 U	0.0021 UJ	0.002 U	0.0021 UJ
HEPTACHLOR EPOXIDE	0.0019 U	--	0.0019 U	0.002 U	0.002 U	--	0.0019 U	0.0021 UJ	0.002 U	0.0021 UJ
METHOXYCHLOR	0.019 U	--	0.019 U	0.02 U	0.02 U	--	0.019 U	0.021 UJ	0.02 U	0.021 UJ
TOXAPHENE	0.19 U	--	0.19 U	0.2 U	0.2 U	--	0.19 U	0.21 UJ	0.2 U	0.21 UJ
PCBS (MG/KG)										
AROCLOR-1016	--	--	0.037 U	--	--	--	--	--	--	0.041 U
AROCLOR-1221	--	--	0.037 U	--	--	--	--	--	--	0.041 U
AROCLOR-1232	--	--	0.037 U	--	--	--	--	--	--	0.041 U
AROCLOR-1242	--	--	0.037 U	--	--	--	--	--	--	0.041 U
AROCLOR-1248	--	--	0.037 U	--	--	--	--	--	--	0.041 U
AROCLOR-1254	--	--	0.037 U	--	--	--	--	--	--	0.041 U
AROCLOR-1260	--	--	0.037 U	--	--	--	--	--	--	0.041 U
AROCLOR-1262	--	--	0.037 U	--	--	--	--	--	--	0.041 U
AROCLOR-1268	--	--	0.037 U	--	--	--	--	--	--	0.041 U
TOTAL AROCLOR	--	--	0 U	--	--	--	--	--	--	0 U
TOTAL AROCLOR HALFND	--	--	0.1665	--	--	--	--	--	--	0.1845
MOBILE LAB PESTICIDES/PCBS (MG/KG)										
AROCLOR-1016	0.281 U	0.275 U	--	0.313 U	--	0.275 U	--	--	--	--
AROCLOR-1221	0.562 U	0.549 U	--	0.625 U	--	0.549 U	--	--	--	--
AROCLOR-1232	0.281 U	0.275 U	--	0.313 U	--	0.275 U	--	--	--	--
AROCLOR-1242	0.281 U	0.275 U	--	0.313 U	--	0.275 U	--	--	--	--
AROCLOR-1248	0.281 U	0.275 U	--	0.313 U	--	0.275 U	--	--	--	--
AROCLOR-1254	0.281 U	0.275 U	--	0.313 U	--	0.275 U	--	--	--	--
AROCLOR-1260	0.281 U	0.275 U	--	0.313 U	--	0.275 U	--	--	--	--
AROCLOR-1262	0.281 U	0.275 U	--	0.313 U	--	0.275 U	--	--	--	--
AROCLOR-1268	0.281 U	0.275 U	--	0.313 U	--	0.275 U	--	--	--	--
TOTAL AROCLOR	0 U	0 U	--	0 U	--	0 U	--	--	--	--
TOTAL AROCLOR HALFND	1.405	1.3745	--	1.5645	--	1.3745	--	--	--	--
PCB CONGENERS (MG/KG)										
DICHLOROBIPHENYLS	0 UJ	--	0 UJ	0.00012 J	0.000026 J	--	0 UJ	0.00025 J	0.0029 J	0.0012 J
HEPTACHLOROBIPHENYLS	0.00012 J	--	0.00021 J	0.0055 J	0.00097 J	--	0 UJ	0.0061 J	0.0061 J	0.0019 J
HEXACHLOROBIPHENYLS	0.00012 J	--	0.00021 J	0.0054 J	0.00073 J	--	0 UJ	0.0046 J	0.0077 J	0.0018 J
MONOCHLOROBIPHENYLS	0 UJ	--	0 UJ	0.00001 J	0.0000046 J	--	0 UJ	0.000012 J	0.000071 J	0.000055 J
NONACHLOROBIPHENYLS	0.00002 J	--	0.000011 J	0.00016 J	0.00011 J	--	0 UJ	0.00072 J	0.0013 J	0.0002 J
OCTACHLOROBIPHENYLS	0.00004 J	--	0.000058 J	0.0012 J	0.00034 J	--	0 UJ	0.0022 J	0.0026 J	0.00059 J
PCB-1	0.000002 U	--	0.000002 U	0.0000025	0.000001 J	--	0.000002 U	0.0000037	0.000029	0.000034
PCB-10	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.00000096 J	0.00002	0.000014
PCB-100	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000015	0.0000023
PCB-101/90	0.0000096	--	0.000013	0.00039	0.000049	--	0.000004 U	0.00024	0.0032	0.00017
PCB-103	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000022	0.0000045
PCB-104	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-105	0.0000021	--	0.0000019 J	0.00012	0.000018	--	0.00000048 U	0.000087	0.0027	0.00005
PCB-108/107	0.000004 U	--	0.000004 U	0.000027	0.0000038 J	--	0.000004 U	0.000014	0.00032	0.0000069
PCB-109	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000092	0.000002 U
PCB-11	0.000002 U	--	0.000002 U	0.0000096	0.0000028	--	0.000002 U	0.000058	0.000022	0.0000068
PCB-110	0.0000041	--	0.0000055	0.00028	0.00005	--	0.000002 U	0.0002	0.0036	0.00014
PCB-111/115	0.000004 U	--	0.000004 U	0.0000075	0.0000011 J	--	0.000004 U	0.0000048	0.00013	0.0000027 J
PCB-113	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-114	0.00000094 U	--	0.00000083 U	0.0000075	0.0000015 J	--	0.00000083 U	0.0000051	0.00017	0.0000037
PCB-118/106	0.000006	--	0.0000064	0.0003	0.000044	--	0.00000044 U	0.0002	0.0035	0.0001
PCB-119	0.000002 U	--	0.000002 U	0.000005	0.00000091 J	--	0.000002 U	0.0000033	0.000087	0.0000027
PCB-12	0.000002 U	--	0.000002 U	0.0000046	0.0000014 J	--	0.000002 U	0.000007	0.000083	0.000023
PCB-120	0.000002 U	--	0.000002 U	0.0000029	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-121	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-122	0.000002 U	--	0.000002 U	0.0000051	0.00000078 J	--	0.000002 U	0.0000037	0.00011	0.0000018 J
PCB-123	0.00000099 U	--	0.00000055 U	0.0000075	0.0000011 J	--	0.0000005 U	0.0000062	0.00018	0.0000031
PCB-124	0.000002 U	--	0.000002 U	0.000021	0.0000023	--	0.000002 U	0.000012	0.00016	0.0000066
PCB-126	0.0000015 U	--	0.00000067 U	0.0000071	0.000001 J	--	0.00000067 U	0.0000031	0.000027	0.0000015 J
PCB-127	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-128/162	0.0000031 J	--	0.0000032 J	0.00011	0.000016	--	0.000004 U	0.000084	0.00027	0.000035
PCB-129	0.000002 U	--	0.000002 U	0.000018	0.0000031	--	0.000002 U	0.000016	0.000095	0.0000094
PCB-13	0.000002 U	--	0.000002 U	0.0000034	0.000001 J	--	0.000002 U	0.0000065	0.00006	0.000018
PCB-130	0.000002 U	--	0.0000017 J	0.000051	0.0000073	--	0.000002 U	0.000035	0.0001	0.000016
PCB-131/133	0.000004 U	--	0.0000011 J	0.000025	0.0000033 J	--	0.000004 U	0.00002	0.000047	0.0000078
PCB-132/161	0.000003 J	--	0.0000061	0.00017	0.000024	--	0.000004 U	0.00012	0.00047	0.000087
PCB-134/143	0.000004 U	--	0.0000016 J	0.000026	0.0000045	--	0.000004 U	0.000024	0.000086	0.000015
PCB-135	0.0000026	--	0.000006	0.00013	0.000018	--	0.000002 U	0.0001	0.00021	0.000056
PCB-136	0.000002 U	--	0.0000044	0.000057	0.000012	--	0.000002 U	0.000081	0.0002	0.000064
PCB-137	0.000002 U	--	0.000002 U	0.000017	0.0000033	--	0.000002 U	0.000011	0.00009	0.0000057
PCB-138/163/164	0.000033	--	0.000047	0.0013	0.00018	--	0.000006 U	0.0012	0.0018	0.00037
PCB-139/149	0.000016	--	0.000037	0.00091	0.00012	--	0.000004 U	0.00074	0.0013	0.00035
PCB-14	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-140	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000009	0.000002 U
PCB-141	0.0000067	--	0.000012	0.00029	0.000037	--	0.000002 U	0.00023	0.00035	0.000098
PCB-142	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-144	0.000002 U	--	0.0000017 J	0.000041	0.0000065	--	0.000002 U	0.000049	0.000069	0.000023
PCB-145	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000011 J	0.000002 U
PCB-146/165	0.0000057	--	0.000007	0.0002	0.000026	--	0.000004 U	0.00016	0.00021	0.000051

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-339	SB-339	SB-339	SB-340	SB-340	SB-340	SB-340	SB-341	SB-341	SB-341
SAMPLE ID	SB339-20191106-0624	SB339-20191106-2448	SB339-20191106-4872	SB340-20191106-0006	SB340-20191106-0624	SB340-20191106-4872	SB340-20191106-96120	SB341-20191106-0006	SB341-20191106-0624	SB341-20191106-7296
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS	SB
PCB-147	0.000002 U	--	0.000002 U	0.0000087	0.00000098 J	--	0.000002 U	0.000004	0.000024	0.0000019 J
PCB-148	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-15	0.000002 U	--	0.000002 U	0.000081	0.000016	--	0.000002 U	0.00012	0.0017	0.00046
PCB-150	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000015 J	0.000002 U
PCB-151	0.0000057	--	0.000013	0.0003	0.000036	--	0.000002 U	0.00032	0.00041	0.00013
PCB-152	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000019 J	0.000002 U
PCB-153	0.00004	--	0.000057	0.0015	0.00019	--	0.000002 U	0.0012	0.0014	0.00037
PCB-154	0.000002 U	--	0.000002 U	0.0000054	0.0000009 J	--	0.000002 U	0.0000027	0.0000084	0.0000016 J
PCB-155	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-156	0.0000023	--	0.0000028	0.00008	0.000013	--	0.00000042 U	0.00007	0.00017	0.000027
PCB-157	0.00000085 U	--	0.00000057 U	0.000014	0.0000019 J	--	0.00000048 U	0.0000083	0.000041	0.0000046
PCB-158/160	0.0000027 J	--	0.0000043	0.00012	0.000017	--	0.000004 U	0.0001	0.00019	0.000037
PCB-159	0.000001 J	--	0.000002 U	0.000023	0.0000035	--	0.000002 U	0.000022	0.000024	0.0000055
PCB-16	0.000002 U	--	0.000002 U	0.0000053	0.0000017 J	--	0.000002 U	0.000018	0.00084	0.00028
PCB-166	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000068	0.000002 U
PCB-167	0.0000018 J	--	0.0000017 J	0.000045	0.0000067	--	0.00000045 U	0.000033	0.00007	0.000012
PCB-168	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-169	0.00000098 U	--	0.0000006 U	0.0000011 U	0.00000077 U	--	0.00000048 U	0.00000091 U	0.0000011 U	0.00000099 U
PCB-17	0.000002 U	--	0.000002 U	0.0000088	0.0000023	--	0.000002 U	0.00002	0.00096	0.00028
PCB-170	0.000014	--	0.000024	0.00058	0.000096	--	0.000002 U	0.00059	0.00056	0.0002
PCB-171	0.0000029	--	0.0000065	0.00014	0.000026	--	0.000002 U	0.00015	0.00017	0.000055
PCB-172	0.000003	--	0.0000046	0.00012	0.000021	--	0.000002 U	0.00013	0.00011	0.000037
PCB-173	0.000002 U	--	0.000002 U	0.000012	0.0000024	--	0.000002 U	0.000011	0.000013	0.0000046
PCB-174	0.000011	--	0.000024	0.00062	0.00011	--	0.000002 U	0.00068	0.00069	0.00022
PCB-175	0.000002 U	--	0.000002 U	0.000016	0.0000044	--	0.000002 U	0.000022	0.000021	0.00001
PCB-176	0.000002 U	--	0.0000025	0.000039	0.0000093	--	0.000002 U	0.000052	0.000077	0.000028
PCB-177	0.0000074	--	0.000014	0.00039	0.000065	--	0.000002 U	0.0004	0.00044	0.00013
PCB-178	0.0000042	--	0.0000058	0.00017	0.000027	--	0.000002 U	0.00018	0.00016	0.000046
PCB-179	0.0000042	--	0.0000095	0.00026	0.000045	--	0.000002 U	0.00028	0.00033	0.000097
PCB-18	0.000002 U	--	0.000002 U	0.000014	0.0000034	--	0.000002 U	0.00004	0.0024	0.00066
PCB-180	0.000034	--	0.000062	0.0015	0.00029	--	0.000002 U	0.0018	0.0018	0.00054
PCB-181	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-182/187	0.00002	--	0.000031	0.00097	0.00016	--	0.000004 U	0.0011	0.001	0.00028
PCB-183	0.0000058	--	0.000013	0.00028	0.000057	--	0.000002 U	0.00031	0.00034	0.00013
PCB-184	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-185	0.0000023	--	0.0000039	0.000086	0.000013	--	0.000002 U	0.0001	0.000087	0.000029
PCB-186	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-188	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-189	0.00000099 J	--	0.0000011 J	0.000022	0.0000039	--	0.00000049 U	0.000024	0.000021	0.0000075
PCB-19	0.000002 U	--	0.000002 U	0.0000013 J	0.000002 U	--	0.000002 U	0.0000038	0.00024	0.00013
PCB-190	0.0000032	--	0.0000061	0.00015	0.000024	--	0.000002 U	0.00018	0.00013	0.000043
PCB-191	0.000002 U	--	0.0000012 J	0.000023	0.0000043	--	0.000002 U	0.000023	0.000028	0.0000096
PCB-192	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-193	0.0000028	--	0.0000036	0.000086	0.000015	--	0.000002 U	0.000093	0.000084	0.000028
PCB-194	0.000007	--	0.000012	0.00029	0.000073	--	0.000002 U	0.00042	0.00047	0.00012
PCB-195	0.0000023	--	0.0000056	0.00013	0.000028	--	0.000002 U	0.00017	0.00017	0.000046
PCB-196/203	0.000011	--	0.000015	0.00031	0.000096	--	0.000004 U	0.0006	0.00072	0.00016
PCB-197	0.000002 U	--	0.000002 U	0.0000065	0.0000021	--	0.000002 U	0.0000097	0.000013	0.0000047
PCB-198	0.000002 U	--	0.0000011 J	0.000015	0.0000053	--	0.000002 U	0.00003	0.000025	0.000006
PCB-199	0.000014	--	0.000016	0.00035	0.000093	--	0.000002 U	0.00071	0.00081	0.00017
PCB-2	0.000002 U	--	0.000002 U	0.0000021	0.0000013 J	--	0.000002 U	0.000002	0.0000095	0.0000054
PCB-20/21/33	0.000006 U	--	0.000006 U	0.000025	0.0000045 J	--	0.000006 U	0.000056	0.0023	0.00056
PCB-200	0.0000011 J	--	0.0000019 J	0.00003	0.0000088	--	0.000002 U	0.000048	0.000075	0.000017
PCB-201	0.000002 U	--	0.0000018 J	0.000024	0.0000093	--	0.000002 U	0.000039	0.00008	0.000021
PCB-202	0.0000033	--	0.0000034	0.000071	0.00002	--	0.000002 U	0.00016	0.00024	0.000043
PCB-204	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-205	0.00000097 J	--	0.00000091 J	0.000019	0.0000043	--	0.000002 U	0.000025	0.000023	0.000006
PCB-206	0.000014	--	0.0000079	0.00012	0.000078	--	0.000002 U	0.00051	0.00088	0.00014
PCB-207	0.0000013 J	--	0.00000094 J	0.000011	0.0000075	--	0.000002 U	0.000038	0.000093	0.000016
PCB-208	0.000005	--	0.0000024	0.000032	0.000023	--	0.000002 U	0.00017	0.00035	0.000045
PCB-209	0.0000046	--	0.0000018 J	0.000051	0.000078	--	0.000002 U	0.0002	0.00023	0.000031
PCB-22	0.000002 U	--	0.000002 U	0.000043	0.0000088	--	0.000002 U	0.000059	0.0023	0.00039
PCB-23	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000041	0.0000013 J
PCB-24	0.000002 U	--	0.000002 U	0.0000011 J	0.000002 U	--	0.000002 U	0.0000024	0.00013	0.000042
PCB-25	0.000002 U	--	0.000002 U	0.00001	0.0000017 J	--	0.000002 U	0.000014	0.00025	0.00009
PCB-26	0.000002 U	--	0.000002 U	0.000014	0.0000026	--	0.000002 U	0.000018	0.00044	0.00019
PCB-27	0.000002 U	--	0.000002 U	0.000002	0.000002 U	--	0.000002 U	0.0000031	0.0001	0.000047
PCB-28	0.000002 U	--	0.000002 U	0.00013	0.000024	--	0.000002 U	0.00017	0.0041	0.00099
PCB-29	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000013	0.0000069
PCB-3	0.000002 U	--	0.000002 U	0.0000055	0.0000023	--	0.000002 U	0.0000061	0.000032	0.000016
PCB-30	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-31	0.000002 U	--	0.000002 U	0.0001	0.000019	--	0.000002 U	0.00012	0.0042	0.001
PCB-32	0.000002 U	--	0.000002 U	0.0000074	0.000002	--	0.000002 U	0.000013	0.001	0.00029
PCB-34	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000016	0.0000032
PCB-35	0.000002 U	--	0.000002 U	0.0000038	0.000002 U	--	0.000002 U	0.0000054	0.00015	0.000027
PCB-36	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000011 J	0.000002 U
PCB-37	0.000002 U	--	0.000002 U	0.000073	0.000014	--	0.000002 U	0.000092	0.0036	0.00048
PCB-38	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000055	0.0000069
PCB-39	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.0000013 J
PCB-4	0.000002 U	--	0.000002 U	0.0000033	0.000002 U	--	0.000002 U	0.0000079	0.00028	0.00029
PCB-40	0.000002 U	--	0.000002 U	0.0000056	0.0000017 J	--	0.000002 U	0.000014	0.0013	0.00022
PCB-41/64/71/72	0.000008 U	--	0.000008 U	0.00009	0.00002	--	0.000008 U	0.000097	0.0066	0.0011
PCB-42/59	0.000004 U	--	0.000004 U	0.00002	0.0000055	--	0.000004 U	0.000034	0.0026	0.00047

LOCATION	SB-339	SB-339	SB-339	SB-340	SB-340	SB-340	SB-340	SB-341	SB-341	SB-341
SAMPLE ID	SB339-20191106-0624	SB339-20191106-2448	SB339-20191106-4872	SB340-20191106-0006	SB340-20191106-0624	SB340-20191106-4872	SB340-20191106-96120	SB341-20191106-0006	SB341-20191106-0624	SB341-20191106-7296
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS	SB
PCB-43/49	0.000004 U	--	0.000004 U	0.000086	0.000018	--	0.000004 U	0.000085	0.0055	0.00087
PCB-44	0.000002 U	--	0.000002 U	0.000039	0.0000089	--	0.000002 U	0.000065	0.0068	0.001
PCB-45	0.000002 U	--	0.000002 U	0.0000043	0.0000014 J	--	0.000002 U	0.000013	0.0009	0.00022
PCB-46	0.000002 U	--	0.000002 U	0.0000013 J	0.000002 U	--	0.000002 U	0.0000045	0.0003	0.000087
PCB-47	0.000002 U	--	0.000002 U	0.00003	0.0000056	--	0.000002 U	0.000036	0.0021	0.00036
PCB-48/75	0.000004 U	--	0.000004 U	0.000012	0.0000026 J	--	0.000004 U	0.000017	0.0013	0.00026
PCB-5	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000027	0.000017
PCB-50	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000012	0.0000037
PCB-51	0.000002 U	--	0.000002 U	0.0000011 J	0.000002 U	--	0.000002 U	0.0000025	0.00023	0.000053
PCB-52/69	0.000004 U	--	0.000004 U	0.000079	0.000017	--	0.000004 U	0.000083	0.0057	0.00096
PCB-53	0.000002 U	--	0.000002 U	0.0000032	0.000002 U	--	0.000002 U	0.0000086	0.00075	0.00015
PCB-54	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000073	0.0000033
PCB-55	0.000002 U	--	0.000002 U	0.0000044	0.000002 U	--	0.000002 U	0.0000049	0.00014	0.0000091
PCB-56/60	0.000004 U	--	0.000004 U	0.00014	0.000024	--	0.000004 U	0.00014	0.0083	0.00013
PCB-57	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.0000009 J	0.000035	0.0000073
PCB-58	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000023	0.0000023
PCB-6	0.000002 U	--	0.000002 U	0.0000037	0.00000083 J	--	0.000002 U	0.0000083	0.00011	0.00006
PCB-61/70	0.000004 U	--	0.0000017 J	0.00021	0.00004	--	0.000004 U	0.00017	0.01	0.00049
PCB-62	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-63	0.000002 U	--	0.000002 U	0.00001	0.0000018 J	--	0.000002 U	0.0000078	0.00034	0.000032
PCB-65	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-66/76	0.000004 U	--	0.0000012 J	0.00019	0.000035	--	0.000004 U	0.0002	0.0088	0.00035
PCB-67	0.000002 U	--	0.000002 U	0.0000047	0.000002 U	--	0.000002 U	0.0000048	0.00022	0.00004
PCB-68	0.000002 U	--	0.000002 U	0.00000098 J	0.000002 U	--	0.000002 U	0.0000015 J	0.000042	0.0000084
PCB-7	0.000002 U	--	0.000002 U	0.000001 J	0.000002 U	--	0.000002 U	0.0000011 J	0.000019	0.000011
PCB-73	0.000002 U	--	0.000002 U	0.0000013 J	0.000002 U	--	0.000002 U	0.0000013 J	0.000039	0.0000065
PCB-74	0.000002 U	--	0.000002 U	0.000092	0.000017	--	0.000002 U	0.000083	0.0043	0.00025
PCB-77	0.000001 U	--	0.00000064 U	0.000037	0.0000063	--	0.00000055 U	0.000034	0.0014	0.000017
PCB-78	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000019	0.000002 U
PCB-79	0.000002 U	--	0.000002 U	0.0000048	0.000002 U	--	0.000002 U	0.0000019 J	0.000045	0.0000015 J
PCB-8	0.000002 U	--	0.000002 U	0.000017	0.0000035	--	0.000002 U	0.00004	0.00057	0.00027
PCB-80	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-81	0.0000008 U	--	0.00000047 U	0.0000044	0.00000085 J	--	0.00000041 U	0.0000038	0.00012	0.0000026
PCB-82	0.000002 U	--	0.000002 U	0.000013	0.000003	--	0.000002 U	0.000014	0.0011	0.000018
PCB-83/112	0.000004 U	--	0.000004 U	0.0000048	0.000001 J	--	0.000004 U	0.0000039 J	0.00025	0.0000058
PCB-84/92	0.000004 U	--	0.000002 J	0.000059	0.0000089	--	0.000004 U	0.000047	0.0015	0.00008
PCB-85/116	0.000004 U	--	0.000001 J	0.000052	0.000008	--	0.000004 U	0.000036	0.0012	0.000023
PCB-86	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000077	0.000002 U
PCB-87/117/125	0.0000014 J	--	0.0000015 J	0.00007	0.000012	--	0.000006 U	0.000047	0.0017	0.000045
PCB-88/91	0.000004 U	--	0.000004 U	0.000017	0.000003 J	--	0.000004 U	0.000013	0.00073	0.00033
PCB-89	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.00014	0.0000061
PCB-9	0.000002 U	--	0.000002 U	0.0000012 J	0.000002 U	--	0.000002 U	0.0000024	0.000021	0.000018
PCB-93	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-94	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000039	0.0000057
PCB-95	0.0000019 J	--	0.0000053	0.00012	0.00002	--	0.000002 U	0.00013	0.0025	0.00036
PCB-96	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000047	0.0000087
PCB-97	0.000002 U	--	0.000002 U	0.000044	0.0000076	--	0.000002 U	0.00003	0.0016	0.000036
PCB-98/102	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	0.0000039 U
PCB-99	0.0000022	--	0.0000026	0.00014	0.000015	--	0.000002 U	0.000076	0.002	0.000054
PENTACHLOROBIPHENYLS	0.000027 J	--	0.000039 J	0.0017 J	0.00025 J	--	0 UJ	0.0012 J	0.027 J	0.0015 J
TEQ DIOXIN-LIKE PCBs (BIRD)	4.67E-10	--	4.98E-10	3.0229E-06	5.03557E-07	--	0.00000048 U	2.40767E-06	8.50108E-05	1.26876E-06
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.41056-07	--	7.3869E-08	3.02345E-06	5.03942E-07	--	0.00000048 U	2.40813E-06	8.50114E-05	1.26925E-06
TEQ DIOXIN-LIKE PCBs (FISH)	3.4E-11	--	3.6E-11	4.2879E-08	6.283E-09	--	0.00000048 U	2.1967E-08	3.5176E-07	1.1038E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	4.064E-09	--	1.879E-09	4.2906E-08	6.302E-09	--	0.00000048 U	2.1989E-08	3.51787E-07	1.1062E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	2.15E-10	--	2.25E-10	7.239E-07	1.02268E-07	--	0.00000048 U	3.21548E-07	2.97656E-06	1.55717E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	9.0125E-08	--	4.2855E-08	7.404E-07	1.13818E-07	--	0.00000048 U	3.35198E-07	2.99306E-06	1.70567E-07
TETRACHLOROBIPHENYLS	0 UJ	--	0.0000029 J	0.0011 J	0.00021 J	--	0 UJ	0.0011 J	0.068 J	0.0071 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.00000719	--	0.0000075	0.0003445	0.00005425	--	0 U	0.0002745	0.004899	0.000129
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00032407	--	0.00052575	0.01536518	0.0027481	--	0 U	0.01679846	0.1341129	0.0196595
TOTAL PCB CONGENERS ZEROND	0.00033126	--	0.00053325	0.01570968	0.00280235	--	0 U	0.01707296	0.1390119	0.0197885
TOTAL PCB CONGENERS-NOAA	0.0001827	--	0.000262	0.00754	0.0013188	--	0 U	0.007979	0.04588	0.006562
TOTAL PCB CONGENERS-NOAA HALFND	0.00047879	--	0.000661415	0.01575723	0.002865735	--	0.0001991	0.017119415	0.13903645	0.019820945
TOTAL PCB CONGENERS-NOAA X2	0.0003654	--	0.000524	0.01508	0.0026376	--	0 U	0.015958	0.09176	0.013124
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0003814	--	0.000536	0.01508	0.0026376	--	0.00004692	0.015958	0.09176	0.013124
TRICHLOROBIPHENYLS	0 UJ	--	0 UJ	0.00044 J	0.000084 J	--	0 UJ	0.00063 J	0.023 J	0.0055 J
DIOXINS/FURANS (NG/KG)										
1,2,3,4,6,7,8,9-OCDD	410	--	300	640	230	--	230	380	84	340
1,2,3,4,6,7,8,9-OCDF	0.36 U	--	0.32 U	3.7 J	0.89 J	--	0.32 U	4.6 J	7.7 J	1.5 J
1,2,3,4,6,7,8-HPCDD	4 J	--	4.4 J	12	3 J	--	6.2	9.4	6.4	9.1
1,2,3,4,6,7,8-HPCDF	0.22 J	--	0.17 U	2.6 J	0.77 J	--	0.17 U	3.6 J	8.9	2.1 J
1,2,3,4,7,8,9-HPCDF	0.15 U	--	0.15 U	0.19 J	0.17 U	--	0.15 U	0.34 J	0.83 J	0.16 U
1,2,3,4,7,8-HXCDD	0.18 U	--	0.21 U	0.3 J	0.23 U	--	0.21 U	0.26 J	0.36 J	0.2 J
1,2,3,4,7,8-HXCDF	0.21 U	--	0.21 U	0.65 J	0.21 U	--	0.21 U	0.74 J	2.3 J	0.43 J
1,2,3,6,7,8-HXCDD	0.18 U	--	0.23 U	0.64 J	0.23 U	--	0.22 U	0.44 J	0.93 J	0.95 J
1,2,3,6,7,8-HXCDF	0.2 U	--	0.2 U	0.36 J	0.2 U	--	0.2 U	0.53 J	1.7 J	0.29 J
1,2,3,7,8,9-HXCDD	0.16 U	--	0.2 U	0.46 J	0.21 U	--	0.38 J	0.38 J	0.58 J	0.53 J
1,2,3,7,8,9-HXCDF	0.16 U	--	0.16 U	0.16 U	0.26 U	--	0.16 U	0.25 J	0.45 J	0.16 U
1,2,3,7,8-PECDD	0.18 U	--	0.19 U	0.26 J	0.18 U	--	0.18 U	0.2 U	0.39 J	0.2 U
1,2,3,7,8-PECDF	0.17 U	--	0.15 U	0.35 J	0.19 U	--	0.15 U	0.45 J	1.8 J	0.46 J
2,3,4,6,7,8-HXCDF	0.13 U	--	0.13 U	0.4 J	0.21 U	--	0.13 U	0.72 J	1.9 J	0.25 J
2,3,4,7,8-PECDF	0.17 U	--	0.14 U	0.56 J	0.2 U	--	0.15 U	0.65 J	2.2 J	0.49 J
2,3,7,8-TCDD	0.077 U	--	0.09 U	0.21 J	0.11 U	--	0.093 U	0.083 U	0.11 U	0.12 U
2,3,7,8-TCDF	0.073 U	--	0.091 U	0.57 J	0.11 U	--	0.11 U	0.77 J	2.9	2

LOCATION	SB-339	SB-339	SB-339	SB-340	SB-340	SB-340	SB-340	SB-341	SB-341	SB-341
SAMPLE ID	SB339-20191106-0624	SB339-20191106-2448	SB339-20191106-4872	SB340-20191106-0006	SB340-20191106-0624	SB340-20191106-4872	SB340-20191106-96120	SB341-20191106-0006	SB341-20191106-0624	SB341-20191106-7296
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS	SB
TEQ DIOXINS (BIRD)	0.0472	--	0.0344	1.94767	0.033789	--	0.0672	1.83166	6.50317	2.76975
TEQ DIOXINS (BIRD) HALFND	0.354868	--	0.350416	1.95567	0.405539	--	0.384166	1.97316	6.55817	2.93855
TEQ DIOXINS (FISH)	0.0472	--	0.0344	1.20227	0.033789	--	0.033	0.83546	2.66797	0.64405
TEQ DIOXINS (FISH) HALFND	0.306743	--	0.306691	1.21027	0.340839	--	0.303716	0.97696	2.72297	0.81285
TEQ DIOXINS (HUMANS/MAMMALS)	0.1652	--	0.134	1.32751	0.106967	--	0.169	0.86628	2.40481	0.84025
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	0.387204	--	0.370448	1.33551	0.368667	--	0.393898	1.00778	2.45981	1.00905
TOTAL HPCDD	7 J	--	8.7 J	24 J	5.9 J	--	12 J	20 J	13 J	20 J
TOTAL HPCDF	0.22 J	--	0 UJ	5.1 J	1.3 J	--	0 UJ	6.3 J	14 J	3.6 J
TOTAL HXCDD	0.23 J	--	1.1 J	7.9 J	0.93 J	--	2.2 J	5.1 J	8.8 J	11 J
TOTAL HXCDF	0 UJ	--	0 UJ	4.4 J	0.45 J	--	0 UJ	5.4 J	16 J	3.2 J
TOTAL PECDD	0 UJ	--	0 UJ	5.3 J	0.25 J	--	0.2 J	1.3 J	4.8 J	3.6 J
TOTAL PECDF	0 UJ	--	0 UJ	6.3 J	0.86 J	--	0 UJ	6.2 J	20 J	4.6 J
TOTAL TCDD	0 UJ	--	0 UJ	5.9 J	0.31 J	--	0 UJ	1.1 J	3.5 J	2.6 J
TOTAL TCDF	0 UJ	--	0 UJ	8.2 J	0.97 J	--	0 UJ	8.3 J	33 J	11 J
METALS (MG/KG)										
ALUMINUM	7630	--	7300	8350	8020	--	10100	8720	6180	7000
ANTIMONY	1 UJ	--	0.99 U	1.3 U	0.3 J	--	1 U	1.1 U	0.35 J	1.3 U
ARSENIC	4 J	--	4.8	4	6.1	--	5.1	5.4	6.5	5.2
BARIUM	21.8	--	25.4	42	169	--	31.9	37.5	186	71.9
BERYLLIUM	0.27 J	--	0.42 J	0.4 J	0.9	--	0.42 J	0.47 J	0.3 J	0.53 J
CADMIUM	0.51 U	--	0.5 U	0.13 J	0.18 J	--	0.52 U	0.12 J	0.67	0.32 J
CALCIUM	537 U	--	535 U	4660	63900	--	605	2270	45300	60500
CHROMIUM	6.8 J	--	12.3	7.8	12.3	--	11.4	12	10.7	12.2
COBALT	12.4	--	7.1	4.9	7.5	--	4.8	6.2	3.3	11.1
COPPER	4.1	--	5.9	13.2	15	--	6.3	10.4	38.6	9
CYANIDE	0.42 J	--	0.17 J	1.5	0.47 J	--	0.36 J	0.39 J	0.21 J	0.15 J
IRON	13300	--	15400	16200	9310	--	13100	16400	23800	13100
LEAD	7.5	--	8.5	34.5	17.6	--	10.9	52.2	154	96.4
MAGNESIUM	443 J	--	399 J	1380	2460	--	574	681	7530	14700
MANGANESE	548	--	242	224	868	--	109	280	238	555
MERCURY	0.019 J	--	0.11 U	0.049 J	0.048 J	--	0.035 J	0.024 J	0.025 J	0.022 J
NICKEL	3.1	--	4.5	10.3	13.6	--	3.8	5.6	6.8	18.7
POTASSIUM	992	--	1090	1830	697	--	1140	1350	765	973
SELENIUM	2.6 UJ	--	2.5 UJ	3.2 UJ	2.8 UJ	--	2.6 UJ	2.8 UJ	2.9 UJ	3.2 UJ
SILVER	0.51 U	--	0.5 U	0.64 U	0.57 U	--	0.52 U	0.57 U	0.57 U	0.63 U
SODIUM	19.1 J	--	23.3 J	61.3 J	48.6 J	--	43.8 J	23.6 J	223 J	80.9 J
THALLIUM	0.51 U	--	0.5 U	0.64 U	0.57 U	--	0.52 U	0.57 U	0.57 U	0.63 U
VANADIUM	9	--	9.9	6	16.3	--	15	13.7	10.2	14.5
ZINC	9	--	11.7	30.3	47.8	--	11.3	113	420	202
MISCELLANEOUS (%)										
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)										
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)										
PERCENT SOLIDS	89	91	--	81	--	91	--	--	--	--

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-342	SB-342	SB-342	SB-342	SB-343	SB-343	SB-343	SB-343	SB-344	SB-344
SAMPLE ID	SB342-20191106-0006	SB342-20191106-0624	SB342-20191106-2448	SB342-20191106-7296	SB343-20191106-0006	SB343-20191106-0624	SB343-20191106-2448	SB343-20191106-4872	SB344-20191106-0006	SB344-20191106-0624
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0	0.5	2	6	0	0.5	2	4	0	0.5
BOTTOM DEPTH	0.5	2	4	8	0.5	2	4	6	0.5	2
VOLATILES (MG/KG)										
1,1,1-TRICHLOROETHANE	0.008 UJ	0.006 U	--	0.0064 U	0.0069 U	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 U
1,1,2,2-TETRACHLOROETHANE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
1,1,2-TRICHLOROETHANE	0.008 UJ	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.008 UJ	0.006 U	--	0.0064 U	0.0069 U	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 U
1,1-DICHLOROETHANE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 U	0.0058 U	0.0059 U
1,1-DICHLOROETHENE	0.008 U	0.006 U	--	0.0064 UJ	0.0069 UJ	0.0066 UJ	--	0.007 U	0.0058 U	0.0059 U
1,2,3-TRICHLOROBENZENE	0.008 UJ	0.006 UJ	--	0.0064 U	0.0069 UJ	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 UJ
1,2,4-TRICHLOROBENZENE	0.008 UJ	0.006 UJ	--	0.0064 U	0.0069 UJ	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.008 U	0.006 UJ	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
1,2-DIBROMOETHANE	0.008 UJ	0.006 U	--	0.0064 U	0.0069 U	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 U
1,2-DICHLOROBENZENE	0.008 UJ	0.006 UJ	--	0.0064 U	0.0069 UJ	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 UJ
1,2-DICHLOROETHANE	0.008 UJ	0.006 U	--	0.0064 U	0.0069 U	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 U
1,2-DICHLOROPROPANE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
1,3-DICHLOROBENZENE	0.008 UJ	0.006 UJ	--	0.0064 U	0.0069 UJ	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 UJ
1,4-DICHLOROBENZENE	0.008 UJ	0.006 UJ	--	0.0064 U	0.0069 UJ	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 UJ
2-BUTANONE	0.016 U	0.012 U	--	0.013	0.014 U	0.013 U	--	0.0083 J	0.012 U	0.012 U
2-HEXANONE	0.016 U	0.012 U	--	0.013 U	0.014 U	0.013 U	--	0.014 UJ	0.012 U	0.012 U
4-METHYL-2-PENTANONE	0.016 U	0.012 U	--	0.013 U	0.014 U	0.013 U	--	0.014 UJ	0.012 U	0.012 U
ACETONE	0.016 U	0.01 J	--	0.027	0.014 U	0.016	--	0.022	0.011 J	0.012 U
BENZENE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
BROMOCHLOROMETHANE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 U	0.0058 U	0.0059 U
BROMODICHLOROMETHANE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
BROMOFORM	0.008 U	0.006 UJ	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
BROMOMETHANE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 U	0.0058 U	0.0059 U
CARBON DISULFIDE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 U	0.0058 U	0.0059 U
CARBON TETRACHLORIDE	0.008 UJ	0.006 U	--	0.0064 U	0.0069 U	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 U
CHLOROBENZENE	0.008 UJ	0.006 U	--	0.0064 U	0.0069 UJ	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 UJ
CHLORODIBROMOMETHANE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
CHLOROETHANE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 U	0.0058 U	0.0059 U
CHLOROFORM	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 U	0.0058 U	0.0059 U
CHLOROMETHANE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 U	0.0058 U	0.0059 U
CIS-1,2-DICHLOROETHENE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 U	0.0058 U	0.0059 U
CIS-1,3-DICHLOROPROPENE	0.008 UJ	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
CYCLOHEXANE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
DICHLORODIFLUOROMETHANE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 U	0.0058 U	0.0059 U
ETHYLBENZENE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
ISOPROPYLBENZENE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
M+P-XYLENES	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
METHYL ACETATE	0.008 UJ	0.006 U	--	0.0064 U	0.0069 U	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 U
METHYL CYCLOHEXANE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
METHYL TERT-BUTYL ETHER	0.008 UJ	0.006 U	--	0.0064 U	0.0069 U	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 U
METHYLENE CHLORIDE	0.008 UJ	0.006 U	--	0.0064 U	0.0069 U	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 U
O-XYLENE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
STYRENE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
TETRACHLOROETHENE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
TOLUENE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
TRANS-1,2-DICHLOROETHENE	0.008 U	0.006 U	--	0.0064 UJ	0.0069 UJ	0.0066 UJ	--	0.007 U	0.0058 U	0.0059 U
TRANS-1,3-DICHLOROPROPENE	0.008 UJ	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 UJ	0.0058 U	0.0059 U
TRICHLOROETHENE	0.008 R	0.006 U	--	0.0064 R	0.0069 R	0.0066 R	--	0.007 UJ	0.0058 R	0.0059 R
TRICHLOROFLUOROMETHANE	0.008 UJ	0.006 U	--	0.0064 U	0.0069 U	0.0066 UJ	--	0.007 UJ	0.0058 U	0.0059 U
VINYL CHLORIDE	0.008 U	0.006 U	--	0.0064 U	0.0069 U	0.0066 U	--	0.007 U	0.0058 U	0.0059 U
SEMIVOLATILES (MG/KG)										
1,1-BIPHENYL	0.24 U	0.022 J	--	0.23 U	0.23 U	0.095 J	--	0.22 U	0.063 J	0.15 J
1,2,4,5-TETRACHLOROBENZENE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
1,4-DIOXANE	0.094 U	0.086 U	--	0.089 U	0.089 U	0.085 U	--	0.085 U	0.08 U	0.074 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
2,3,4,6-TETRACHLOROPHENOL	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
2,4,5-TRICHLOROPHENOL	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
2,4,6-TRICHLOROPHENOL	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
2,4-DICHLOROPHENOL	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
2,4-DIMETHYLPHENOL	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
2,4-DINITROPHENOL	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
2,4-DINITROTOLUENE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
2,6-DINITROTOLUENE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
2-CHLORONAPHTHALENE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
2-CHLOROPHENOL	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
2-METHYLNAPHTHALENE	0.048 J	0.058 J	--	0.23 U	0.034 J	0.36	--	0.045 J	0.24	0.34
2-METHYLPHENOL	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
2-NITROANILINE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
2-NITROPHENOL	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
3&4-METHYLPHENOL	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
3,3'-DICHLOROBENZIDINE	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
3-NITROANILINE	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
4,6-DINITRO-2-METHYLPHENOL	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
4-BROMOPHENYL PHENYL ETHER	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
4-CHLORO-3-METHYLPHENOL	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
4-CHLOROANILINE	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
4-CHLOROPHENYL PHENYL ETHER	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
4-NITROANILINE	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
4-NITROPHENOL	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-342	SB-342	SB-342	SB-342	SB-343	SB-343	SB-343	SB-343	SB-344	SB-344
SAMPLE ID	SB342-20191106-0006	SB342-20191106-0624	SB342-20191106-2448	SB342-20191106-7296	SB343-20191106-0006	SB343-20191106-0624	SB343-20191106-2448	SB343-20191106-4872	SB344-20191106-0006	SB344-20191106-0624
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
ACENAPHTHENE	0.24 U	0.038 J	--	0.23 U	0.029 J	0.22 U	--	0.22 U	0.2 U	0.19 U
ACENAPHTHYLENE	0.09 J	0.22	--	0.025 J	0.059 J	0.039 J	--	0.043 J	0.2 U	0.19 U
ACETOPHENONE	0.46 U	0.42 U	--	0.44 U	0.42 U	0.42 U	--	0.42 U	0.39 U	0.37 U
ANTHRACENE	0.083 J	0.23	--	0.023 J	0.15 J	0.068 J	--	0.054 J	0.024 J	0.031 J
ATRAZINE	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
BAP EQUIVALENT-HALFND	0.62051	1.5668	--	0.24076	1.7022	0.49903	--	0.46383	0.18419	0.17762
BAP EQUIVALENT-POS	0.50051	1.4568	--	0.12576	1.5872	0.38903	--	0.35383	0.08419	0.08262
BENZALDEHYDE	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.029 J	0.035 J	0.036 J
BENZO(A)ANTHRACENE	0.37	1.1	--	0.085 J	1	0.28	--	0.25	0.072 J	0.067 J
BENZO(A)PYRENE	0.37	1.1	--	0.094 J	1.2	0.29	--	0.27	0.057 J	0.054 J
BENZO(B)FLUORANTHENE	0.65	1.7	--	0.13 J	1.9	0.48	--	0.39	0.15 J	0.17 J
BENZO(G,H,I)PERYLENE	0.27	0.69	--	0.1 J	0.91	0.23	--	0.2 J	0.054 J	0.051 J
BENZO(K)FLUORANTHENE	0.2 J	0.55	--	0.065 J	0.67	0.16 J	--	0.15 J	0.038 J	0.031 J
BIS(2-CHLOROETHOXY)METHANE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
BIS(2-CHLOROETHYL)ETHER	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.019 J	0.22 U	--	0.06 J	0.39	0.16 J	--	0.13 J	0.087 J	0.19 U
BUTYL BENZYL PHTHALATE	0.24 U	0.22 U	--	0.23 U	0.061 J	0.22 U	--	0.22 U	0.2 U	0.19 U
CAPROLACTAM	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
CARBAZOLE	0.46 U	0.065 J	--	0.44 U	0.12 J	0.42 U	--	0.42 U	0.39 U	0.37 U
CHRYSENE	0.51	1.3	--	0.11 J	1.5	0.43	--	0.33	0.21	0.31
DIBENZO(A,H)ANTHRACENE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
DIBENZOFURAN	0.021 J	0.043 J	--	0.23 U	0.027 J	0.07 J	--	0.022 J	0.051 J	0.06 J
DIETHYL PHTHALATE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
DIMETHYL PHTHALATE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
DI-N-BUTYL PHTHALATE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.032 J	--	0.22 U	0.2 U	0.19 U
DI-N-OCTYL PHTHALATE	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
FLUORANTHENE	0.86	2.6	--	0.12 J	2.6	0.69	--	0.58	0.2 J	0.17 J
FLUORENE	0.037 J	0.083 J	--	0.23 U	0.04 J	0.037 J	--	0.023 J	0.2 U	0.034 J
HEXACHLOROBENZENE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
HEXACHLOROBUTADIENE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
HEXACHLOROCYCLOPENTADIENE	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
HEXACHLOROETHANE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
HIGH MOLECULAR WEIGHT PAHS	3.29	9.14	--	0.779	9.97	2.62	--	2.24	0.795	0.886
INDENO(1,2,3-CD)PYRENE	0.26	0.7	--	0.095 J	0.89	0.21 J	--	0.18 J	0.044 J	0.043 J
ISOPHORONE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
LOW MOLECULAR WEIGHT PAHS	1.489	4.22	--	0.246	3.711	1.474	--	1.026	0.708	0.982
NAPHTHALENE	0.029 J	0.049 J	--	0.23 U	0.023 J	0.14 J	--	0.026 J	0.094 J	0.087 J
NITROBENZENE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
N-NITROSO-DI-N-PROPYLAMINE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
N-NITROSODIPHENYLAMINE	0.24 U	0.22 U	--	0.23 U	0.23 U	0.22 U	--	0.22 U	0.2 U	0.19 U
PENTACHLOROPHENOL	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
PHENANTHRENE	0.39	1	--	0.078 J	0.81	0.5	--	0.3	0.39	0.66
PHENOL	0.46 U	0.42 U	--	0.44 U	0.44 U	0.42 U	--	0.42 U	0.39 U	0.37 U
PYRENE	0.66	2	--	0.1 J	1.9	0.54	--	0.47	0.17 J	0.16 J
TOTAL PAHS	4.779	13.36	--	1.025	13.681	4.094	--	3.266	1.503	1.868
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K										
1,4-DIOXANE	0.0093 U	0.0086 U	--	0.0089 U	0.0091 U	0.0084 U	--	0.0085 U	0.0079 U	0.0075 U
2-METHYLNAPHTHALENE	0.052	0.061	--	0.013	0.033	0.33	--	0.045	0.21	0.24
ACENAPHTHENE	0.011	0.028	--	0.0033 J	0.019	0.015	--	0.0078	0.011	0.016
ACENAPHTHYLENE	0.062	0.19 J	--	0.017	0.037	0.026	--	0.03	0.0059	0.0071
ANTHRACENE	0.059	0.19 J	--	0.016	0.098	0.045	--	0.038	0.016	0.017
BAP EQUIVALENT-HALFND	0.32828	1.02558	--	0.073097	0.97047	0.27002	--	0.25635	0.05629	0.04594
BAP EQUIVALENT-POS	0.32598	1.02348	--	0.070897	0.96827	0.26792	--	0.25425	0.05434	0.04409
BENZO(A)ANTHRACENE	0.26	0.78 J	--	0.056	0.67 J	0.21	--	0.2	0.052	0.034
BENZO(A)PYRENE	0.24	0.77 J	--	0.053	0.73 J	0.2	--	0.19	0.036	0.029
BENZO(B)FLUORANTHENE	0.41 J	1.3 J	--	0.094	1.2 J	0.33	--	0.32	0.11	0.1
BENZO(G,H,I)PERYLENE	0.16	0.34 J	--	0.024	0.41 J	0.12	--	0.066	0.017 J	0.014 J
BENZO(K)FLUORANTHENE	0.16	0.46 J	--	0.031	0.44 J	0.16	--	0.1	0.027	0.019
CHRYSENE	0.38 J	0.88 J	--	0.087	0.87 J	0.32	--	0.25	0.17	0.2
DIBENZO(A,H)ANTHRACENE	0.0046 U	0.0042 U	--	0.0044 U	0.0044 U	0.0042 U	--	0.0042 U	0.0039 U	0.0037 U
FLUORANTHENE	0.61 J	2 J	--	0.11	1.7 J	0.5 J	--	0.46 J	0.18	0.11
FLUORENE	0.036	0.098	--	0.013	0.033	0.035	--	0.022	0.012	0.018
HIGH MOLECULAR WEIGHT PAHS	2.26	6.33	--	0.451	5.98	1.85	--	1.586	0.549	0.491
INDENO(1,2,3-CD)PYRENE	0.17	0.4 J	--	0.025	0.46 J	0.12	--	0.11	0.017	0.013
LOW MOLECULAR WEIGHT PAHS	1.099	3.356	--	0.2245	2.469	1.111	--	0.8228	0.6179	0.6171
NAPHTHALENE	0.031	0.05	--	0.0082	0.022	0.13	--	0.025	0.093	0.069
PENTACHLOROPHENOL	0.0094 U	0.0086 U	--	0.0089 U	0.0089 U	0.0085 U	--	0.0085 U	0.008 U	0.0074 U
PHENANTHRENE	0.29	0.8 J	--	0.057	0.56 J	0.36 J	--	0.24	0.3	0.38 J
PYRENE	0.48 J	1.4 J	--	0.081	1.2 J	0.39 J	--	0.35 J	0.12	0.082
TOTAL PAHS	0.38	0.88	--	0.087	0.87	0.32	--	0.25	0.17	0.2
PESTICIDES (MG/KG)										
4,4'-DDD	0.0013 J	0.00096 J	--	0.004 U	0.0013 J	0.0035 J	--	0.00036 J	0.004 U	0.0029 J
4,4'-DDE	0.00055 J	0.0043 U	--	0.004 U	0.0045 U	0.0017 J	--	0.00024 J	0.004 U	0.0037 U
4,4'-DDT	0.0044 U	0.0043 U	--	0.004 U	0.0045 U	0.0014 J	--	0.00022 J	0.004 U	0.0037 U
ALDRIN	0.0023 U	0.0022 U	--	0.0021 U	0.0023 U	0.0023 U	--	0.0023 U	0.0021 U	0.0019 U
ALPHA-BHC	0.0023 U	0.0022 U	--	0.0021 U	0.0023 U	0.0023 U	--	0.0023 U	0.0021 U	0.0019 U
ALPHA-CHLORDANE	0.0023 U	0.0022 U	--	0.0021 U	0.002 J	0.0014 J	--	0.0023 U	0.0021 U	0.0019 U
BETA-BHC	0.0023 U	0.0022 U	--	0.0021 U	0.0023 U	0.0023 U	--	0.0023 U	0.0021 U	0.0019 U
DELTA-BHC	0.0023 U	0.0022 U	--	0.0021 U	0.0023 U	0.0023 U	--	0.0023 U	0.0021 U	0.0019 U
DIELDRIN	0.0044 U	0.0043 U	--	0.004 U	0.0045 U	0.00034 R	--	0.0044 U	0.004 U	0.0037 U
ENDOSULFAN I	0.0023 U	0.0022 U	--	0.0021 U	0.0023 U	0.0023 U	--	0.0023 U	0.0021 U	0.0019 U
ENDOSULFAN II	0.00044 J	0.0043 U	--	0.004 U	0.00079 J	0.00049 J	--	0.0044 U	0.004 U	0.0037 U
ENDOSULFAN SULFATE	0.0044 U	0.0043 U	--	0.004 U	0.0045 U	0.00052 R	--	0.0044 U	0.004 U	0.0037 U

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-342	SB-342	SB-342	SB-342	SB-343	SB-343	SB-343	SB-343	SB-344	SB-344
SAMPLE ID	SB342-20191106-0006	SB342-20191106-0624	SB342-20191106-2448	SB342-20191106-7296	SB343-20191106-0006	SB343-20191106-0624	SB343-20191106-2448	SB343-20191106-4872	SB344-20191106-0006	SB344-20191106-0624
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
ENDRIN	0.00025 J	0.0043 U	--	0.004 U	0.00027 J	0.00056 J	--	0.0044 U	0.004 U	0.00036 J
ENDRIN ALDEHYDE	0.0044 U	0.0043 U	--	0.004 U	0.0045 U	0.0045 U	--	0.0044 U	0.004 U	0.0037 U
ENDRIN KETONE	0.0044 U	0.0043 U	--	0.004 U	0.0045 U	0.0045 U	--	0.0044 U	0.004 U	0.0037 U
GAMMA-BHC (LINDANE)	0.0013 J	0.00081 J	--	0.0021 U	0.0017 J	0.0033 J	--	0.0023 U	0.0016 J	0.0027
GAMMA-CHLORDANE	0.0023 U	0.0022 U	--	0.0021 U	0.0015 R	0.0011 R	--	0.0023 U	0.0021 U	0.0019 U
HEPTACHLOR	0.0023 U	0.0022 U	--	0.0021 U	0.0023 U	0.0023 U	--	0.0023 U	0.0021 U	0.0019 U
HEPTACHLOR EPOXIDE	0.0023 U	0.0022 U	--	0.0021 U	0.00036 J	0.0023 U	--	0.0023 U	0.0021 U	0.0019 U
METHOXYCHLOR	0.023 U	0.022 U	--	0.021 U	0.023 U	0.023 U	--	0.023 U	0.021 U	0.019 U
TOXAPHENE	0.23 U	0.22 U	--	0.21 U	0.23 U	0.23 U	--	0.23 U	0.21 U	0.19 U
PCBS (MG/KG)										
AROCLOR-1016	--	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1221	--	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1232	--	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1242	--	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1248	--	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1254	--	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1260	--	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1262	--	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1268	--	--	--	0.04 U	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	0 U	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	0.18	--	--	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)										
AROCLOR-1016	--	0.333 U	0.338 U	0.272 U	--	0.305 U	0.298 U	--	--	0.313 U
AROCLOR-1221	--	0.667 U	0.676 U	0.543 U	--	0.61 U	0.595 U	--	--	0.625 U
AROCLOR-1232	--	0.333 U	0.338 U	0.272 U	--	0.305 U	0.298 U	--	--	0.313 U
AROCLOR-1242	--	0.333 U	0.338 U	0.272 U	--	0.305 U	0.298 U	--	--	0.313 U
AROCLOR-1248	--	0.333 U	0.338 U	0.272 U	--	0.305 U	0.298 U	--	--	0.313 U
AROCLOR-1254	--	0.333 U	0.338 U	0.272 U	--	0.305 U	0.298 U	--	--	0.313 U
AROCLOR-1260	--	0.333 U	0.338 U	0.272 U	--	0.187 J	0.298 U	--	--	0.106 J
AROCLOR-1262	--	0.333 U	0.338 U	0.272 U	--	0.305 U	0.298 U	--	--	0.313 U
AROCLOR-1268	--	0.333 U	0.338 U	0.272 U	--	0.305 U	0.298 U	--	--	0.313 U
TOTAL AROCLOR	--	0 U	0 U	0 U	--	0.187	0 U	--	--	0.106
TOTAL AROCLOR HALFND	--	1.6655	1.69	1.3595	--	1.5595	1.4895	--	--	1.514
PCB CONGENERS (MG/KG)										
DICHLOROBIPHENYLS	0.0002 J	0.000097 J	--	0.0000022 J	0.0006 J	0.00064 J	--	0.00013 J	0.0042 J	0.000066 J
HEPTACHLOROBIPHENYLS	0.002 J	0.0096 J	--	0.000012 J	0.004 J	0.027 J	--	0.0016 J	0.55 J	0.028 J
HEXACHLOROBIPHENYLS	0.002 J	0.01 J	--	0.000013 J	0.0085 J	0.031 J	--	0.0019 J	0.48 J	0.026 J
MONOCHLOROBIPHENYLS	0.00002 J	0.000027 J	--	0.000012 J	0.00006 J	0.00019 J	--	0.00006 J	0.00037 J	0.000044 J
NONACHLOROBIPHENYLS	0.00044 J	0.0012 J	--	0.0000046 J	0.00041 J	0.0011 J	--	0.00036 J	0.0087 J	0.0012 J
OCTACHLOROBIPHENYLS	0.00071 J	0.0025 J	--	0.0000075 J	0.00094 J	0.0063 J	--	0.00057 J	0.13 J	0.0067 J
PCB-1	0.0000037	0.0000051	--	0.000002 U	0.00002	0.000054	--	0.000017	0.00016	0.0000086
PCB-10	0.000002 U	0.000002 U	--	0.000002 U	0.0000032	0.0000038	--	0.00000081 J	0.000017	0.000002 U
PCB-100	0.000002 U	0.000002 U	--	0.000002 U	0.0000049	0.000004	--	0.000002 U	0.000011	0.000002 U
PCB-101/90	0.00015	0.00064	--	0.0000021 J	0.0015	0.0029	--	0.00023	0.032	0.0015
PCB-103	0.000002 U	0.0000019 J	--	0.000002 U	0.0000081	0.0000081	--	0.000002 U	0.000036	0.000002 U
PCB-104	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-105	0.000037	0.00014	--	0.0000008 U	0.00062	0.00056	--	0.000069	0.0037	0.00012
PCB-108/107	0.0000067	0.000024	--	0.000004 U	0.00011	0.000095	--	0.000011	0.00077	0.000018
PCB-109	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-11	0.00016	0.000043	--	0.0000022	0.000045	0.000038	--	0.000014	0.00027	0.000008
PCB-110	0.00014	0.00055	--	0.0000022	0.0019	0.0023	--	0.00025	0.017	0.00081
PCB-111/115	0.000002 J	0.0000078	--	0.000004 U	0.000043	0.000033	--	0.0000042	0.00012	0.000004
PCB-113	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-114	0.000002	0.0000096	--	0.00000082 U	0.00004	0.000038	--	0.0000043	0.00026	0.000012
PCB-118/106	0.0001	0.00041	--	0.0000016 J	0.0014	0.0016	--	0.00018	0.012	0.00052
PCB-119	0.0000015 J	0.0000053	--	0.000002 U	0.000029	0.000025	--	0.0000034	0.00005	0.0000037
PCB-12	0.0000017 J	0.000002	--	0.000002 U	0.000017	0.00002	--	0.0000025	0.00011	0.0000027
PCB-120	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000011	--	0.000002 U	0.00012	0.0000089
PCB-121	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-122	0.000002	0.0000058	--	0.000002 U	0.000021	0.000024	--	0.0000024	0.00014	0.0000058
PCB-123	0.0000021	0.0000083	--	0.00000077 U	0.000035	0.000024	--	0.0000033	0.0001	0.0000045
PCB-124	0.0000055	0.000024	--	0.000002 U	0.000066	0.000099	--	0.0000098	0.00084	0.000049
PCB-126	0.0000018 J	0.0000057	--	0.0000009 U	0.00001	0.000018	--	0.0000024	0.00033	0.0000079
PCB-127	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-128/162	0.00004	0.00018	--	0.000004 U	0.00038	0.00061	--	0.000048	0.0065	0.0004
PCB-129	0.0000089	0.000039	--	0.000002 U	0.00011	0.00015	--	0.000011	0.0014	0.000088
PCB-13	0.0000036	0.0000047	--	0.000002 U	0.000016	0.000022	--	0.0000091	0.000087	0.0000034
PCB-130	0.000018	0.000097	--	0.000002 U	0.00014	0.00032	--	0.000021	0.0032	0.00021
PCB-131/133	0.0000088	0.000042	--	0.000004 U	0.000063	0.00013	--	0.0000088	0.0015	0.000082
PCB-132/161	0.0001	0.0004	--	0.000004 U	0.00051	0.0013	--	0.000086	0.022	0.0011
PCB-134/143	0.000014	0.000072	--	0.000004 U	0.0001	0.00028	--	0.000018	0.0028	0.00019
PCB-135	0.000057	0.00024	--	0.000002 U	0.00021	0.00081	--	0.00005	0.012	0.00072
PCB-136	0.000046	0.00021	--	0.000002 U	0.00023	0.00086	--	0.000057	0.011	0.00093
PCB-137	0.0000075	0.000022	--	0.000002 U	0.00012	0.000088	--	0.0000092	0.00079	0.000035
PCB-138/163/164	0.00046	0.0023	--	0.0000049 J	0.0021	0.0068	--	0.00041	0.11 J	0.0058
PCB-139/149	0.00037	0.0019	--	0.0000035 J	0.0013	0.0059	--	0.00035	0.085 J	0.0047
PCB-14	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-140	0.000002 U	0.000002 U	--	0.000002 U	0.000009	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-141	0.0001	0.00051	--	0.000002 U	0.00035	0.0018	--	0.000099	0.03	0.0016
PCB-142	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-144	0.000016	0.00013	--	0.000002 U	0.000069	0.00038	--	0.000022	0.0047	0.00029
PCB-145	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.0000029	0.000002 U
PCB-146/165	0.000062	0.00029	--	0.000004 U	0.00022	0.00087	--	0.000053	0.013	0.00072

LOCATION	SB-342	SB-342	SB-342	SB-342	SB-343	SB-343	SB-343	SB-343	SB-344	SB-344
SAMPLE ID	SB342-20191106-0006	SB342-20191106-0624	SB342-20191106-2448	SB342-20191106-7296	SB343-20191106-0006	SB343-20191106-0624	SB343-20191106-2448	SB343-20191106-4872	SB344-20191106-0006	SB344-20191106-0624
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
PCB-147	0.0000022	0.000009	--	0.000002 U	0.000034	0.000038	--	0.0000037	0.00019	0.000012
PCB-148	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-15	0.000025	0.000027	--	0.000002 U	0.00037	0.00033	--	0.000053	0.0013	0.000026
PCB-150	0.000002 U	0.000002 U	--	0.000002 U	0.0000023	0.0000027	--	0.000002 U	0.000045	0.000002 U
PCB-151	0.00014	0.00072	--	0.000002 U	0.00034	0.002	--	0.00012	0.033 J	0.0017
PCB-152	0.000002 U	0.000002 U	--	0.000002 U	0.0000023	0.000002 U	--	0.000002 U	0.00001	0.000002 U
PCB-153	0.00047	0.0025	--	0.0000047	0.0016	0.0077	--	0.00042	0.12 J	0.0066
PCB-154	0.0000019 J	0.0000068	--	0.000002 U	0.000014	0.000018	--	0.0000018 J	0.00028	0.0000071
PCB-155	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-156	0.000031	0.00014	--	0.00000078 U	0.00022	0.00043	--	0.000031	0.007	0.00037
PCB-157	0.0000046	0.000018	--	0.00000086 U	0.000056	0.000055	--	0.0000056	0.00064	0.000027
PCB-158/160	0.000042	0.00021	--	0.000004 U	0.00023	0.00063	--	0.000042	0.0092	0.00053
PCB-159	0.0000073	0.000029	--	0.000002 U	0.000012	0.000086	--	0.0000056	0.0015	0.000089
PCB-16	0.0000024	0.000004	--	0.000002 U	0.000087	0.00011	--	0.000013	0.0005	0.0000037
PCB-166	0.0000019 J	0.0000013 J	--	0.000002 U	0.0000097	0.0000074	--	0.000002 U	0.000014	0.0000024
PCB-167	0.000015	0.000065	--	0.00000085 U	0.000093	0.00021	--	0.000014	0.0032	0.00019
PCB-168	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-169	0.00000099 U	0.00000085 U	--	0.00000098 U	0.0000014 U	0.0000012 U	--	0.0000012 U	0.000052	0.0000023
PCB-17	0.0000032	0.0000057	--	0.000002 U	0.0001	0.000091	--	0.000013	0.00067	0.000006
PCB-170	0.00022	0.00098	--	0.000002 U	0.0005	0.0032	--	0.00018	0.061 J	0.0032
PCB-171	0.000056	0.00029	--	0.000002 U	0.00011	0.00089	--	0.000053	0.015	0.00089
PCB-172	0.000042	0.0002	--	0.000002 U	0.000085	0.00057	--	0.000029	0.011	0.00058
PCB-173	0.0000048	0.000025	--	0.000002 U	0.000011	0.000073	--	0.0000039	0.0011	0.000059
PCB-174	0.00023	0.0012	--	0.000003	0.00048	0.0032	--	0.00018	0.068 J	0.0035
PCB-175	0.0000098	0.000045	--	0.000002 U	0.000002 U	0.00014	--	0.0000084	0.0022	0.00012
PCB-176	0.000022	0.00012	--	0.000002 U	0.000046	0.00039	--	0.000018	0.0058	0.00036
PCB-177	0.00014	0.00068	--	0.000002 U	0.00028	0.0018	--	0.000095	0.038 J	0.0019
PCB-178	0.000056	0.00025	--	0.000002 U	0.0001	0.00065	--	0.000044	0.013	0.00062
PCB-179	0.000098	0.00046	--	0.000002 U	0.00018	0.0012	--	0.000062	0.021 J	0.0012
PCB-18	0.000006	0.000011	--	0.000002 U	0.00018	0.0002	--	0.000029	0.0014	0.0000096
PCB-180	0.00057	0.0027	--	0.000006	0.0011	0.0076	--	0.00045	0.17 J	0.0084
PCB-181	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-182/187	0.00033	0.0014	--	0.0000034 J	0.00061	0.0039	--	0.00025	0.074 J	0.0036
PCB-183	0.00013	0.00061	--	0.000002 U	0.00023	0.0018	--	0.00011	0.033 J	0.0019
PCB-184	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000025	0.000002 U
PCB-185	0.00003	0.00015	--	0.000002 U	0.000058	0.00043	--	0.000028	0.0079	0.00037
PCB-186	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-188	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000046	0.000002 U
PCB-189	0.0000093	0.000038	--	0.0000011 U	0.000019	0.00012	--	0.0000069	0.0021	0.00012
PCB-19	0.000002 U	0.000002 U	--	0.000002 U	0.000016	0.000016	--	0.0000024	0.0001	0.000002 U
PCB-190	0.000051	0.00023	--	0.000002 U	0.00011	0.00067	--	0.000038	0.014	0.00071
PCB-191	0.0000089	0.000043	--	0.000002 U	0.000019	0.00013	--	0.0000078	0.0025	0.00014
PCB-192	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-193	0.000028	0.00013	--	0.000002 U	0.000054	0.00037	--	0.000024	0.0073	0.00036
PCB-194	0.00013	0.00054	--	0.0000021	0.00018	0.0014	--	0.000098	0.03 J	0.0015
PCB-195	0.00005	0.00023	--	0.000002 U	0.000079	0.00061	--	0.000036	0.013	0.00066
PCB-196/203	0.0002	0.00068	--	0.0000026 J	0.00026	0.0018	--	0.00017	0.037	0.0019
PCB-197	0.0000043	0.000019	--	0.000002 U	0.0000074	0.000057	--	0.0000051	0.001	0.000064
PCB-198	0.000012	0.00004	--	0.000002 U	0.000021	0.000088	--	0.0000099	0.0017	0.00009
PCB-199	0.00022	0.00069	--	0.0000028	0.00027	0.0016	--	0.00017	0.034 J	0.0017
PCB-2	0.0000065	0.0000081	--	0.0000065	0.00001	0.000036	--	0.00001	0.000049	0.000011
PCB-20/21/33	0.0000085	0.000016	--	0.000006 U	0.00016	0.00019	--	0.000034	0.0014	0.000014
PCB-200	0.00002	0.000075	--	0.000002 U	0.000028	0.0002	--	0.000017	0.0039	0.00022
PCB-201	0.000019	0.00007	--	0.000002 U	0.000025	0.00019	--	0.000018	0.0034	0.00021
PCB-202	0.000051	0.00016	--	0.000002 U	0.000063	0.0003	--	0.000041	0.0051	0.00031
PCB-204	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-205	0.0000069	0.000032	--	0.000002 U	0.000011	0.000078	--	0.0000056	0.0017	0.00008
PCB-206	0.00029	0.00082	--	0.0000032	0.00028	0.00076	--	0.00024	0.0066	0.00077
PCB-207	0.000025	0.000067	--	0.000002 U	0.000023	0.000073	--	0.00002	0.00085	0.00013
PCB-208	0.00012	0.0003	--	0.0000014 J	0.00011	0.00023	--	0.000095	0.0012	0.00028
PCB-209	0.00038	0.0011	--	0.0000033	0.00034	0.00072	--	0.00035	0.00039	0.00015
PCB-22	0.0000082	0.000012	--	0.000002 U	0.00029	0.00018	--	0.000026	0.00083	0.0000078
PCB-23	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.0000031	0.000002 U
PCB-24	0.000002 U	0.000002 U	--	0.000002 U	0.000017	0.000013	--	0.0000017 J	0.000075	0.000002 U
PCB-25	0.0000023	0.0000029	--	0.000002 U	0.000052	0.000038	--	0.0000058	0.00018	0.0000022
PCB-26	0.0000036	0.0000048	--	0.000002 U	0.000093	0.000075	--	0.000011	0.00029	0.0000035
PCB-27	0.000002 U	0.000002 U	--	0.000002 U	0.000013	0.000014	--	0.0000021	0.000066	0.000002 U
PCB-28	0.000018	0.000032	--	0.000002 U	0.0009	0.00054	--	0.000069	0.0017	0.000018
PCB-29	0.000002 U	0.000002 U	--	0.000002 U	0.0000023	0.0000022	--	0.000002 U	0.000017	0.000002 U
PCB-3	0.0000096	0.000014	--	0.0000058	0.00003	0.0001	--	0.000033	0.00016	0.000024
PCB-30	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-31	0.000024	0.000037	--	0.000002 U	0.00053	0.00045	--	0.000063	0.0021	0.000019
PCB-32	0.0000024	0.0000051	--	0.000002 U	0.000072	0.000082	--	0.000012	0.00059	0.0000047
PCB-34	0.000002 U	0.000002 U	--	0.000002 U	0.0000028	0.0000017 J	--	0.000002 U	0.000008	0.000002 U
PCB-35	0.000002 U	0.0000032	--	0.000002 U	0.000014	0.000016	--	0.0000033	0.000068	0.000002 U
PCB-36	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-37	0.000021	0.000027	--	0.000002 U	0.00035	0.0003	--	0.00004	0.000033	0.000017
PCB-38	0.000002 U	0.000002 U	--	0.000002 U	0.0000052	0.0000055	--	0.000002 U	0.000002 U	0.000002 U
PCB-39	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-4	0.0000014 J	0.000004	--	0.000002 U	0.000023	0.000029	--	0.0000067	0.00041	0.0000041
PCB-40	0.000003	0.0000034	--	0.000002 U	0.000079	0.000091	--	0.0000013 J	0.00034	0.0000048
PCB-41/64/71/72	0.000026	0.000043	--	0.0000079 U	0.00082	0.00059	--	0.000064	0.0019	0.000024
PCB-42/59	0.000007	0.0000097	--	0.000004 U	0.00025	0.00022	--	0.000021	0.00076	0.000009

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-342	SB-342	SB-342	SB-342	SB-343	SB-343	SB-343	SB-343	SB-344	SB-344
SAMPLE ID	SB342-20191106-0006	SB342-20191106-0624	SB342-20191106-2448	SB342-20191106-7296	SB343-20191106-0006	SB343-20191106-0624	SB343-20191106-2448	SB343-20191106-4872	SB344-20191106-0006	SB344-20191106-0624
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
PCB-43/49	0.000025	0.000038	--	0.000004 U	0.00073	0.00047	--	0.000049	0.0018	0.000027
PCB-44	0.000015	0.00003	--	0.000002 U	0.00055	0.00051	--	0.000052	0.002	0.000029
PCB-45	0.0000019 J	0.0000028	--	0.000002 U	0.000071	0.000073	--	0.0000072	0.00022	0.0000028
PCB-46	0.000002 U	0.0000011 J	--	0.000002 U	0.000019	0.000022	--	0.0000025	0.000082	0.0000016 J
PCB-47	0.000012	0.000013	--	0.000002 U	0.00031	0.00023	--	0.000024	0.00077	0.000012
PCB-48/75	0.0000027 J	0.0000048	--	0.000004 U	0.00012	0.00011	--	0.0000079	0.00033	0.0000044
PCB-5	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000075	0.000002 U
PCB-50	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.0000045	0.000002 U
PCB-51	0.000002 U	0.000002 U	--	0.000002 U	0.000014	0.000018	--	0.0000021	0.000059	0.000002 U
PCB-52/69	0.00003	0.00007	--	0.000004 U	0.0011	0.00075	--	0.000087	0.003	0.000089
PCB-53	0.0000015 J	0.0000027	--	0.000002 U	0.000062	0.000063	--	0.0000066	0.00019	0.0000029
PCB-54	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.0000022	0.000002 U
PCB-55	0.000001 J	0.0000023	--	0.000002 U	0.000025	0.000015	--	0.0000022	0.000071	0.000002 U
PCB-56/60	0.000026	0.000045	--	0.000004 U	0.00067	0.0005	--	0.000059	0.0018	0.000025
PCB-57	0.000002 U	0.000002 U	--	0.000002 U	0.0000042	0.0000037	--	0.000002 U	0.000019	0.000002 U
PCB-58	0.000002 U	0.000002 U	--	0.000002 U	0.0000033	0.0000022	--	0.000002 U	0.0000083	0.000002 U
PCB-6	0.000002	0.0000032	--	0.000002 U	0.000024	0.00003	--	0.0000075	0.00032	0.0000037
PCB-61/70	0.000058	0.00014	--	0.000004 U	0.0012	0.00097	--	0.00013	0.0041	0.000028
PCB-62	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-63	0.0000019 J	0.0000026	--	0.000002 U	0.000045	0.000024	--	0.0000029	0.00012	0.0000021
PCB-65	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-66/76	0.000047	0.000092	--	0.000004 U	0.001	0.0008	--	0.000088	0.0034	0.000078
PCB-67	0.0000013 J	0.0000016 J	--	0.000002 U	0.000028	0.000017	--	0.0000023	0.0001	0.0000019 J
PCB-68	0.000002 U	0.000002 U	--	0.000002 U	0.0000085	0.000005	--	0.000002 U	0.000016	0.000002 U
PCB-7	0.000002 U	0.000002 U	--	0.000002 U	0.0000066	0.0000074	--	0.000003	0.000074	0.0000014 J
PCB-73	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000088	--	0.000002 U	0.000002 U	0.000002 U
PCB-74	0.000021	0.000041	--	0.000002 U	0.00048	0.00034	--	0.000039	0.0014	0.000025
PCB-77	0.00001	0.000022	--	0.00000068 U	0.00014	0.00013	--	0.000016	0.00076	0.00001
PCB-78	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000043	--	0.000002 U	0.00001	0.000002 U
PCB-79	0.0000012 J	0.0000034	--	0.000002 U	0.000013	0.000016	--	0.000002	0.00005	0.0000022
PCB-8	0.0000069	0.000013	--	0.000002 U	0.000095	0.00015	--	0.000035	0.0015	0.000015
PCB-80	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-81	0.0000016 J	0.0000055	--	0.00000062 U	0.000026	0.000029	--	0.0000035	0.00014	0.0000066
PCB-82	0.0000063	0.000021	--	0.000002 U	0.00018	0.00018	--	0.000019	0.00056	0.000015
PCB-83/112	0.0000026 J	0.0000085	--	0.000004 U	0.000065	0.00007	--	0.0000079	0.00019	0.0000097
PCB-84/92	0.000026	0.00011	--	0.000004 U	0.00058	0.00073	--	0.000068	0.0041	0.00025
PCB-85/116	0.000015	0.000052	--	0.000004 U	0.00029	0.00027	--	0.000031	0.0009	0.000027
PCB-86	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-87/117/125	0.000029	0.00012	--	0.000006 U	0.00062	0.00066	--	0.000067	0.0036	0.00015
PCB-88/91	0.000009	0.000031	--	0.000004 U	0.0002	0.00018	--	0.000022	0.00047	0.000013
PCB-89	0.000002 U	0.000002 U	--	0.000002 U	0.000013	0.000017	--	0.0000018 J	0.000028	0.000002 U
PCB-9	0.000002 U	0.000002 U	--	0.000002 U	0.0000039	0.000011	--	0.0000021	0.000083	0.0000014 J
PCB-93	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-94	0.000002 U	0.000002 U	--	0.000002 U	0.0000065	0.0000077	--	0.000002 U	0.000022	0.000002 U
PCB-95	0.000089	0.00042	--	0.000002 U	0.0012	0.002	--	0.00018	0.02	0.001
PCB-96	0.000002 U	0.000002 U	--	0.000002 U	0.0000081	0.0000082	--	0.000002 U	0.000021	0.000002 U
PCB-97	0.000018	0.000064	--	0.000002 U	0.00047	0.00049	--	0.000055	0.0018	0.000082
PCB-98/102	0.0000039 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U
PCB-99	0.000035	0.00011	--	0.000002 U	0.00059	0.00058	--	0.000067	0.0019	0.000082
PENTACHLOROBIPHENYLS	0.00068 J	0.0028 J	--	0.0000059 J	0.01 J	0.013 J	--	0.0013 J	0.1 J	0.0047 J
TEQ DIOXIN-LIKE PCBs (BIRD)	8.47724E-07	2.25187E-06	--	0.0000008 U	1.06951E-05	1.13118E-05	--	1.40123E-06	0.000086266	2.00835E-06
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	8.48219E-07	2.2523E-06	--	0.0000008 U	1.06958E-05	1.13124E-05	--	1.40183E-06	0.000086266	2.00835E-06
TEQ DIOXIN-LIKE PCBs (FISH)	1.1304E-08	3.5544E-08	--	0.0000008 U	8.2415E-08	1.24685E-07	--	1.6019E-08	1.8836E-06	4.8132E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	1.1328E-08	3.5565E-08	--	0.0000008 U	8.245E-08	1.24715E-07	--	1.6049E-08	1.8836E-06	4.8132E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.8451E-07	5.86417E-07	--	0.0000008 U	1.05429E-06	1.86481E-06	--	2.46673E-07	0.000035188	8.87285E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	1.9936E-07	5.99167E-07	--	0.0000008 U	1.07529E-06	1.88281E-06	--	2.64673E-07	0.000035188	8.87285E-07
TETRACHLOROBIPHENYLS	0.00029 J	0.00057 J	--	0 UJ	0.0078 J	0.006 J	--	0.00067 J	0.023 J	0.00039 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0001144	0.0004521	--	0 U	0.001259	0.001614	--	0.000156	0.018282	0.0008703
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.0067673	0.0276806	--	0.0000613	0.0342803	0.0871997	--	0.00707131	1.286718	0.0669101
TOTAL PCB CONGENERS ZEROND	0.0068817	0.0281327	--	0.0000613	0.0355393	0.0888137	--	0.00722731	1.305	0.0677804
TOTAL PCB CONGENERS-NOAA	0.0032199	0.013648	--	0.0000292	0.014334	0.03991	--	0.003223	0.62219	0.0319586
TOTAL PCB CONGENERS-NOAA HALFND	0.006939145	0.028187125	--	0.00023883	0.035575	0.0888473	--	0.00727591	1.305027	0.0678344
TOTAL PCB CONGENERS-NOAA X2	0.0064398	0.027296	--	0.0000584	0.028668	0.07982	--	0.006446	1.24438	0.0639172
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0064398	0.027296	--	0.0000832	0.028668	0.07982	--	0.006446	1.24438	0.0639172
TRICHLOROBIPHENYLS	0.0001 J	0.00016 J	--	0 UJ	0.0029 J	0.0023 J	--	0.00033 J	0.01 J	0.00011 J
DIOXINS/FURANS (NG/KG)										
1,2,3,4,6,7,8,9-OCDD	1100	820	--	360	1800	890	--	310	180	110
1,2,3,4,6,7,8,9-OCDF	22	15	--	0.41 U	130	68	--	15	21	5.1 J
1,2,3,4,6,7,8-HPCDD	34	33	--	3.9 J	150	76	--	22	14	9.5
1,2,3,4,6,7,8-HPCDF	14	18	--	0.79 J	56	81	--	15	13	5.1
1,2,3,4,7,8,9-HPCDF	0.81 J	1.1 J	--	0.15 U	3.1 J	2.8 J	--	0.9 J	2.4 J	0.51 J
1,2,3,4,7,8-HXCDD	0.8 J	1.4 J	--	0.22 U	2.5 J	1.4 J	--	0.83 J	0.67 J	0.6 J
1,2,3,4,7,8-HXCDF	2.1 J	4.8 J	--	0.25 J	2.6 J	9.1	--	4.1 J	11	2.7 J
1,2,3,6,7,8-HXCDD	1.7 J	3.2 J	--	0.22 U	6.3	5.2	--	2.3 J	1.5 J	1.9 J
1,2,3,6,7,8-HXCDF	1.7 J	3.1 J	--	0.23 J	2.6 J	4.4 J	--	2.5 J	3.1 J	1.2 J
1,2,3,7,8,9-HXCDD	1.2 J	1.8 J	--	0.2 U	5	2.8 J	--	1.3 J	0.97 J	1.1 J
1,2,3,7,8,9-HXCDF	0.41 J	0.69 J	--	0.16 U	0.57 J	0.79 J	--	0.59 J	0.86 J	0.38 J
1,2,3,7,8-PECDD	0.67 J	1.2 J	--	0.18 U	1.6 J	1.2 J	--	0.74 J	0.88 J	0.57 J
1,2,3,7,8-PECDF	1.3 J	3.3 J	--	0.26 J	0.91 J	2.8 J	--	2.2 J	2 J	2.6 J
2,3,4,6,7,8-HXCDF	1.7 J	2.5 J	--	0.23 J	3.3 J	3.3 J	--	2 J	2.4 J	0.67 J
2,3,4,7,8-PECDF	2.2 J	4.5 J	--	0.38 J	2.1 J	4 J	--	2.9 J	5.5	2.4 J
2,3,7,8-TCDD	0.26 J	0.45 J	--	0.082 U	0.97 J	1.3	--	0.33 J	0.35 J	0.13 J
2,3,7,8-TCDF	2	4.7	--	0.54 J	2.2	3.4	--	2.5	5.2	7.6

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-342	SB-342	SB-342	SB-342	SB-343	SB-343	SB-343	SB-343	SB-344	SB-344
SAMPLE ID	SB342-20191106-0006	SB342-20191106-0624	SB342-20191106-2448	SB342-20191106-7296	SB343-20191106-0006	SB343-20191106-0624	SB343-20191106-2448	SB343-20191106-4872	SB344-20191106-0006	SB344-20191106-0624
SAMPLE DATE	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106	20191106
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS	SS
TEQ DIOXINS (BIRD)	6.3223	12.8785	--	1.0648	9.49	13.3508	--	8.017	14.1996	11.69111
TEQ DIOXINS (BIRD) HALFND	6.3223	12.8785	--	1.2211705	9.49	13.3508	--	8.017	14.1996	11.69111
TEQ DIOXINS (FISH)	3.5093	6.4665	--	0.3488	6.9795	8.3588	--	4.3385	6.6238	3.31211
TEQ DIOXINS (FISH) HALFND	3.5093	6.4665	--	0.5456705	6.9795	8.3588	--	4.3385	6.6238	3.31211
TEQ DIOXINS (HUMANS/MAMMALS)	3.6147	6.0895	--	0.4017	8.4043	8.7084	--	4.0945	5.8643	3.29863
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	3.6147	6.0895	--	0.5735115	8.4043	8.7084	--	4.0945	5.8643	3.29863
TOTAL HPCDD	68 J	65 J	--	7.6 J	310 J	160 J	--	44 J	27 J	20 J
TOTAL HPCDF	28 J	29 J	--	0.79 J	140 J	140 J	--	24 J	24 J	6.9 J
TOTAL HXCDD	21 J	48 J	--	1.7 J	57 J	57 J	--	34 J	18 J	35 J
TOTAL HXCDF	20 J	30 J	--	1.8 J	60 J	57 J	--	24 J	43 J	10 J
TOTAL PECDD	13 J	36 J	--	0.89 J	22 J	31 J	--	20 J	13 J	29 J
TOTAL PECDF	22 J	44 J	--	3.3 J	29 J	43 J	--	30 J	60 J	17 J
TOTAL TCDD	13 J	33 J	--	1.3 J	33 J	30 J	--	19 J	11 J	35 J
TOTAL TCDF	34 J	69 J	--	8.1 J	23 J	55 J	--	44 J	47 J	45 J
METALS (MG/KG)										
ALUMINUM	6560	8060	--	4790	7110	8890	--	6430	6370	4690
ANTIMONY	0.85 J	0.81 J	--	0.57 J	0.69 J	1.1 J	--	0.44 J	0.72 J	0.51 J
ARSENIC	15.3	28.8	--	7.7	8.9	27	--	15.2	23	26.8
BARIUM	101	110	--	73	141	221	--	142	166	141
BERYLLIUM	0.85	0.7	--	0.81	0.95	1.5	--	1.1	1.2	0.47 J
CADMIUM	0.32 J	1.3	--	0.17 J	0.8	0.98	--	0.51 J	1.4	0.12 J
CALCIUM	1480	1140	--	604 U	5080	1650	--	777	2120	312 J
CHROMIUM	9.2	8	--	11.5	20.7	28.7	--	12.6	175	10.2
COBALT	8.9	4.9	--	7.4	16.9	18.5	--	9.3	16.9	5.6
COPPER	39.9	56	--	21.8	41.9	85.3	--	56.5	61.6	43.2
CYANIDE	0.33 J	0.35 J	--	0.18 J	0.31 J	0.32 J	--	0.092 J	0.49 J	0.25 J
IRON	10800	16000	--	9800	12500	23100	--	9350	15300	16000
LEAD	85	193	--	57.9	79.9	274	--	194	99.9	34.3
MAGNESIUM	590 J	639	--	328 J	1500	1280	--	511 J	1720	1230
MANGANESE	272	180	--	133	1430	324	--	211	548	105
MERCURY	0.14	0.19	--	0.091 J	0.068 J	0.11 J	--	0.1 J	0.057 J	0.2
NICKEL	12.8	8.4	--	12.6	26.1	30.1	--	10.5	27.6	12.4
POTASSIUM	1070	1590	--	703	1110	1870	--	970	1490	1420
SELENIUM	3.1 UJ	3.1 UJ	--	2.9 UJ	3.3 UJ	3.2 UJ	--	3 UJ	2.8 UJ	2.7 UJ
SILVER	0.13 J	0.091 J	--	0.079 J	0.45 J	0.55 J	--	0.18 J	0.14 J	0.096 J
SODIUM	88.9 J	157 J	--	56.5 J	40.5 J	174 J	--	112 J	65.5 J	132 J
THALLIUM	0.63 U	0.61 U	--	0.57 U	0.66 U	0.65 U	--	0.61 U	0.55 U	0.53 U
VANADIUM	11.2	8.9	--	12.5	16.4	24	--	18.4	2.8	9.3
ZINC	112	264	--	72.9	282	260	--	153	118	39.3
MISCELLANEOUS (%)										
TOTAL SOLIDS	72	--	--	--	--	78	--	--	--	--
MISCELLANEOUS (MG/KG)										
TOTAL ORGANIC CARBON	218000	--	--	--	--	123000	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)										
PERCENT SOLIDS	--	75	74	92	--	82	84	--	--	80

LOCATION	SB-344	SB-344
SAMPLE ID	SB344-20191106-2448	SB344-20191106-6084
SAMPLE DATE	20191106	20191106
DUPLICATE		
SAMPLE CODE	NORMAL	NORMAL
MATRIX	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House
SUBMATRIX	SB	SB
TOP DEPTH	2	5
BOTTOM DEPTH	4	7
VOLATILES (MG/KG)		
1,1,1-TRICHLOROETHANE	--	0.0051 U
1,1,2,2-TETRACHLOROETHANE	--	0.0051 U
1,1,2-TRICHLOROETHANE	--	0.0051 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	0.0051 U
1,1-DICHLOROETHANE	--	0.0051 U
1,1-DICHLOROETHENE	--	0.0051 U
1,2,3-TRICHLOROBENZENE	--	0.0051 UJ
1,2,4-TRICHLOROBENZENE	--	0.0051 UJ
1,2-DIBROMO-3-CHLOROPROPANE	--	0.0051 U
1,2-DIBROMOETHANE	--	0.0051 U
1,2-DICHLOROBENZENE	--	0.0051 UJ
1,2-DICHLOROETHANE	--	0.0051 U
1,2-DICHLOROPROPANE	--	0.0051 U
1,3-DICHLOROBENZENE	--	0.0051 UJ
1,4-DICHLOROBENZENE	--	0.0051 UJ
2-BUTANONE	--	0.01 U
2-HEXANONE	--	0.01 U
4-METHYL-2-PENTANONE	--	0.01 U
ACETONE	--	0.01 U
BENZENE	--	0.0051 U
BROMOCHLOROMETHANE	--	0.0051 U
BROMODICHLOROMETHANE	--	0.0051 U
BROMOFORM	--	0.0051 U
BROMOMETHANE	--	0.0051 U
CARBON DISULFIDE	--	0.0051 U
CARBON TETRACHLORIDE	--	0.0051 U
CHLOROBENZENE	--	0.0051 UJ
CHLORODIBROMOMETHANE	--	0.0051 U
CHLOROETHANE	--	0.0051 U
CHLOROFORM	--	0.0051 U
CHLOROMETHANE	--	0.0051 U
CIS-1,2-DICHLOROETHENE	--	0.0051 U
CIS-1,3-DICHLOROPROPENE	--	0.0051 U
CYCLOHEXANE	--	0.0051 U
DICHLORODIFLUOROMETHANE	--	0.0051 U
ETHYLBENZENE	--	0.0051 U
ISOPROPYLBENZENE	--	0.0051 U
M+P-XYLENES	--	0.0051 U
METHYL ACETATE	--	0.0051 U
METHYL CYCLOHEXANE	--	0.0051 U
METHYL TERT-BUTYL ETHER	--	0.0051 U
METHYLENE CHLORIDE	--	0.0051 U
O-XYLENE	--	0.0051 U
STYRENE	--	0.0051 U
TETRACHLOROETHENE	--	0.0051 U
TOLUENE	--	0.0051 U
TRANS-1,2-DICHLOROETHENE	--	0.0051 U
TRANS-1,3-DICHLOROPROPENE	--	0.0051 U
TRICHLOROETHENE	--	0.0051 R
TRICHLOROFLUOROMETHANE	--	0.0051 U
VINYL CHLORIDE	--	0.0051 U
SEMIVOLATILES (MG/KG)		
1,1-BIPHENYL	--	0.019 J
1,2,4,5-TETRACHLOROBENZENE	--	0.19 U
1,4-DIOXANE	--	0.075 U
2,2'-OXYBIS(1-CHLOROPROPANE)	--	0.37 U
2,3,4,6-TETRACHLOROPHENOL	--	0.19 U
2,4,5-TRICHLOROPHENOL	--	0.19 U
2,4,6-TRICHLOROPHENOL	--	0.19 U
2,4-DICHLOROPHENOL	--	0.19 U
2,4-DIMETHYLPHENOL	--	0.19 U
2,4-DINITROPHENOL	--	0.37 U
2,4-DINITROTOLUENE	--	0.19 U
2,6-DINITROTOLUENE	--	0.19 U
2-CHLORONAPHTHALENE	--	0.19 U
2-CHLOROPHENOL	--	0.19 U
2-METHYLNAPHTHALENE	--	0.055 J
2-METHYLPHENOL	--	0.37 U
2-NITROANILINE	--	0.19 U
2-NITROPHENOL	--	0.19 U
3&4-METHYLPHENOL	--	0.37 U
3,3'-DICHLOROBENZIDINE	--	0.37 U
3-NITROANILINE	--	0.37 U
4,6-DINITRO-2-METHYLPHENOL	--	0.37 U
4-BROMOPHENYL PHENYL ETHER	--	0.19 U
4-CHLORO-3-METHYLPHENOL	--	0.19 U
4-CHLOROANILINE	--	0.37 U
4-CHLOROPHENYL PHENYL ETHER	--	0.19 U
4-NITROANILINE	--	0.37 U
4-NITROPHENOL	--	0.37 U

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-344	SB-344
SAMPLE ID	SB344-20191106-2448	SB344-20191106-6084
SAMPLE DATE	20191106	20191106
DUPLICATE		
SAMPLE CODE	NORMAL	NORMAL
MATRIX	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House
SUBMATRIX	SB	SB
ACENAPHTHENE	--	0.19 U
ACENAPHTHYLENE	--	0.19 U
ACETOPHENONE	--	0.37 U
ANTHRACENE	--	0.019 J
ATRAZINE	--	0.37 U
BAP EQUIVALENT-HALFND	--	0.14022
BAP EQUIVALENT-POS	--	0.03477
BENZALDEHYDE	--	0.027 J
BENZO(A)ANTHRACENE	--	0.029 J
BENZO(A)PYRENE	--	0.024 J
BENZO(B)FLUORANTHENE	--	0.077 J
BENZO(G,H,I)PERYLENE	--	0.022 J
BENZO(K)FLUORANTHENE	--	0.19 U
BIS(2-CHLOROETHOXY)METHANE	--	0.19 U
BIS(2-CHLOROETHYL)ETHER	--	0.37 U
BIS(2-ETHYLHEXYL)PHTHALATE	--	0.19 U
BUTYL BENZYL PHTHALATE	--	0.19 U
CAPROLACTAM	--	0.37 U
CARBAZOLE	--	0.37 U
CHRYSENE	--	0.17 J
DIBENZO(A,H)ANTHRACENE	--	0.19 U
DIBENZOFURAN	--	0.19 U
DIETHYL PHTHALATE	--	0.19 U
DIMETHYL PHTHALATE	--	0.19 U
DI-N-BUTYL PHTHALATE	--	0.19 U
DI-N-OCTYL PHTHALATE	--	0.37 U
FLUORANTHENE	--	0.086 J
FLUORENE	--	0.19 U
HEXACHLOROBENZENE	--	0.19 U
HEXACHLOROBUTADIENE	--	0.19 U
HEXACHLOROCYCLOPENTADIENE	--	0.37 U
HEXACHLOROETHANE	--	0.19 U
HIGH MOLECULAR WEIGHT PAHS	--	0.401
INDENO(1,2,3-CD)PYRENE	--	0.19 U
ISOPHORONE	--	0.19 U
LOW MOLECULAR WEIGHT PAHS	--	0.299
NAPHTHALENE	--	0.014 J
NITROBENZENE	--	0.19 U
N-NITROSO-DI-N-PROPYLAMINE	--	0.19 U
N-NITROSODIPHENYLAMINE	--	0.19 U
PENTACHLOROPHENOL	--	0.37 U
PHENANTHRENE	--	0.18 J
PHENOL	--	0.37 U
PYRENE	--	0.079 J
TOTAL PAHS	--	0.7
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K		
1,4-DIOXANE	--	0.0076 U
2-METHYLNAPHTHALENE	--	0.058
ACENAPHTHENE	--	0.0079
ACENAPHTHYLENE	--	0.0031 J
ANTHRACENE	--	0.017
BAP EQUIVALENT-HALFND	--	0.03373
BAP EQUIVALENT-POS	--	0.03188
BENZO(A)ANTHRACENE	--	0.029
BENZO(A)PYRENE	--	0.02
BENZO(B)FLUORANTHENE	--	0.079
BENZO(G,H,I)PERYLENE	--	0.011 J
BENZO(K)FLUORANTHENE	--	0.011
CHRYSENE	--	0.17
DIBENZO(A,H)ANTHRACENE	--	0.0037 U
FLUORANTHENE	--	0.068
FLUORENE	--	0.013
HIGH MOLECULAR WEIGHT PAHS	--	0.386
INDENO(1,2,3-CD)PYRENE	--	0.008
LOW MOLECULAR WEIGHT PAHS	--	0.316
NAPHTHALENE	--	0.017
PENTACHLOROPHENOL	--	0.0075 U
PHENANTHRENE	--	0.19
PYRENE	--	0.058
TOTAL PAHS	--	0.17
PESTICIDES (MG/KG)		
4,4'-DDD	--	0.002 J
4,4'-DDE	--	0.0037 U
4,4'-DDT	--	0.0037 U
ALDRIN	--	0.0019 U
ALPHA-BHC	--	0.0019 U
ALPHA-CHLORDANE	--	0.0019 U
BETA-BHC	--	0.0019 U
DELTA-BHC	--	0.0019 U
DIELDRIN	--	0.0037 U
ENDOSULFAN I	--	0.0019 U
ENDOSULFAN II	--	0.0037 U
ENDOSULFAN SULFATE	--	0.0037 U

LOCATION	SB-344	SB-344
SAMPLE ID	SB344-20191106-2448	SB344-20191106-6084
SAMPLE DATE	20191106	20191106
DUPLICATE		
SAMPLE CODE	NORMAL	NORMAL
MATRIX	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House
SUBMATRIX	SB	SB
ENDRIN	--	0.00029 J
ENDRIN ALDEHYDE	--	0.0037 U
ENDRIN KETONE	--	0.0037 U
GAMMA-BHC (LINDANE)	--	0.0013 J
GAMMA-CHLORDANE	--	0.0019 U
HEPTACHLOR	--	0.0019 U
HEPTACHLOR EPOXIDE	--	0.0019 U
METHOXYCHLOR	--	0.019 U
TOXAPHENE	--	0.19 U
PCBS (MG/KG)		
AROCLOR-1016	--	0.037 U
AROCLOR-1221	--	0.037 U
AROCLOR-1232	--	0.037 U
AROCLOR-1242	--	0.037 U
AROCLOR-1248	--	0.037 U
AROCLOR-1254	--	0.037 U
AROCLOR-1260	--	0.037 U
AROCLOR-1262	--	0.037 U
AROCLOR-1268	--	0.037 U
TOTAL AROCLOR	--	0 U
TOTAL AROCLOR HALFND	--	0.1665
MOBILE LAB PESTICIDES/PCBS (MG/KG)		
AROCLOR-1016	0.342 U	--
AROCLOR-1221	0.685 U	--
AROCLOR-1232	0.342 U	--
AROCLOR-1242	0.342 U	--
AROCLOR-1248	0.342 U	--
AROCLOR-1254	0.342 U	--
AROCLOR-1260	0.125 J	--
AROCLOR-1262	0.342 U	--
AROCLOR-1268	0.342 U	--
TOTAL AROCLOR	0.125	--
TOTAL AROCLOR HALFND	1.6645	--
PCB CONGENERS (MG/KG)		
DICHLOROBIPHENYLS	--	0.000013 J
HEPTACHLOROBIPHENYLS	--	0.00064 J
HEXACHLOROBIPHENYLS	--	0.00056 J
MONOCHLOROBIPHENYLS	--	0.0000099 J
NONACHLOROBIPHENYLS	--	0.00017 J
OCTACHLOROBIPHENYLS	--	0.00049 J
PCB-1	--	0.0000026
PCB-10	--	0.000002 U
PCB-100	--	0.000002 U
PCB-101/90	--	0.000064
PCB-103	--	0.000002 U
PCB-104	--	0.000002 U
PCB-105	--	0.00002
PCB-108/107	--	0.0000036 J
PCB-109	--	0.000002 U
PCB-11	--	0.000004
PCB-110	--	0.000083
PCB-111/115	--	0.000004 U
PCB-113	--	0.000002 U
PCB-114	--	0.0000011 J
PCB-118/106	--	0.000052
PCB-119	--	0.000002 U
PCB-12	--	0.000002 U
PCB-120	--	0.000002 U
PCB-121	--	0.000002 U
PCB-122	--	0.00000097 J
PCB-123	--	0.0000012 J
PCB-124	--	0.0000028
PCB-126	--	0.0000012 J
PCB-127	--	0.000002 U
PCB-128/162	--	0.000018
PCB-129	--	0.0000061
PCB-13	--	0.000002 U
PCB-130	--	0.0000071
PCB-131/133	--	0.0000035 J
PCB-132/161	--	0.000026
PCB-134/143	--	0.0000061
PCB-135	--	0.000013
PCB-136	--	0.000018
PCB-137	--	0.0000055
PCB-138/163/164	--	0.00013
PCB-139/149	--	0.000092
PCB-14	--	0.000002 U
PCB-140	--	0.000002 U
PCB-141	--	0.000026
PCB-142	--	0.000002 U
PCB-144	--	0.0000033
PCB-145	--	0.000002 U
PCB-146/165	--	0.000016

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-344	SB-344
SAMPLE ID	SB344-20191106-2448	SB344-20191106-6084
SAMPLE DATE	20191106	20191106
DUPLICATE		
SAMPLE CODE	NORMAL	NORMAL
MATRIX	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House
SUBMATRIX	SB	SB
PCB-147	--	0.0000018 J
PCB-148	--	0.000002 U
PCB-15	--	0.0000053
PCB-150	--	0.000002 U
PCB-151	--	0.000028
PCB-152	--	0.000002 U
PCB-153	--	0.00012
PCB-154	--	0.000002 U
PCB-155	--	0.000002 U
PCB-156	--	0.000013
PCB-157	--	0.0000033
PCB-158/160	--	0.000015
PCB-159	--	0.000003
PCB-16	--	0.000002 U
PCB-166	--	0.000002 U
PCB-167	--	0.0000063
PCB-168	--	0.000002 U
PCB-169	--	0.0000011 U
PCB-17	--	0.000002 U
PCB-170	--	0.000053
PCB-171	--	0.000015
PCB-172	--	0.00001
PCB-173	--	0.000002 U
PCB-174	--	0.00007
PCB-175	--	0.000002 U
PCB-176	--	0.0000073
PCB-177	--	0.000036
PCB-178	--	0.000016
PCB-179	--	0.000029
PCB-18	--	0.0000035
PCB-180	--	0.0002
PCB-181	--	0.000002 U
PCB-182/187	--	0.00012
PCB-183	--	0.000047
PCB-184	--	0.000002 U
PCB-185	--	0.000009
PCB-186	--	0.000002 U
PCB-188	--	0.000002 U
PCB-189	--	0.0000025
PCB-19	--	0.000002 U
PCB-190	--	0.000014
PCB-191	--	0.0000032
PCB-192	--	0.000002 U
PCB-193	--	0.0000076
PCB-194	--	0.000091
PCB-195	--	0.000025
PCB-196/203	--	0.00016
PCB-197	--	0.0000035
PCB-198	--	0.0000053
PCB-199	--	0.00014
PCB-2	--	0.0000034
PCB-20/21/33	--	0.0000044 J
PCB-200	--	0.000013
PCB-201	--	0.000016
PCB-202	--	0.000034
PCB-204	--	0.000002 U
PCB-205	--	0.0000032
PCB-206	--	0.00012
PCB-207	--	0.000015
PCB-208	--	0.000032
PCB-209	--	0.000024
PCB-22	--	0.0000021
PCB-23	--	0.000002 U
PCB-24	--	0.000002 U
PCB-25	--	0.000002 U
PCB-26	--	0.0000014 J
PCB-27	--	0.000002 U
PCB-28	--	0.0000054
PCB-29	--	0.000002 U
PCB-3	--	0.0000039
PCB-30	--	0.000002 U
PCB-31	--	0.0000068
PCB-32	--	0.000002 U
PCB-34	--	0.000002 U
PCB-35	--	0.000002 U
PCB-36	--	0.000002 U
PCB-37	--	0.0000043
PCB-38	--	0.000002 U
PCB-39	--	0.000002 U
PCB-4	--	0.000002 U
PCB-40	--	0.0000016 J
PCB-41/64/71/72	--	0.0000085
PCB-42/59	--	0.000004 U

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-344	SB-344
SAMPLE ID	SB344-20191106-2448	SB344-20191106-6084
SAMPLE DATE	20191106	20191106
DUPLICATE		
SAMPLE CODE	NORMAL	NORMAL
MATRIX	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House
SUBMATRIX	SB	SB
PCB-43/49	--	0.0000084
PCB-44	--	0.000012
PCB-45	--	0.000002 U
PCB-46	--	0.000002 U
PCB-47	--	0.0000023
PCB-48/75	--	0.0000011 J
PCB-5	--	0.000002 U
PCB-50	--	0.000002 U
PCB-51	--	0.000002 U
PCB-52/69	--	0.000023
PCB-53	--	0.000002 U
PCB-54	--	0.000002 U
PCB-55	--	0.000002 U
PCB-56/60	--	0.0000063
PCB-57	--	0.000002 U
PCB-58	--	0.000002 U
PCB-6	--	0.000002 U
PCB-61/70	--	0.000029
PCB-62	--	0.000002 U
PCB-63	--	0.000002 U
PCB-65	--	0.000002 U
PCB-66/76	--	0.000014
PCB-67	--	0.000002 U
PCB-68	--	0.000002 U
PCB-7	--	0.000002 U
PCB-73	--	0.000002 U
PCB-74	--	0.0000066
PCB-77	--	0.0000021
PCB-78	--	0.000002 U
PCB-79	--	0.000002 U
PCB-8	--	0.0000035
PCB-80	--	0.000002 U
PCB-81	--	0.0000012 J
PCB-82	--	0.0000066
PCB-83/112	--	0.0000026 J
PCB-84/92	--	0.00002
PCB-85/116	--	0.0000086
PCB-86	--	0.000002 U
PCB-87/117/125	--	0.000021
PCB-88/91	--	0.0000059
PCB-89	--	0.000002 U
PCB-9	--	0.000002 U
PCB-93	--	0.000002 U
PCB-94	--	0.000002 U
PCB-95	--	0.000051
PCB-96	--	0.000002 U
PCB-97	--	0.000017
PCB-98/102	--	0.000004 U
PCB-99	--	0.000019
PENTACHLOROBIPHENYLS	--	0.00038 J
TEQ DIOXIN-LIKE PCBs (BIRD)	--	3.4884E-07
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	3.4939E-07
TEQ DIOXIN-LIKE PCBs (FISH)	--	7.045E-09
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	7.072E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	1.21992E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	1.38492E-07
TETRACHLOROBIPHENYLS	--	0.00012 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	0.0000519
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	0.00237897
TOTAL PCB CONGENERS ZEROND	--	0.00243087
TOTAL PCB CONGENERS-NOAA	--	0.0010074
TOTAL PCB CONGENERS-NOAA HALFND	--	0.00251142
TOTAL PCB CONGENERS-NOAA X2	--	0.0020148
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	0.0020148
TRICHLOROBIPHENYLS	--	0.000028 J
DIOXINS/FURANS (NG/KG)		
1,2,3,4,6,7,8,9-OCDD	--	41
1,2,3,4,6,7,8,9-OCDF	--	0.61 J
1,2,3,4,6,7,8-HPCDD	--	3 J
1,2,3,4,6,7,8-HPCDF	--	0.55 J
1,2,3,4,7,8,9-HPCDF	--	0.15 U
1,2,3,4,7,8-HXCDD	--	0.21 U
1,2,3,4,7,8-HXCDF	--	0.22 U
1,2,3,6,7,8-HXCDD	--	0.23 U
1,2,3,6,7,8-HXCDF	--	0.22 U
1,2,3,7,8,9-HXCDD	--	0.2 U
1,2,3,7,8,9-HXCDF	--	0.26 U
1,2,3,7,8-PECDD	--	0.18 U
1,2,3,7,8-PECDF	--	0.18 J
2,3,4,6,7,8-HXCDF	--	0.26 U
2,3,4,7,8-PECDF	--	0.21 J
2,3,7,8-TCDD	--	0.08 U
2,3,7,8-TCDF	--	0.23 J

TABLE 5

SOIL ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-344	SB-344
SAMPLE ID	SB344-20191106-2448	SB344-20191106-6084
SAMPLE DATE	20191106	20191106
DUPLICATE		
SAMPLE CODE	NORMAL	NORMAL
MATRIX	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House
SUBMATRIX	SB	SB
TEQ DIOXINS (BIRD)	--	0.470661
TEQ DIOXINS (BIRD) HALFND	--	0.665811
TEQ DIOXINS (FISH)	--	0.138161
TEQ DIOXINS (FISH) HALFND	--	0.371561
TEQ DIOXINS (HUMANS/MAMMALS)	--	0.139383
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	0.350133
TOTAL HPCDD	--	5.7 J
TOTAL HPCDF	--	0.91 J
TOTAL HXCDD	--	6.6 J
TOTAL HXCDF	--	0.35 J
TOTAL PECDD	--	1.6 J
TOTAL PECDF	--	1.7 J
TOTAL TCDD	--	0.7 J
TOTAL TCDF	--	2.5 J
METALS (MG/KG)		
ALUMINUM	--	5080
ANTIMONY	--	0.53 J
ARSENIC	--	21.8
BARIUM	--	97.2
BERYLLIUM	--	0.82
CADMIUM	--	0.092 J
CALCIUM	--	840
CHROMIUM	--	10.2
COBALT	--	14.2
COPPER	--	93.6
CYANIDE	--	0.31 J
IRON	--	14300
LEAD	--	21.3
MAGNESIUM	--	2180
MANGANESE	--	384
MERCURY	--	0.07 J
NICKEL	--	17.9
POTASSIUM	--	866
SELENIUM	--	2.7 UJ
SILVER	--	0.062 J
SODIUM	--	44.3 J
THALLIUM	--	0.53 U
VANADIUM	--	8.5
ZINC	--	52.8
MISCELLANEOUS (%)		
TOTAL SOLIDS	--	--
MISCELLANEOUS (MG/KG)		
TOTAL ORGANIC CARBON	--	--
MOBILE LAB MISCELLANEOUS (%)		
PERCENT SOLIDS	73	--

TABLE 6

SURFACE WATER ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD340	SW/SD340	SW/SD341	SW/SD341	SW/SD341	SW/SD341
SAMPLE ID	SW340-20191212	SW340-20191212-F	SW341-20191212	SW341-20191212-D	SW341-20191212-F	SW341-20191212-F-D
SAMPLE DATE	20191212	20191212	20191212	20191212	20191212	20191212
DUPLICATE				SW341-20191212		SW341-20191212-F
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP	ORIG	DUP
MATRIX	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
VOLATILES (UG/L)						
1,1,1-TRICHLOROETHANE	5 U	--	5 U	5 U	--	--
1,1,2,2-TETRACHLOROETHANE	5 U	--	5 U	5 U	--	--
1,1,2-TRICHLOROETHANE	5 U	--	5 U	5 U	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	--	5 U	5 U	--	--
1,1-DICHLOROETHANE	5 U	--	5 U	5 U	--	--
1,1-DICHLOROETHENE	5 U	--	5 U	5 U	--	--
1,2,3-TRICHLOROBENZENE	5 U	--	5 U	5 U	--	--
1,2,4-TRICHLOROBENZENE	5 U	--	5 U	5 U	--	--
1,2-DIBROMO-3-CHLOROPROPANE	5 U	--	5 U	5 U	--	--
1,2-DIBROMOETHANE	5 U	--	5 U	5 U	--	--
1,2-DICHLOROBENZENE	5 U	--	5 U	5 U	--	--
1,2-DICHLOROETHANE	5 U	--	5 U	5 U	--	--
1,2-DICHLOROPROPANE	5 U	--	5 U	5 U	--	--
1,3-DICHLOROBENZENE	5 U	--	5 U	5 U	--	--
1,4-DICHLOROBENZENE	5 U	--	5 U	5 U	--	--
2-BUTANONE	10 U	--	10 U	10 U	--	--
2-HEXANONE	10 U	--	10 U	10 U	--	--
4-METHYL-2-PENTANONE	10 U	--	10 U	10 U	--	--
ACETONE	10 U	--	10 U	10 U	--	--
BENZENE	5 U	--	5 U	5 U	--	--
BROMOCHLOROMETHANE	5 U	--	5 U	5 U	--	--
BROMODICHLOROMETHANE	5 U	--	5 U	5 U	--	--
BROMOFORM	5 U	--	5 U	5 U	--	--
BROMOMETHANE	5 U	--	5 U	5 U	--	--
CARBON DISULFIDE	5 U	--	5 U	5 U	--	--
CARBON TETRACHLORIDE	5 U	--	5 U	5 U	--	--
CHLOROBENZENE	5 U	--	5 U	5 U	--	--
CHLORODIBROMOMETHANE	5 U	--	5 U	5 U	--	--
CHLOROETHANE	5 U	--	5 U	5 U	--	--
CHLOROFORM	5 U	--	5 U	5 U	--	--
CHLOROMETHANE	5 U	--	5 U	5 U	--	--
CIS-1,2-DICHLOROETHENE	5 U	--	5 U	5 U	--	--
CIS-1,3-DICHLOROPROPENE	5 U	--	5 U	5 U	--	--
CYCLOHEXANE	5 U	--	5 U	5 U	--	--
DICHLORODIFLUOROMETHANE	5 U	--	5 U	5 U	--	--
ETHYLBENZENE	5 U	--	5 U	5 U	--	--
ISOPROPYLBENZENE	5 U	--	5 U	5 U	--	--
M+P-XYLENES	5 U	--	5 U	5 U	--	--
METHYL ACETATE	5 U	--	5 U	5 U	--	--
METHYL CYCLOHEXANE	5 U	--	5 U	5 U	--	--
METHYL TERT-BUTYL ETHER	5 U	--	5 U	5 U	--	--
METHYLENE CHLORIDE	5 U	--	5 U	5 U	--	--
O-XYLENE	5 U	--	5 U	5 U	--	--
STYRENE	5 U	--	5 U	5 U	--	--
TETRACHLOROETHENE	5 U	--	5 U	5 U	--	--
TOLUENE	5 U	--	5 U	5 U	--	--
TRANS-1,2-DICHLOROETHENE	5 U	--	5 U	5 U	--	--
TRANS-1,3-DICHLOROPROPENE	5 U	--	5 U	5 U	--	--
TRICHLOROETHENE	5 U	--	5 U	5 U	--	--
TRICHLOROFLUOROMETHANE	5 U	--	5 U	5 U	--	--
VINYL CHLORIDE	5 U	--	5 U	5 U	--	--
SEMIVOLATILES (UG/L)						
1,1-BIPHENYL	5 U	--	5 U	5 U	--	--
1,2,4,5-TETRACHLOROBENZENE	5 U	--	5 U	5 U	--	--
1,4-DIOXANE	2 U	--	2 U	2 U	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	--	10 U	10 U	--	--
2,3,4,6-TETRACHLOROPHENOL	5 U	--	5 U	5 U	--	--
2,4,5-TRICHLOROPHENOL	5 U	--	5 U	5 U	--	--
2,4,6-TRICHLOROPHENOL	5 U	--	5 U	5 U	--	--
2,4-DICHLOROPHENOL	5 U	--	5 U	5 U	--	--
2,4-DIMETHYLPHENOL	5 U	--	5 U	5 U	--	--
2,4-DINITROPHENOL	10 R	--	10 U	10 U	--	--
2,4-DINITROTOLUENE	5 U	--	5 U	5 U	--	--
2,6-DINITROTOLUENE	5 U	--	5 U	5 U	--	--
2-CHLORONAPHTHALENE	5 U	--	5 U	5 U	--	--
2-CHLOROPHENOL	5 U	--	5 U	5 U	--	--
2-METHYLNAPHTHALENE	5 U	--	5 U	5 U	--	--
2-METHYLPHENOL	10 U	--	10 U	10 U	--	--
2-NITROANILINE	5 R	--	5 U	5 U	--	--
2-NITROPHENOL	5 U	--	5 U	5 U	--	--
3&4-METHYLPHENOL	10 U	--	10 U	10 U	--	--
3,3'-DICHLOROBENZIDINE	10 U	--	10 U	10 U	--	--
3-NITROANILINE	10 R	--	10 U	10 U	--	--
4,6-DINITRO-2-METHYLPHENOL	10 UJ	--	10 UJ	10 U	--	--
4-BROMOPHENYL PHENYL ETHER	5 U	--	5 U	5 U	--	--
4-CHLORO-3-METHYLPHENOL	5 U	--	5 U	5 U	--	--
4-CHLOROANILINE	10 U	--	10 U	10 U	--	--
4-CHLOROPHENYL PHENYL ETHER	5 U	--	5 U	5 U	--	--
4-NITROANILINE	10 R	--	10 U	10 U	--	--
4-NITROPHENOL	10 R	--	10 U	10 U	--	--
ACENAPHTHENE	5 U	--	5 U	5 U	--	--
ACENAPHTHYLENE	5 U	--	5 U	5 U	--	--
ACETOPHENONE	10 U	--	10 U	10 U	--	--

TABLE 6

SURFACE WATER ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD340	SW/SD340	SW/SD341	SW/SD341	SW/SD341	SW/SD341
SAMPLE ID	SW340-20191212	SW340-20191212-F	SW341-20191212	SW341-20191212-D	SW341-20191212-F	SW341-20191212-F-D
SAMPLE DATE	20191212	20191212	20191212	20191212	20191212	20191212
DUPLICATE				SW341-20191212		SW341-20191212-F
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP	ORIG	DUP
MATRIX	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
ANTHRACENE	5 U	--	5 U	5 U	--	--
ATRAZINE	10 U	--	10 U	10 U	--	--
BAP EQUIVALENT-HALFND	5 U	--	5 U	5 U	--	--
BAP EQUIVALENT-POS	5 U	--	5 U	5 U	--	--
BENZALDEHYDE	10 U	--	10 U	10 U	--	--
BENZO(A)ANTHRACENE	5 U	--	5 U	5 U	--	--
BENZO(A)PYRENE	5 U	--	5 U	5 U	--	--
BENZO(B)FLUORANTHENE	5 U	--	5 U	5 U	--	--
BENZO(G,H,I)PERYLENE	5 U	--	5 U	5 U	--	--
BENZO(K)FLUORANTHENE	5 U	--	5 U	5 U	--	--
BIS(2-CHLOROETHOXY)METHANE	5 U	--	5 U	5 U	--	--
BIS(2-CHLOROETHYL)ETHER	10 U	--	10 U	10 U	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	5 U	--	5 U	5 U	--	--
BUTYL BENZYL PHTHALATE	5 U	--	5 U	5 U	--	--
CAPROLACTAM	10 U	--	10 U	10 U	--	--
CARBAZOLE	10 U	--	10 U	10 U	--	--
CHRYSENE	5 U	--	5 U	5 U	--	--
DIBENZO(A,H)ANTHRACENE	5 U	--	5 U	5 U	--	--
DIBENZOFURAN	5 U	--	5 U	5 U	--	--
DIETHYL PHTHALATE	5 U	--	5 U	5 U	--	--
DIMETHYL PHTHALATE	1.8 J	--	1.2 J	1.4 J	--	--
DI-N-BUTYL PHTHALATE	5 U	--	5 U	5 U	--	--
DI-N-OCTYL PHTHALATE	10 U	--	10 U	10 U	--	--
FLUORANTHENE	10 U	--	10 U	10 U	--	--
FLUORENE	5 U	--	5 U	5 U	--	--
HEXACHLOROBENZENE	5 U	--	5 U	5 U	--	--
HEXACHLOROBUTADIENE	5 U	--	5 U	5 U	--	--
HEXACHLOROCYCLOPENTADIENE	10 U	--	10 U	10 U	--	--
HEXACHLOROETHANE	5 U	--	5 U	5 U	--	--
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0 U	0 U	--	--
INDENO(1,2,3-CD)PYRENE	5 U	--	5 U	5 U	--	--
ISOPHORONE	5 U	--	5 U	5 U	--	--
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	0 U	--	--
NAPHTHALENE	5 U	--	5 U	5 U	--	--
NITROBENZENE	5 U	--	5 U	5 U	--	--
N-NITROSO-DI-N-PROPYLAMINE	5 U	--	5 U	5 U	--	--
N-NITROSODIPHENYLAMINE	5 U	--	5 U	5 U	--	--
PENTACHLOROPHENOL	10 U	--	10 U	10 U	--	--
PHENANTHRENE	5 U	--	5 U	5 U	--	--
PHENOL	10 U	--	10 U	10 U	--	--
PYRENE	5 U	--	5 U	5 U	--	--
TOTAL PAHS	0 U	--	0 U	0 U	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L						
2-METHYLNAPHTHALENE	0.1 U	--	0.1 U	0.1 U	--	--
ACENAPHTHENE	0.1 U	--	0.1 U	0.1 U	--	--
ACENAPHTHYLENE	0.1 U	--	0.1 U	0.1 U	--	--
ANTHRACENE	0.1 U	--	0.1 U	0.1 U	--	--
BAP EQUIVALENT-HALFND	0.1 U	--	0.11355	0.11355	--	--
BAP EQUIVALENT-POS	0.1 U	--	0.003	0.003	--	--
BENZO(A)ANTHRACENE	0.1 U	--	0.1 U	0.1 U	--	--
BENZO(A)PYRENE	0.1 U	--	0.1 U	0.1 U	--	--
BENZO(B)FLUORANTHENE	0.1 U	--	0.03 J	0.03 J	--	--
BENZO(G,H,I)PERYLENE	0.1 U	--	0.1 U	0.1 U	--	--
BENZO(K)FLUORANTHENE	0.1 U	--	0.1 U	0.1 U	--	--
CHRYSENE	0.1 U	--	0.1 U	0.1 U	--	--
DIBENZO(A,H)ANTHRACENE	0.1 U	--	0.1 U	0.1 U	--	--
FLUORANTHENE	0.1 U	--	0.1 U	0.1 U	--	--
FLUORENE	0.1 U	--	0.1 U	0.1 U	--	--
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0.03	0.03	--	--
INDENO(1,2,3-CD)PYRENE	0.1 U	--	0.1 U	0.1 U	--	--
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	0 U	--	--
NAPHTHALENE	0.1 U	--	0.1 U	0.1 U	--	--
PENTACHLOROPHENOL	0.2 U	--	0.2 U	0.2 U	--	--
PHENANTHRENE	0.1 U	--	0.1 U	0.1 U	--	--
PYRENE	0.1 U	--	0.1 U	0.1 U	--	--
TOTAL PAHS	0.1	--	0.1	0.1	--	--
PESTICIDES (UG/L)						
4,4'-DDD	0.1 U	--	0.1 U	0.1 U	--	--
4,4'-DDE	0.1 U	--	0.1 U	0.1 U	--	--
4,4'-DDT	0.1 U	--	0.1 U	0.1 U	--	--
ALDRIN	0.05 U	--	0.05 U	0.05 U	--	--
ALPHA-BHC	0.05 U	--	0.05 U	0.05 U	--	--
ALPHA-CHLORDANE	0.05 U	--	0.05 U	0.05 U	--	--
BETA-BHC	0.05 U	--	0.05 U	0.05 U	--	--
DELTA-BHC	0.05 U	--	0.05 U	0.05 U	--	--
DIELDRIN	0.1 U	--	0.1 U	0.1 U	--	--
ENDOSULFAN I	0.05 U	--	0.05 U	0.05 U	--	--
ENDOSULFAN II	0.1 U	--	0.1 U	0.1 U	--	--
ENDOSULFAN SULFATE	0.1 U	--	0.1 U	0.1 U	--	--
ENDRIN	0.1 U	--	0.1 U	0.1 U	--	--
ENDRIN ALDEHYDE	0.1 U	--	0.1 U	0.1 U	--	--
ENDRIN KETONE	0.1 U	--	0.1 U	0.1 U	--	--
GAMMA-BHC (LINDANE)	0.05 U	--	0.05 U	0.05 U	--	--
GAMMA-CHLORDANE	0.05 U	--	0.05 U	0.05 U	--	--

TABLE 6

SURFACE WATER ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD340	SW/SD340	SW/SD341	SW/SD341	SW/SD341	SW/SD341
SAMPLE ID	SW340-20191212	SW340-20191212-F	SW341-20191212	SW341-20191212-D	SW341-20191212-F	SW341-20191212-F-D
SAMPLE DATE	20191212	20191212	20191212	20191212	20191212	20191212
DUPLICATE				SW341-20191212		SW341-20191212-F
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP	ORIG	DUP
MATRIX	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
HEPTACHLOR	0.05 U	--	0.05 U	0.05 U	--	--
HEPTACHLOR EPOXIDE	0.05 U	--	0.05 U	0.05 U	--	--
METHOXYCHLOR	0.5 U	--	0.5 U	0.5 U	--	--
TOXAPHENE	5 U	--	5 U	5 U	--	--
PCBS (UG/L)						
AROCLOR-1016	1 U	--	1 U	1 U	--	--
AROCLOR-1221	1 U	--	1 U	1 U	--	--
AROCLOR-1232	1 U	--	1 U	1 U	--	--
AROCLOR-1242	1 U	--	1 U	1 U	--	--
AROCLOR-1248	1 U	--	1 U	1 U	--	--
AROCLOR-1254	1 U	--	1 U	1 U	--	--
AROCLOR-1260	1 U	--	1 U	1 U	--	--
AROCLOR-1262	1 U	--	1 U	1 U	--	--
AROCLOR-1268	1 U	--	1 U	1 U	--	--
TOTAL AROCLOR	0 U	--	0 U	0 U	--	--
TOTAL AROCLOR HALFND	4.5	--	4.5	4.5	--	--
PCB CONGENERS (UG/L)						
PCB-105	0.00015 U	--	0.000151 U	0.000152 U	--	--
PCB-114	0.0001 U	--	0.00000105 J	0.00000195 J	--	--
PCB-118	0.0001 U	--	0.000101 U	0.000103	--	--
PCB-123	0.0001 U	--	0.00000113 J	0.00000189 J	--	--
PCB-126	0.0001 U	--	0.000101 U	0.000101 U	--	--
PCB-128/166	0.00000314 J	--	0.0000179 J	0.0000354 J	--	--
PCB-129/138/163	0.0003 U	--	0.000394	0.000798	--	--
PCB-153/168	0.0002 U	--	0.000436	0.000848	--	--
PCB-156	0.0002 U	--	0.000201 U	--	--	--
PCB-156/157	--	--	--	0.000203 U	--	--
PCB-167	0.00000154 J	--	0.0000113 J	0.0000196 J	--	--
PCB-169	0.0001 U	--	0.00000167 J	0.00000245 J	--	--
PCB-170	0.0001 U	--	0.000153	0.000326	--	--
PCB-18/30	0.00000887 Z	--	0.000201 U	0.000203 U	--	--
PCB-180/193	0.0002 U	--	0.000476	0.001	--	--
PCB-187	0.0001 U	--	0.000223	0.000538	--	--
PCB-189	0.0001 U	--	0.000101 U	0.000101 U	--	--
PCB-195	0.0001 U	--	0.000101 U	0.000101 U	--	--
PCB-20/28	0.00000971 J	--	0.0000294 J	0.0000603 J	--	--
PCB-206	0.0001 U	--	0.000101 U	0.000216	--	--
PCB-209	0.0001 U	--	0.000101 U	0.000101 U	--	--
PCB-44/47/65	0.00000851 J	--	0.0000175 J	0.0000334 J	--	--
PCB-52	0.0002 U	--	0.000201 U	0.000203 U	--	--
PCB-66	0.00000715 J	--	0.0000311 J	0.0000673 J	--	--
PCB-77	0.000000841 Z	--	0.000101 U	0.000101 U	--	--
PCB-8	0.00000825 Z	--	0.00000604 Z	0.00000864 Z	--	--
PCB-81	0.0001 U	--	0.000101 U	0.000101 U	--	--
PCB-90/101/113	0.0003 U	--	0.000302 U	0.000304 U	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	4.2065E-08	--	1.899E-09	3.889E-09	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.01161E-05	--	1.26455E-05	1.26471E-05	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	9.1E-11	--	1.49E-10	7.53E-10	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	2.79466E-07	--	2.84332E-07	2.84692E-07	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.3E-10	--	5.0503E-08	7.7292E-08	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	6.52638E-06	--	5.12901E-06	5.15433E-06	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.000002381	--	0.00001515	0.00012889	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00004563	--	0.00178394	0.00393104	--	--
TOTAL PCB CONGENERS ZEROND	0.000048011	--	0.00179909	0.00405993	--	--
TOTAL PCB CONGENERS-NOAA	0.00004563	--	0.00178394	0.00403404	--	--
TOTAL PCB CONGENERS-NOAA HALFND	0.001423011	--	0.00273109	0.00489543	--	--
TOTAL PCB CONGENERS-NOAA X2	0.00009126	--	0.00356788	0.00806808	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.00204126	--	0.00482688	0.00913208	--	--
DIOXINS/FURANS (PG/L)						
1,2,3,4,6,7,8,9-OCDD	102 U	--	50.4 U	101 U	--	--
1,2,3,4,6,7,8,9-OCDF	102 U	--	50.4 U	101 U	--	--
1,2,3,4,6,7,8-HPCDD	50.9 U	--	50.4 U	50.4 U	--	--
1,2,3,4,6,7,8-HPCDF	50.9 U	--	50.4 U	50.4 U	--	--
1,2,3,4,7,8,9-HPCDF	50.9 U	--	50.4 U	50.4 U	--	--
1,2,3,4,7,8-HXCDD	50.9 U	--	50.4 U	50.4 U	--	--
1,2,3,4,7,8-HXCDF	50.9 U	--	50.4 U	50.4 U	--	--
1,2,3,6,7,8-HXCDD	50.9 U	--	50.4 U	50.4 U	--	--
1,2,3,6,7,8-HXCDF	50.9 U	--	50.4 U	50.4 U	--	--
1,2,3,7,8,9-HXCDD	50.9 U	--	50.4 U	50.4 U	--	--
1,2,3,7,8,9-HXCDF	50.9 U	--	50.4 U	50.4 U	--	--
1,2,3,7,8-PECDD	50.9 U	--	50.4 U	50.4 U	--	--
1,2,3,7,8-PECDF	50.9 U	--	50.4 U	50.4 U	--	--
2,3,4,6,7,8-HXCDF	50.9 U	--	50.4 U	50.4 U	--	--
2,3,4,7,8-PECDF	50.9 U	--	50.4 U	50.4 U	--	--
2,3,7,8-TCDD	10.2 U	--	50.4 U	10.1 U	--	--
2,3,7,8-TCDF	10.2 U	--	50.4 U	10.1 U	--	--
TEQ DIOXINS (BIRD)	10.2 U	--	50.4 U	10.1 U	--	--
TEQ DIOXINS (BIRD) HALFND	10.2 U	--	50.4 U	10.1 U	--	--
TEQ DIOXINS (FISH)	10.2 U	--	50.4 U	10.1 U	--	--
TEQ DIOXINS (FISH) HALFND	10.2 U	--	50.4 U	10.1 U	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	10.2 U	--	50.4 U	10.1 U	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	10.2 U	--	50.4 U	10.1 U	--	--
TOTAL HPCDD	50.9 UJ	--	50.4 UJ	50.4 UJ	--	--
TOTAL HPCDF	50.9 UJ	--	50.4 UJ	50.4 UJ	--	--

TABLE 6

SURFACE WATER ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD340	SW/SD340	SW/SD341	SW/SD341	SW/SD341	SW/SD341
SAMPLE ID	SW340-20191212	SW340-20191212-F	SW341-20191212	SW341-20191212-D	SW341-20191212-F	SW341-20191212-F-D
SAMPLE DATE	20191212	20191212	20191212	20191212	20191212	20191212
DUPLICATE				SW341-20191212		SW341-20191212-F
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP	ORIG	DUP
MATRIX	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
TOTAL HXCDD	50.9 UJ	--	50.4 UJ	50.4 UJ	--	--
TOTAL HXCDF	50.9 UJ	--	50.4 UJ	50.4 UJ	--	--
TOTAL PECDD	50.9 UJ	--	50.4 UJ	50.4 UJ	--	--
TOTAL PECDF	50.9 UJ	--	50.4 UJ	50.4 UJ	--	--
TOTAL TCDD	10.2 UJ	--	50.4 UJ	10.1 UJ	--	--
TOTAL TCDF	10.2 UJ	--	50.4 UJ	10.1 UJ	--	--
METALS (UG/L)						
ALUMINUM	12.4 J	20 U	36.9	60.9	20 U	20 U
ANTIMONY	2 U	2 U	2 U	2 U	2 U	2 U
ARSENIC	0.48 J	0.45 J	0.38 J	0.56 J	0.19 J	0.18 J
BARIUM	56.5	56.7	62	63.3	62.2	58
BERYLLIUM	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	1 U	0.1 J	1 U	1 U	1 U	1 U
CALCIUM	21800	22300	22600	23100	24200	22700
CHROMIUM	2 U	2 U	2 U	2 U	2 U	2 U
COBALT	0.71 J	0.92 J	1.2	1.5	0.93 J	0.93 J
COPPER	2.2	2 U	4	5.9	2.4	2.5
CYANIDE	10 U	--	10 U	10 U	--	--
IRON	303	253	561	857	200 U	200 U
LEAD	0.26 J	1 U	1.2	2.7	1 U	1 U
MAGNESIUM	4370	4430	4130	4160	4120	4150
MANGANESE	47.7	58	154	195	137	134
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	1.5	1.6	2.9	3.4	2.8	2.9
POTASSIUM	3030	3060	2630	2810	2650	2670
SELENIUM	1.5 J	1.4 J	5 U	5 U	5 U	5 U
SILVER	1 U	1 U	1 U	1 U	1 U	1 U
SODIUM	13900	13900	14000	14100	14000	14100
THALLIUM	1 U	1 U	1 U	1 U	1 U	1 U
VANADIUM	0.12 J	0.11 J	0.13 J	0.21 J	0.04 J	0.05 J
ZINC	78.8	83	38.8	106	36.6	37

TABLE 7

SEDIMENT ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD340	SW/SD340	SW/SD341	SW/SD341
SAMPLE ID	SD340-20191212	SD340-20191212-D	SD341-20191212-0006	SD341-20191212-0624
SAMPLE DATE	20191212	20191212	20191212	20191212
DUPLICATE		SD340-20191212		
SAMPLE CODE	ORIG	DUP	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	NA	NA	NA	NA
TOP DEPTH	0	0.5	0	0.5
BOTTOM DEPTH	0.5	2	0.5	2
VOLATILES (MG/KG)				
1,1,1-TRICHLOROETHANE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
1,1,2,2-TETRACHLOROETHANE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
1,1,2-TRICHLOROETHANE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.01 U	0.0097 U	0.0097 U	0.0098 U
1,1-DICHLOROETHANE	0.01 U	0.0097 U	0.0097 U	0.0098 U
1,1-DICHLOROETHENE	0.01 U	0.0097 U	0.0097 U	0.0098 U
1,2,3-TRICHLOROBENZENE	0.01 R	0.0097 UJ	0.0097 R	0.0098 UJ
1,2,4-TRICHLOROBENZENE	0.01 R	0.0097 UJ	0.0097 R	0.0098 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.01 R	0.0097 UJ	0.0097 R	0.0098 UJ
1,2-DIBROMOETHANE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
1,2-DICHLOROBENZENE	0.01 R	0.0097 UJ	0.0097 R	0.0098 UJ
1,2-DICHLOROETHANE	0.01 U	0.0097 U	0.0097 U	0.0098 U
1,2-DICHLOROPROPANE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
1,3-DICHLOROBENZENE	0.01 R	0.0097 UJ	0.0097 R	0.0098 UJ
1,4-DICHLOROBENZENE	0.01 R	0.0097 UJ	0.0097 R	0.0098 UJ
2-BUTANONE	0.02 U	0.019 U	0.019 U	0.02 U
2-HEXANONE	0.02 UJ	0.019 U	0.019 UJ	0.02 U
4-METHYL-2-PENTANONE	0.02 UJ	0.019 U	0.019 UJ	0.02 U
ACETONE	0.02 U	0.019 U	0.019 U	0.02 U
BENZENE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
BROMOCHLOROMETHANE	0.01 U	0.0097 U	0.0097 U	0.0098 U
BROMODICHLOROMETHANE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
BROMOFORM	0.01 R	0.0097 UJ	0.0097 R	0.0098 UJ
BROMOMETHANE	0.01 U	0.0097 U	0.0097 U	0.0098 U
CARBON DISULFIDE	0.01 U	0.0097 U	0.0097 U	0.0098 U
CARBON TETRACHLORIDE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
CHLOROBENZENE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
CHLORODIBROMOMETHANE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
CHLOROETHANE	0.01 U	0.0097 U	0.0097 U	0.0098 U
CHLOROFORM	0.01 U	0.0097 U	0.0097 U	0.0098 U
CHLOROMETHANE	0.01 U	0.0097 U	0.0097 U	0.0098 U
CIS-1,2-DICHLOROETHENE	0.01 U	0.0097 U	0.0097 U	0.0098 U
CIS-1,3-DICHLOROPROPENE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
CYCLOHEXANE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
DICHLORODIFLUOROMETHANE	0.01 U	0.0097 U	0.0097 U	0.0098 U
ETHYLBENZENE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
ISOPROPYLBENZENE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
M+P-XYLENES	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
METHYL ACETATE	0.01 U	0.0097 U	0.0097 U	0.0098 U
METHYL CYCLOHEXANE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
METHYL TERT-BUTYL ETHER	0.01 U	0.0097 U	0.0097 U	0.0098 U
METHYLENE CHLORIDE	0.01 U	0.0097 U	0.0097 U	0.0098 U
O-XYLENE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
STYRENE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
TETRACHLOROETHENE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
TOLUENE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
TRANS-1,2-DICHLOROETHENE	0.01 U	0.0097 U	0.0097 U	0.0098 U
TRANS-1,3-DICHLOROPROPENE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
TRICHLOROETHENE	0.01 UJ	0.0097 U	0.0097 UJ	0.0098 U
TRICHLOROFLUOROMETHANE	0.01 U	0.0097 U	0.0097 U	0.0098 U
VINYL CHLORIDE	0.01 U	0.0097 U	0.0097 U	0.0098 U
SEMIVOLATILES (MG/KG)				
1,1-BIPHENYL	0.28 U	0.3 U	0.26 U	0.27 U
1,2,4,5-TETRACHLOROBENZENE	0.28 U	0.3 U	0.26 U	0.27 U
1,4-DIOXANE	0.11 U	0.12 U	0.1 U	0.11 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.55 U	0.58 U	0.5 U	0.53 U
2,3,4,6-TETRACHLOROPHENOL	0.28 U	0.3 U	0.26 U	0.27 U
2,4,5-TRICHLOROPHENOL	0.28 U	0.3 U	0.26 U	0.27 U
2,4,6-TRICHLOROPHENOL	0.28 U	0.3 U	0.26 U	0.27 U
2,4-DICHLOROPHENOL	0.28 U	0.3 U	0.26 U	0.27 U
2,4-DIMETHYLPHENOL	0.28 U	0.3 U	0.26 U	0.27 U
2,4-DINITROPHENOL	0.55 U	0.58 U	0.5 U	0.53 U
2,4-DINITROTOLUENE	0.28 U	0.3 U	0.26 U	0.27 U
2,6-DINITROTOLUENE	0.28 U	0.3 U	0.26 U	0.27 U
2-CHLORONAPHTHALENE	0.28 U	0.3 U	0.26 U	0.27 U
2-CHLOROPHENOL	0.28 U	0.3 U	0.26 U	0.27 U
2-METHYLNAPHTHALENE	0.28 U	0.3 U	0.17 J	0.071 J
2-METHYLPHENOL	0.55 U	0.58 U	0.5 U	0.53 U
2-NITROANILINE	0.28 U	0.3 U	0.26 U	0.27 U
2-NITROPHENOL	0.28 U	0.3 U	0.26 U	0.27 U
3&4-METHYLPHENOL	0.55 U	0.58 U	0.5 U	0.53 U
3,3'-DICHLOROBENZIDINE	0.55 U	0.58 U	0.5 U	0.53 U
3-NITROANILINE	0.55 U	0.58 U	0.5 U	0.53 U
4,6-DINITRO-2-METHYLPHENOL	0.55 U	0.58 U	0.5 U	0.53 U
4-BROMOPHENYL PHENYL ETHER	0.28 U	0.3 U	0.26 U	0.27 U
4-CHLORO-3-METHYLPHENOL	0.28 U	0.3 U	0.26 U	0.27 U
4-CHLOROANILINE	0.55 U	0.58 U	0.5 U	0.53 U
4-CHLOROPHENYL PHENYL ETHER	0.28 U	0.3 U	0.26 U	0.27 U
4-NITROANILINE	0.55 U	0.58 U	0.5 U	0.53 U
4-NITROPHENOL	0.55 U	0.58 U	0.5 U	0.53 U

TABLE 7

SEDIMENT ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD340	SW/SD340	SW/SD341	SW/SD341
SAMPLE ID	SD340-20191212	SD340-20191212-D	SD341-20191212-0006	SD341-20191212-0624
SAMPLE DATE	20191212	20191212	20191212	20191212
DUPLICATE		SD340-20191212		
SAMPLE CODE	ORIG	DUP	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	NA	NA	NA	NA
TOP DEPTH	0	0.5	0	0.5
BOTTOM DEPTH	0.5	2	0.5	2
ACENAPHTHENE	0.28 U	0.3 U	0.26 U	0.27 U
ACENAPHTHYLENE	0.28 U	0.3 U	0.26 U	0.27 U
ACETOPHENONE	0.55 U	0.58 U	0.5 U	0.53 U
ANTHRACENE	0.28 U	0.3 U	0.26 U	0.27 U
ATRAZINE	0.55 U	0.58 U	0.5 U	0.53 U
BAP EQUIVALENT-HALFND	0.2693	0.31793	0.294094	0.27 U
BAP EQUIVALENT-POS	0.1279	0.16643	0.006794	0.27 U
BENZALDEHYDE	0.55 U	0.58 U	0.5 U	0.53 U
BENZO(A)ANTHRACENE	0.1 J	0.14 J	0.26 U	0.27 U
BENZO(A)PYRENE	0.1 J	0.13 J	0.26 U	0.27 U
BENZO(B)FLUORANTHENE	0.12 J	0.15 J	0.067 J	0.27 U
BENZO(G,H,I)PERYLENE	0.072 J	0.09 J	0.26 U	0.27 U
BENZO(K)FLUORANTHENE	0.28 U	0.3 U	0.26 U	0.27 U
BIS(2-CHLOROETHOXY)METHANE	0.28 U	0.3 U	0.26 U	0.27 U
BIS(2-CHLOROETHYL)ETHER	0.55 U	0.58 U	0.5 U	0.53 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.28 U	0.3 U	0.26 U	0.27 U
BUTYL BENZYL PHTHALATE	0.28 U	0.3 U	0.26 U	0.27 U
CAPROLACTAM	0.55 U	0.58 U	0.5 U	0.53 U
CARBAZOLE	0.55 U	0.58 U	0.5 U	0.53 U
CHRYSENE	0.1 J	0.13 J	0.094 J	0.27 U
DIBENZO(A,H)ANTHRACENE	0.28 U	0.3 U	0.26 U	0.27 U
DIBENZOFURAN	0.28 U	0.3 U	0.052 J	0.27 U
DIETHYL PHTHALATE	0.28 U	0.3 U	0.26 U	0.27 U
DIMETHYL PHTHALATE	0.25 J	0.36	0.1 J	0.13 J
DI-N-BUTYL PHTHALATE	0.28 U	0.3 U	0.26 U	0.27 U
DI-N-OCTYL PHTHALATE	0.55 U	0.58 U	0.5 U	0.53 U
FLUORANTHENE	0.26 J	0.38 J	0.088 J	0.53 U
FLUORENE	0.28 U	0.3 U	0.26 U	0.27 U
HEXACHLOROBENZENE	0.28 U	0.3 U	0.26 U	0.27 U
HEXACHLOROBUTADIENE	0.28 U	0.3 U	0.26 U	0.27 U
HEXACHLOROCYCLOPENTADIENE	0.55 U	0.58 U	0.5 U	0.53 U
HEXACHLOROETHANE	0.28 U	0.3 U	0.26 U	0.27 U
HIGH MOLECULAR WEIGHT PAHS	0.77	1.023	0.233	0 U
INDENO(1,2,3-CD)PYRENE	0.058 J	0.073 J	0.26 U	0.27 U
ISOPHORONE	0.28 U	0.3 U	0.26 U	0.27 U
LOW MOLECULAR WEIGHT PAHS	0.39	0.6	0.358	0.11
NAPHTHALENE	0.28 U	0.3 U	0.1 J	0.27 U
NITROBENZENE	0.28 U	0.3 U	0.26 U	0.27 U
N-NITROSO-DI-N-PROPYLAMINE	0.28 U	0.3 U	0.26 U	0.27 U
N-NITROSODIPHENYLAMINE	0.28 U	0.3 U	0.26 U	0.27 U
PENTACHLOROPHENOL	0.55 U	0.58 U	0.5 U	0.53 U
PHENANTHRENE	0.13 J	0.22 J	0.17 J	0.11 J
PHENOL	0.17 J	0.22 J	0.14 J	0.085 J
PYRENE	0.22 J	0.31	0.072 J	0.27 U
TOTAL PAHS	1.16	1.623	0.591	0.11
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K				
2-METHYLNAPHTHALENE	0.0017 J	0.0018 J	0.13	0.06
ACENAPHTHENE	0.0028 J	0.0049 J	0.0026 J	0.0017 J
ACENAPHTHYLENE	0.017	0.019	0.007	0.0039 J
ANTHRACENE	0.023	0.035	0.01	0.0055
BAP EQUIVALENT-HALFND	0.110635	0.14156	0.043598	0.021739
BAP EQUIVALENT-POS	0.110635	0.14156	0.043598	0.021739
BENZO(A)ANTHRACENE	0.079	0.1	0.029	0.015
BENZO(A)PYRENE	0.076	0.096	0.025	0.012
BENZO(B)FLUORANTHENE	0.084	0.12	0.049	0.024
BENZO(G,H,I)PERYLENE	0.057	0.072	0.024	0.016
BENZO(K)FLUORANTHENE	0.036	0.046	0.013	0.0063
CHRYSENE	0.075	0.1	0.068	0.026
DIBENZO(A,H)ANTHRACENE	0.013	0.017	0.0087	0.0048 J
FLUORANTHENE	0.17	0.27	0.063	0.039
FLUORENE	0.0075	0.015	0.0072	0.0046 J
HIGH MOLECULAR WEIGHT PAHS	0.619	0.841	0.2897	0.1466
INDENO(1,2,3-CD)PYRENE	0.049	0.06	0.019	0.0095
LOW MOLECULAR WEIGHT PAHS	0.3176	0.5181	0.3088	0.1787
NAPHTHALENE	0.0043 J	0.0042 J	0.079	0.037
PENTACHLOROPHENOL	0.011 U	0.012 U	0.01 U	0.011 U
PHENANTHRENE	0.093	0.17	0.14	0.087
PYRENE	0.15	0.23	0.054	0.033
TOTAL PAHS	0.075	0.1	0.068	0.026
PESTICIDES (MG/KG)				
4,4'-DDD	0.00058 J	0.00055 J	0.0059 J	0.0037 J
4,4'-DDE	0.0055 U	0.0058 U	0.005 U	0.0053 U
4,4'-DDT	0.0055 U	0.0058 U	0.005 U	0.0053 U
ALDRIN	0.0028 U	0.003 U	0.00084 J	0.00033 J
ALPHA-BHC	0.0028 U	0.003 U	0.0026 U	0.0027 U
ALPHA-CHLORDANE	0.0028 U	0.003 U	0.00044 J	0.0027 U
BETA-BHC	0.0028 U	0.003 U	0.0026 U	0.0027 U
DELTA-BHC	0.0028 U	0.003 U	0.0026 U	0.0027 U
DIELDRIN	0.0055 U	0.0058 U	0.005 U	0.0053 U
ENDOSULFAN I	0.0028 U	0.003 U	0.0026 U	0.0027 U
ENDOSULFAN II	0.0055 U	0.0058 U	0.0022 J	0.0012 J

TABLE 7

SEDIMENT ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD340	SW/SD340	SW/SD341	SW/SD341
SAMPLE ID	SD340-20191212	SD340-20191212-D	SD341-20191212-0006	SD341-20191212-0624
SAMPLE DATE	20191212	20191212	20191212	20191212
DUPLICATE		SD340-20191212		
SAMPLE CODE	ORIG	DUP	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	NA	NA	NA	NA
TOP DEPTH	0	0.5	0	0.5
BOTTOM DEPTH	0.5	2	0.5	2
ENDOSULFAN SULFATE	0.0055 U	0.0058 U	0.005 U	0.0053 U
ENDRIN	0.0055 U	0.0058 U	0.005 U	0.0053 U
ENDRIN ALDEHYDE	0.0055 U	0.0058 U	0.005 U	0.0053 U
ENDRIN KETONE	0.0055 U	0.0058 U	0.005 U	0.0053 U
GAMMA-BHC (LINDANE)	0.00095 J	0.00088 J	0.0039 J	0.0021 J
GAMMA-CHLORDANE	0.0028 U	0.003 U	0.0015 R	0.0027 U
HEPTACHLOR	0.0028 U	0.003 U	0.0026 U	0.0027 U
HEPTACHLOR EPOXIDE	0.0028 U	0.003 U	0.0026 U	0.0027 U
METHOXYCHLOR	0.028 U	0.03 U	0.026 U	0.027 U
TOXAPHENE	0.28 U	0.3 U	0.26 U	0.27 U
PCBS (MG/KG)				
AROCLOR-1016	0.055 U	0.058 U	0.05 U	0.053 U
AROCLOR-1221	0.055 U	0.058 U	0.05 U	0.053 U
AROCLOR-1232	0.055 U	0.058 U	0.05 U	0.053 U
AROCLOR-1242	0.055 U	0.058 U	0.05 U	0.053 U
AROCLOR-1248	0.055 U	0.058 U	0.05 U	0.053 U
AROCLOR-1254	0.055 U	0.058 U	0.05 U	0.053 U
AROCLOR-1260	0.055 U	0.058 U	0.03 J	0.025 J
AROCLOR-1262	0.055 U	0.058 U	0.05 U	0.053 U
AROCLOR-1268	0.055 U	0.058 U	0.05 U	0.053 U
TOTAL AROCLOR	0 U	0 U	0.03	0.025
TOTAL AROCLOR HALFND	0.2475	0.261	0.23	0.237
PCB CONGENERS (MG/KG)				
PCB-105	0.000245	0.000505	0.000115	0.000346
PCB-114	0.0000107 J	0.0000196 J	0.000101 U	0.0000217 J
PCB-118	0.000675	0.00138	0.000281	0.000842
PCB-123	0.00000983 J	0.0000212 Z	0.000101 U	0.000013 Z
PCB-126	0.00000942 J	0.0000202 J	0.000101 U	0.000105 U
PCB-128/166	0.000169 J	0.000341	0.000175 J	0.000403
PCB-129/138/163	0.00306	0.00584	0.00313	0.00617
PCB-153/168	0.000226 U	0.0061	0.00339	0.0064
PCB-156	0.00019 J	0.000369	0.000155 J	0.000366
PCB-167	0.000079 J	0.000153	0.0000707 J	0.000148
PCB-169	0.000113 U	0.000115 U	0.000101 U	0.000105 U
PCB-170	0.00092	0.00176	0.00157	0.00285
PCB-18/30	0.0000115 J	0.0000185 J	0.0000118 J	0.0000249 J
PCB-180/193	0.00246	0.00471	0.00643	0.00885
PCB-187	0.00158	0.00303	0.00517	0.00667
PCB-189	0.0000364 J	0.0000626 J	0.0000647 J	0.000106
PCB-195	0.000196	0.00038	0.000842	0.00105
PCB-20/28	0.0000694 J	0.000126 J	0.000109 J	0.000255
PCB-206	0.00298	0.00739	0.00366	0.00455
PCB-209	0.00813	0.0167	0.000696	0.000866
PCB-44/47/65	0.0000864 J	0.000142 J	0.0000763 J	0.000189 J
PCB-52	0.000164	0.00028	0.000107	0.000296
PCB-66	0.000156 J	0.000304	0.000142 J	0.000316
PCB-77	0.0000389 J	0.0000743 J	0.0000194 J	0.0000452 J
PCB-8	0.00000822 J	0.0000177 J	0.0000122 J	0.0000247 J
PCB-81	0.000113 U	0.000115 U	0.000101 U	0.000105 U
PCB-90/101/113	0.000999	0.00202	0.00057	0.00145
TEQ DIOXIN-LIKE PCBs (BIRD)	2.93957E-06	5.84053E-06	1.00116E-06	2.34446E-06
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	8.64607E-06	1.1648E-05	1.11572E-05	1.2897E-05
TEQ DIOXIN-LIKE PCBs (FISH)	5.7219E-08	1.20982E-07	5.371E-09	1.3733E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	8.8294E-08	1.52607E-07	2.8615E-07	3.05108E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	9.83267E-07	2.10274E-06	2.2532E-08	5.9801E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	2.69522E-06	3.84499E-06	6.60571E-06	6.90555E-06
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.00129425	0.0026049	0.0007058	0.0018879
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.02098952	0.0491592	0.0260913	0.0403646
TOTAL PCB CONGENERS ZEROND	0.02228377	0.0517641	0.0267971	0.0422525
TOTAL PCB CONGENERS-NOAA	0.02190952	0.0510442	0.0264873	0.0415526
TOTAL PCB CONGENERS-NOAA HALFND	0.02250977	0.0518791	0.0270496	0.04241
TOTAL PCB CONGENERS-NOAA X2	0.04381904	0.1020884	0.0529746	0.0831052
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.04404504	0.1020884	0.0529746	0.0831052
DIOXINS/FURANS (NG/KG)				
1,2,3,4,6,7,8,9-OCDD	679	108	153	185
1,2,3,4,6,7,8,9-OCDF	17.6	9.8 U	6.64 J	8.23 J
1,2,3,4,6,7,8-HPCDD	38.8	6.62	9.32	12.8
1,2,3,4,6,7,8-HPCDF	20.5	3.77 J	5.48	6.39
1,2,3,4,7,8,9-HPCDF	0.9 Z	4.9 U	4.76 U	5.09 U
1,2,3,4,7,8-HXCDD	1.28 J	0.239 Z	4.76 U	0.499 J
1,2,3,4,7,8-HXCDF	3.97 J	0.872 Z	4.76 U	5.09 U
1,2,3,6,7,8-HXCDD	3.14 J	0.545 J	4.76 U	0.841 J
1,2,3,6,7,8-HXCDF	2.79 Z	4.9 U	4.76 U	5.09 U
1,2,3,7,8,9-HXCDD	1.78 J	0.392 Z	4.76 U	5.09 U
1,2,3,7,8,9-HXCDF	0.696 J	4.9 U	4.76 U	5.09 U
1,2,3,7,8-PECDD	1.45 Z	0.378 Z	4.76 U	5.09 U
1,2,3,7,8-PECDF	3.01 J	0.635 Z	4.76 U	0.912 Z
2,3,4,6,7,8-HXCDF	2.34 J	0.508 Z	1.13 Z	0.782 J
2,3,4,7,8-PECDF	5.31 Z	1.06 J	1.27 Z	1.3 Z
2,3,7,8-TCDD	0.398 Z	0.98 U	0.878 Z	0.452 Z
2,3,7,8-TCDF	3.69	1.15 Z	0.952 U	1.27 Z

TABLE 7

SEDIMENT ANALYTICAL DATA - BRITT BATH HOUSE AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD340	SW/SD340	SW/SD341	SW/SD341
SAMPLE ID	SD340-20191212	SD340-20191212-D	SD341-20191212-0006	SD341-20191212-0624
SAMPLE DATE	20191212	20191212	20191212	20191212
DUPLICATE		SD340-20191212		
SAMPLE CODE	ORIG	DUP	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Britt Bath House	Britt Bath House	Britt Bath House	Britt Bath House
SUBMATRIX	NA	NA	NA	NA
TOP DEPTH	0	0.5	0	0.5
BOTTOM DEPTH	0.5	2	0.5	2
TEQ DIOXINS (BIRD)	12.72446	2.90122	2.341084	3.320783
TEQ DIOXINS (BIRD) HALFND	12.72446	3.90621	6.553684	6.909233
TEQ DIOXINS (FISH)	6.82926	1.31924	1.706084	1.643233
TEQ DIOXINS (FISH) HALFND	6.82926	2.32423	6.204284	5.002633
TEQ DIOXINS (HUMANS/MAMMALS)	6.31088	1.22195	1.567892	1.458429
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	6.31088	2.22792	5.518692	5.046879
TOTAL HPCDD	78.5 J	13.6 J	18.3 J	25.6 J
TOTAL HPCDF	36.4 J	6.33 J	9.48 J	13.5 J
TOTAL HXCDD	41.4 J	6.11 J	7.84 J	8.5 J
TOTAL HXCDF	31.3 J	5.73 J	5.43 J	13.2 J
TOTAL PECDD	23.8 J	5.79 J	7.76 J	5.11 J
TOTAL PECDF	41.4 J	9.47 J	13 J	18.5 J
TOTAL TCDD	28.1 J	6.28 J	4 J	5.5 J
TOTAL TCDF	93.5 J	16.4 J	2.66 J	9.62 J
METALS (MG/KG)				
ALUMINUM	4520	5250	2020	3880
ANTIMONY	1.2 U	1.2 U	1.2 U	1.1 U
ARSENIC	6.8	6.9	15.1	13
BARIUM	94.8	104	58.9	91.7
BERYLLIUM	0.8	0.89	0.59 U	0.57 U
CADMIUM	0.59 UJ	0.61 UJ	0.59 UJ	0.57 UJ
CALCIUM	1350	1380	1270	2130
CHROMIUM	8.3	10	5.4	4.7
COBALT	4.8	5.4	8.5	16.6
COPPER	35.9	38.9	69.8	71.4
CYANIDE	0.82 U	0.19 J	0.79 U	0.79 U
IRON	13000	14200	21900	35900
LEAD	149	166	38.4	54.2
MAGNESIUM	397 J	479 J	514 J	685
MANGANESE	164	210	376	674
MERCURY	0.22	0.24	0.15 U	0.14 U
NICKEL	9.1	10.9	10	13.9
POTASSIUM	355 J	464 J	340 J	459 J
SELENIUM	0.59 J	0.64 J	0.73 J	0.65 J
SILVER	0.59 U	0.61 U	0.59 U	0.57 U
SODIUM	79.4 J	65 J	560 UJ	575 UJ
THALLIUM	0.59 U	0.61 U	0.59 U	0.57 U
VANADIUM	9.4	11.2	3.8	4.7
ZINC	164	183	60	112
MISCELLANEOUS (%)				
TOTAL SOLIDS	--	--	65	--
MISCELLANEOUS (MG/KG)				
TOTAL ORGANIC CARBON	--	--	66200	--

APPENDIX G.5

BERWIND GREEN HILL MINE DUMP AREA ANALYTICAL DATA

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-345	SB-345	SB-345	SB-345	SB-346	SB-346	SB-346	SB-346	SB-347
SAMPLE ID	SB345-20191114-0006	SB345-20191114-0624	SB345-20191114-2448	SB345-20191114-4872	SB346-20191114-0006	SB346-20191114-0624	SB346-20191114-7296	SB346-20191114-96120	SB347-20191114-0006
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS
TOP DEPTH	0	0.5	2	4	0	0.5	6	8	0
BOTTOM DEPTH	0.5	2	4	6	0.5	2	8	10	0.5
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
1,1,2,2-TETRACHLOROETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
1,1,2-TRICHLOROETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
1,1-DICHLOROETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 U	--	0.0051 U
1,1-DICHLOROETHENE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 U	--	0.0051 U
1,2,3-TRICHLOROBENZENE	0.0056 UJ	0.0049 UJ	0.0052 UJ	--	0.0056 UJ	0.0051 U	0.0057 R	--	0.0051 U
1,2,4-TRICHLOROBENZENE	0.0056 UJ	0.0049 UJ	0.0052 UJ	--	0.0056 UJ	0.0051 U	0.0057 R	--	0.0051 U
1,2-DIBROMO-3-CHLOROPROPANE	0.0056 U	0.0049 U	0.0052 UJ	--	0.0056 U	0.0051 U	0.0057 R	--	0.0051 U
1,2-DIBROMOETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
1,2-DICHLOROBENZENE	0.0056 UJ	0.0049 UJ	0.0052 UJ	--	0.0056 UJ	0.0051 U	0.0057 R	--	0.0051 U
1,2-DICHLOROETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
1,2-DICHLOROPROPANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 UJ	0.0051 U	0.0057 UJ	--	0.0051 U
1,3-DICHLOROBENZENE	0.0056 UJ	0.0049 UJ	0.0052 UJ	--	0.0056 UJ	0.0051 U	0.0057 R	--	0.0051 U
1,4-DICHLOROBENZENE	0.0056 UJ	0.0049 UJ	0.0052 UJ	--	0.0056 UJ	0.0051 U	0.0057 R	--	0.0051 U
2-BUTANONE	0.011 U	0.0098 U	0.01 U	--	0.011 U	0.01 U	0.011 U	--	0.01 U
2-HEXANONE	0.011 U	0.0098 U	0.01 U	--	0.011 U	0.01 U	0.011 UJ	--	0.01 U
4-METHYL-2-PENTANONE	0.011 U	0.0098 U	0.01 U	--	0.011 U	0.01 U	0.011 UJ	--	0.01 U
ACETONE	0.011 U	0.0098 U	0.01 U	--	0.016	0.01 U	0.0071 J	--	0.01 U
BENZENE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0063 J+	--	0.0051 U
BROMOCHLOROMETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 U	--	0.0051 U
BROMODICHLOROMETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 UJ	0.0051 U	0.0057 UJ	--	0.0051 U
BROMOFORM	0.0056 U	0.0049 U	0.0052 UJ	--	0.0056 U	0.0051 U	0.0057 R	--	0.0051 U
BROMOMETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 U	--	0.0051 U
CARBON DISULFIDE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 U	--	0.0051 U
CARBON TETRACHLORIDE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
CHLOROBENZENE	0.0056 UJ	0.0049 UJ	0.0052 UJ	--	0.0056 UJ	0.0051 U	0.0057 UJ	--	0.0051 U
CHLORODIBROMOMETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
CHLOROETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 U	--	0.0051 U
CHLOROFORM	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 U	--	0.0051 U
CHLOROMETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 U	--	0.0051 U
CIS-1,2-DICHLOROETHENE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 U	--	0.0051 U
CIS-1,3-DICHLOROPROPENE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
CYCLOHEXANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 UJ	0.0051 U	0.0047 J	--	0.0051 U
DICHLORODIFLUOROMETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 U	--	0.0051 U
ETHYLBENZENE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
ISOPROPYLBENZENE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
M+P-XYLENES	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
METHYL ACETATE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
METHYL CYCLOHEXANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 UJ	0.0051 U	0.0077 J+	--	0.0051 U
METHYL TERT-BUTYL ETHER	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
METHYLENE CHLORIDE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
O-XYLENE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
STYRENE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
TETRACHLOROETHENE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
TOLUENE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0037 J	--	0.0051 U
TRANS-1,2-DICHLOROETHENE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 U	--	0.0051 U
TRANS-1,3-DICHLOROPROPENE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
TRICHLOROETHENE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
TRICHLOROFLUOROMETHANE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 UJ	--	0.0051 U
VINYL CHLORIDE	0.0056 U	0.0049 U	0.0052 U	--	0.0056 U	0.0051 U	0.0057 U	--	0.0051 U
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.21 U	0.023 J	0.02 J	--	0.21 U	0.2 U	0.048 J	--	0.21 U
1,2,4,5-TETRACHLOROBENZENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
1,4-DIOXANE	0.082 U	0.076 U	0.073 UJ	--	0.083 U	0.079 U	0.075 U	--	0.082 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
2,3,4,6-TETRACHLOROPHENOL	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
2,4,5-TRICHLOROPHENOL	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
2,4,6-TRICHLOROPHENOL	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
2,4-DICHLOROPHENOL	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
2,4-DIMETHYLPHENOL	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
2,4-DINITROPHENOL	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
2,4-DINITROTOLUENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
2,6-DINITROTOLUENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
2-CHLORONAPHTHALENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
2-CHLOROPHENOL	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
2-METHYLNAPHTHALENE	0.21 U	0.078 J	0.061 J	--	0.21 U	0.033 J	0.19	--	0.21 U
2-METHYLPHENOL	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
2-NITROANILINE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
2-NITROPHENOL	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
3&4-METHYLPHENOL	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
3,3'-DICHLOROBENZIDINE	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
3-NITROANILINE	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
4,6-DINITRO-2-METHYLPHENOL	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
4-BROMOPHENYL PHENYL ETHER	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
4-CHLORO-3-METHYLPHENOL	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
4-CHLOROANILINE	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
4-CHLOROPHENYL PHENYL ETHER	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
4-NITROANILINE	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
4-NITROPHENOL	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-345	SB-345	SB-345	SB-345	SB-346	SB-346	SB-346	SB-346	SB-347
SAMPLE ID	SB345-20191114-0006	SB345-20191114-0624	SB345-20191114-2448	SB345-20191114-4872	SB346-20191114-0006	SB346-20191114-0624	SB346-20191114-7296	SB346-20191114-96120	SB347-20191114-0006
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS
ACENAPHTHENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
ACENAPHTHYLENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
ACETOPHENONE	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
ANTHRACENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
ATRAZINE	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
BAP EQUIVALENT-HALFND	0.21 U	0.20816	0.212814	--	0.21 U	0.231035	0.20853	--	0.21 U
BAP EQUIVALENT-POS	0.21 U	0.00771	0.002864	--	0.21 U	0.000035	0.00808	--	0.21 U
BENZALDEHYDE	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
BENZO(A)ANTHRACENE	0.21 U	0.033 J	0.19 U	--	0.21 U	0.2 U	0.028 J	--	0.21 U
BENZO(A)PYRENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
BENZO(B)FLUORANTHENE	0.21 U	0.043 J	0.028 J	--	0.21 U	0.2 U	0.051 J	--	0.21 U
BENZO(G,H,I)PERYLENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
BENZO(K)FLUORANTHENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
BIS(2-CHLOROETHOXY)METHANE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
BIS(2-CHLOROETHYL)ETHER	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
BUTYL BENZYL PHTHALATE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
CAPROLACTAM	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
CARBAZOLE	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
CHRYSENE	0.21 U	0.11 J	0.064 J	--	0.21 U	0.035 J	0.18 J	--	0.21 U
DIBENZO(A,H)ANTHRACENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
DIBENZOFURAN	0.21 U	0.022 J	0.018 J	--	0.21 U	0.2 U	0.038 J	--	0.21 U
DIETHYL PHTHALATE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
DIMETHYL PHTHALATE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
DI-N-BUTYL PHTHALATE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
DI-N-OCTYL PHTHALATE	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
FLUORANTHENE	0.41 U	0.071 J	0.044 J	--	0.41 U	0.02 J	0.059 J	--	0.4 U
FLUORENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
HEXACHLOROBENZENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
HEXACHLOROBUTADIENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
HEXACHLOROCYCLOPENTADIENE	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
HEXACHLOROETHANE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
HIGH MOLECULAR WEIGHT PAHS	0 U	0.296	0.141	--	0 U	0.057	0.339	--	0 U
INDENO(1,2,3-CD)PYRENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
ISOPHORONE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
LOW MOLECULAR WEIGHT PAHS	0 U	0.34	0.256	--	0 U	0.142	0.464	--	0 U
NAPHTHALENE	0.21 U	0.059 J	0.052 J	--	0.21 U	0.022 J	0.085 J	--	0.21 U
NITROBENZENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
N-NITROSO-DI-N-PROPYLAMINE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
N-NITROSODIPHENYLAMINE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
PENTACHLOROPHENOL	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.37 U	--	0.4 U
PHENANTHRENE	0.21 U	0.21	0.16 J	--	0.21 U	0.1 J	0.32	--	0.21 U
PHENOL	0.41 U	0.37 U	0.36 U	--	0.41 U	0.39 U	0.038 J	--	0.4 U
PYRENE	0.21 U	0.11 J	0.049 J	--	0.21 U	0.022 J	0.08 J	--	0.21 U
TOTAL PAHS	0 U	0.636	0.397	--	0 U	0.199	0.803	--	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	0.0083 U	0.0076 U	0.0074 U	--	0.0083 U	0.0079 U	0.0075 U	--	0.0082 U
2-METHYLNAPHTHALENE	0.0041 U	0.11	0.095	--	0.0041 U	0.042	0.25	--	0.004 U
ACENAPHTHENE	0.0041 U	0.0049	0.0042	--	0.0041 U	0.0023 J	0.011	--	0.004 U
ACENAPHTHYLENE	0.0041 U	0.0012 J	0.0011 J	--	0.0041 U	0.0039 U	0.0022 J	--	0.004 U
ANTHRACENE	0.0041 U	0.0071	0.0054	--	0.0041 U	0.0023 J	0.011	--	0.004 U
BAP EQUIVALENT-HALFND	0.0041 U	0.018078	0.014178	--	0.004735	0.007277	0.027438	--	0.00446
BAP EQUIVALENT-POS	0.0041 U	0.01806	0.01416	--	0	0.007258	0.02742	--	0.000038
BENZO(A)ANTHRACENE	0.0041 U	0.037	0.017	--	0.0041 U	0.0087	0.034	--	0.00038 J
BENZO(A)PYRENE	0.0041 U	0.0043	0.0044	--	0.0041 U	0.0019 J	0.0096	--	0.004 U
BENZO(B)FLUORANTHENE	0.0041 U	0.043	0.032	--	0.0041 U	0.018	0.056	--	0.004 U
BENZO(G,H,I)PERYLENE	0.0041 U	0.0051	0.005	--	0.0041 U	0.0021 J	0.008	--	0.004 U
BENZO(K)FLUORANTHENE	0.0041 U	0.0037 U	0.0036 U	--	0.0041 U	0.0039 U	0.0037 U	--	0.004 U
CHRYSENE	0.0041 U	0.19	0.11	--	0.00072 J	0.058	0.21	--	0.004 U
DIBENZO(A,H)ANTHRACENE	0.0041 U	0.0053	0.0045	--	0.0041 U	0.0025 J	0.0082	--	0.004 U
FLUORANTHENE	0.00069 J	0.058	0.041	--	0.00055 J	0.018	0.089	--	0.00095 J
FLUORENE	0.0041 U	0.0058	0.0048	--	0.0041 U	0.0022 J	0.016	--	0.004 U
HIGH MOLECULAR WEIGHT PAHS	0 U	0.3784	0.2144	--	0.00072	0.1125	0.3879	--	0.00093
INDENO(1,2,3-CD)PYRENE	0.0041 U	0.0027 J	0.0025 J	--	0.0041 U	0.0013 J	0.0041	--	0.004 U
LOW MOLECULAR WEIGHT PAHS	0.00158	0.406	0.3375	--	0.00255	0.1638	0.6192	--	0.00275
NAPHTHALENE	0.0041 U	0.089	0.081	--	0.0041 U	0.029	0.13	--	0.004 U
PENTACHLOROPHENOL	0.0082 U	0.0076 U	0.0073 U	--	0.0083 U	0.0079 U	0.0075 U	--	0.0082 U
PHENANTHRENE	0.00089 J	0.24	0.2	--	0.002 J	0.11	0.36 J	--	0.0018 J
PYRENE	0.0041 U	0.091	0.039	--	0.0041 U	0.02	0.058	--	0.00055 J
TOTAL PAHS	0.0041	0.19	0.11	--	0.00072	0.058	0.21	--	0.004
PESTICIDES (MG/KG)									
4,4'-DDD	0.0041 U	0.0019 R	0.0017 R	--	0.00029 J	0.0006 R	0.0033 R	--	0.0041 U
4,4'-DDE	0.0041 U	0.00074 R	0.00042 R	--	0.0041 U	0.0018 R	0.0036 U	--	0.0041 U
4,4'-DDT	0.0041 U	0.0034 J	0.0024 J	--	0.0041 U	0.00097 J	0.0053	--	0.0041 U
ALDRIN	0.0021 U	0.0003 R	0.00027 R	--	0.0021 U	0.002 U	0.00035 R	--	0.0021 U
ALPHA-BHC	0.0021 U	0.0019 U	0.0019 U	--	0.0021 U	0.002 U	0.0019 U	--	0.0021 U
ALPHA-CHLORDANE	0.00031 J	0.002 J	0.0019	--	0.00082 J	0.0012 J	0.0024 J	--	0.0021 U
BETA-BHC	0.0021 U	0.00063 J	0.00062 J	--	0.0021 U	0.002 U	0.00077 J	--	0.0021 U
DELTA-BHC	0.0021 U	0.0019 U	0.0019 U	--	0.0021 U	0.002 U	0.0019 U	--	0.0021 U
DIELDRIN	0.0041 U	0.0011 R	0.001 J	--	0.0041 U	0.00041 R	0.0018 R	--	0.0041 U
ENDOSULFAN I	0.0021 U	0.0019 U	0.0019 U	--	0.0021 U	0.00039 R	0.0019 U	--	0.0021 U
ENDOSULFAN II	0.0041 U	0.0017 J	0.0018 J	--	0.0041 U	0.0039 U	0.0034 J	--	0.0041 U
ENDOSULFAN SULFATE	0.00061 J	0.00063 R	0.0036 U	--	0.00054 J	0.0039 U	0.0012 R	--	0.00062 J

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-345	SB-345	SB-345	SB-345	SB-346	SB-346	SB-346	SB-346	SB-347
SAMPLE ID	SB345-20191114-0006	SB345-20191114-0624	SB345-20191114-2448	SB345-20191114-4872	SB346-20191114-0006	SB346-20191114-0624	SB346-20191114-7296	SB346-20191114-96120	SB347-20191114-0006
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS
ENDRIN	0.0041 U	0.0062	0.0046	--	0.0041 U	0.0039 U	0.0019 R	--	0.0041 U
ENDRIN ALDEHYDE	0.0041 U	0.0044 J	0.0034 J	--	0.0041 U	0.0011 J	0.0064	--	0.0041 U
ENDRIN KETONE	0.0041 U	0.0074 R	0.0048 R	--	0.0041 U	0.0039 U	0.0088 R	--	0.0041 U
GAMMA-BHC (LINDANE)	0.0021 U	0.003 J	0.0029 J	--	0.0021 U	0.00096 J	0.0043 J	--	0.0021 U
GAMMA-CHLORDANE	0.0021 U	0.0019 U	0.0019 U	--	0.0021 U	0.002 U	0.0003 R	--	0.0021 U
HEPTACHLOR	0.0021 U	0.00028 R	0.0019 U	--	0.0021 U	0.00041 R	0.0017 R	--	0.0021 U
HEPTACHLOR EPOXIDE	0.00035 J	0.0019 U	0.0019 U	--	0.0021 U	0.002 U	0.0019 U	--	0.00032 J
METHOXYCHLOR	0.021 U	0.038	0.023	--	0.021 U	0.01 J	0.042	--	0.021 U
TOXAPHENE	0.21 U	0.19 U	0.19 U	--	0.21 U	0.2 U	0.19 U	--	0.21 U
PCBS (MG/KG)									
AROCLOR-1016	--	--	0.036 U	--	0.041 U	--	--	--	--
AROCLOR-1221	--	--	0.036 U	--	0.041 U	--	--	--	--
AROCLOR-1232	--	--	0.036 U	--	0.041 U	--	--	--	--
AROCLOR-1242	--	--	0.036 U	--	0.041 U	--	--	--	--
AROCLOR-1248	--	--	0.036 U	--	0.041 U	--	--	--	--
AROCLOR-1254	--	--	0.036 U	--	0.041 U	--	--	--	--
AROCLOR-1260	--	--	0.036 U	--	0.041 U	--	--	--	--
AROCLOR-1262	--	--	0.036 U	--	0.041 U	--	--	--	--
AROCLOR-1268	--	--	0.036 U	--	0.041 U	--	--	--	--
TOTAL AROCLOR	--	--	0 U	--	0 U	--	--	--	--
TOTAL AROCLOR HALFND	--	--	0.162	--	0.1845	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	0.291 U	--	0.284 U	--	0.291 U	--	0.287 U	--
AROCLOR-1221	--	0.581 U	--	0.568 U	--	0.581 U	--	0.575 U	--
AROCLOR-1232	--	0.291 U	--	0.284 U	--	0.291 U	--	0.287 U	--
AROCLOR-1242	--	0.291 U	--	0.284 U	--	0.291 U	--	0.287 U	--
AROCLOR-1248	--	0.291 U	--	0.284 U	--	0.291 U	--	0.287 U	--
AROCLOR-1254	--	0.291 U	--	0.284 U	--	0.291 U	--	0.287 U	--
AROCLOR-1260	--	0.291 U	--	0.284 U	--	0.291 U	--	0.287 U	--
AROCLOR-1262	--	0.291 U	--	0.284 U	--	0.291 U	--	0.287 U	--
AROCLOR-1268	--	0.291 U	--	0.284 U	--	0.291 U	--	0.287 U	--
TOTAL AROCLOR	--	0 U	--	0 U	--	0 U	--	0 U	--
TOTAL AROCLOR HALFND	--	1.4545	--	1.42	--	1.4545	--	1.4355	--
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	0.0000054 J	0.000024 J	0.000051 J	--	0.000016 J	0.0000072 J	0.000037 J	--	0.000034 J
HEPTACHLOROBIPHENYLS	0.000017 J	0.00059 J	0.001 J	--	0.000015 J	0.00048 J	0.0011 J	--	0.00012 J
HEXACHLOROBIPHENYLS	0.000019 J	0.00016 J	0.00083 J	--	0.000015 J	0.0001 J	0.00031 J	--	0.000065 J
MONOCHLOROBIPHENYLS	0 UJ	0.000042 J	0.000069 J	--	0 UJ	0.000027 J	0.000075 J	--	0 UJ
NONACHLOROBIPHENYLS	0.0000035 J	0.00033 J	0.00024 J	--	0 UJ	0.0002 J	0.00049 J	--	0.000047 J
OCTACHLOROBIPHENYLS	0.0000067 J	0.00093 J	0.00073 J	--	0.0000064 J	0.00066 J	0.0015 J	--	0.00014 J
PCB-1	0.000002 U	0.0000081	0.00001	--	0.000002 U	0.0000046	0.000013	--	0.000002 U
PCB-10	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000012 J	--	0.000002 U
PCB-100	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-101/90	0.0000021 J	0.000012	0.000084	--	0.0000023 J	0.0000052	0.000021	--	0.0000044
PCB-103	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-104	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-105	0.0000013 U	0.000003	0.0000092	--	0.00000083 U	0.0000012 J	0.0000042	--	0.0000018 J
PCB-108/107	0.000004 U	0.000004 U	0.0000022 J	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U
PCB-109	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-11	0.0000054	0.0000044	0.0000061	--	0.000016	0.0000072	0.0000064	--	0.000034
PCB-110	0.0000012 J	0.0000089	0.000039	--	0.000002 U	0.0000027	0.000012	--	0.0000021
PCB-111/115	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U
PCB-113	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-114	0.0000012 U	0.00000083 U	0.00000084 U	--	0.00000083 U	0.00000083 U	0.0000011 U	--	0.00000083 U
PCB-118/106	0.0000013 U	0.0000073	0.00003	--	0.0000017 J	0.0000027 J	0.000013	--	0.0000031 J
PCB-119	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-12	0.000002 U	0.0000015 J	0.000004	--	0.000002 U	0.000002 U	0.000003	--	0.000002 U
PCB-120	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-121	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-122	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-123	0.00000097 U	0.00000065 U	0.00000074 U	--	0.00000069 U	0.0000006 U	0.00000097 U	--	0.00000072 U
PCB-124	0.000002 U	0.000002 U	0.000002	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-126	0.0000016 U	0.00000082 U	0.00000085 U	--	0.000001 U	0.00000067 U	0.0000012 U	--	0.00000098 U
PCB-127	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-128/162	0.000004 U	0.0000022 J	0.000013	--	0.000004 U	0.000004 U	0.0000037 J	--	0.0000022 J
PCB-129	0.000002 U	0.000002 U	0.0000037	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-13	0.000002 U	0.000002	0.0000069	--	0.000002 U	0.000002 U	0.0000033	--	0.000002 U
PCB-130	0.000002 U	0.0000016 J	0.0000062	--	0.000002 U	0.000002 U	0.0000026	--	0.000002 U
PCB-131/133	0.000004 U	0.000004 U	0.0000038 J	--	0.000004 U	0.000004 U	0.0000018 J	--	0.000004 U
PCB-132/161	0.000004 U	0.0000038 J	0.000038	--	0.000004 U	0.0000024 J	0.0000085	--	0.000004 U
PCB-134/143	0.000004 U	0.0000023 J	0.0000069	--	0.000004 U	0.000004 U	0.000003 J	--	0.000004 U
PCB-135	0.000002 U	0.0000055	0.000023	--	0.000002 U	0.0000028	0.0000098	--	0.0000013 J
PCB-136	0.000002 U	0.0000085	0.000036	--	0.000002 U	0.0000037	0.000014	--	0.000002 U
PCB-137	0.000002 U	0.0000014 J	0.0000028	--	0.000002 U	0.000002 U	0.0000017 J	--	0.000002 U
PCB-138/163/164	0.0000072	0.000018	0.00015	--	0.0000052 J	0.000011	0.000036	--	0.000016
PCB-139/149	0.0000031 J	0.000034	0.00016	--	0.0000022 J	0.000022	0.000066	--	0.000007
PCB-14	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-140	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-141	0.000002 U	0.0000066	0.000049	--	0.000002 U	0.0000041	0.000013	--	0.0000029
PCB-142	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-144	0.000002 U	0.0000015 J	0.000009	--	0.000002 U	0.0000014 J	0.0000025	--	0.000002 U
PCB-145	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-146/165	0.000004 U	0.0000049	0.000024	--	0.0000012 J	0.0000038 J	0.0000094	--	0.000003 J

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-345	SB-345	SB-345	SB-345	SB-346	SB-346	SB-346	SB-346	SB-347
SAMPLE ID	SB345-20191114-0006	SB345-20191114-0624	SB345-20191114-2448	SB345-20191114-4872	SB346-20191114-0006	SB346-20191114-0624	SB346-20191114-7296	SB346-20191114-96120	SB347-20191114-0006
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS
PCB-147	0.000002 U	0.000002 U	0.0000012 J	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-148	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-15	0.000002 U	0.0000018 J	0.000011	--	0.000002 U	0.000002 U	0.0000046	--	0.000002 U
PCB-150	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-151	0.000002 U	0.000018	0.000067	--	0.000002 U	0.000012	0.000033	--	0.0000037
PCB-152	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-153	0.0000085	0.000047	0.0002	--	0.0000064	0.000035	0.000084	--	0.000024
PCB-154	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000018 J	--	0.000002 U
PCB-155	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-156	0.0000012 U	0.0000016 J	0.000011	--	0.00000073 U	0.00000092 U	0.0000036	--	0.0000012 J
PCB-157	0.0000012 U	0.000001 U	0.0000018 J	--	0.00000072 U	0.00000082 U	0.0000013 J	--	0.00000091 U
PCB-158/160	0.000004 U	0.0000019 J	0.000015	--	0.000004 U	0.0000014 J	0.0000038 J	--	0.0000019 J
PCB-159	0.000002 U	0.0000048	0.0000057	--	0.000002 U	0.0000038	0.000008	--	0.000002 U
PCB-16	0.000002 U	0.000002 U	0.0000033	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-166	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-167	0.0000013 U	0.0000011 U	0.0000054	--	0.0000008 U	0.00000087 U	0.0000027	--	0.000002
PCB-168	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-169	0.0000013 U	0.000001 U	0.00000099 U	--	0.00000074 U	0.00000079 U	0.0000018 J	--	0.00000086 U
PCB-17	0.000002 U	0.000002 U	0.0000031	--	0.000002 U	0.000002 U	0.0000027	--	0.000002 U
PCB-170	0.0000032	0.000018	0.00009	--	0.0000022	0.000014	0.00004	--	0.0000079
PCB-171	0.000002 U	0.0000068	0.000026	--	0.000002 U	0.0000054	0.000013	--	0.000003
PCB-172	0.000002 U	0.0000072	0.00002	--	0.000002 U	0.0000061	0.000015	--	0.0000024
PCB-173	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-174	0.0000028	0.000054	0.00012	--	0.0000021	0.000047	0.00011	--	0.00001
PCB-175	0.000002 U	0.0000028	0.000002 U	--	0.000002 U	0.0000029	0.0000054	--	0.000002 U
PCB-176	0.000002 U	0.0000089	0.000015	--	0.000002 U	0.0000065	0.000014	--	0.0000017 J
PCB-177	0.000002 U	0.00002	0.000063	--	0.000002 U	0.000017	0.000044	--	0.0000058
PCB-178	0.000002 U	0.000019	0.000028	--	0.000002 U	0.000016	0.000034	--	0.0000046
PCB-179	0.000002 U	0.000042	0.000056	--	0.000002 U	0.000031	0.000072	--	0.0000046
PCB-18	0.000002 U	0.000002 U	0.0000051	--	0.000002 U	0.000002 U	0.0000038	--	0.000002 U
PCB-180	0.0000049	0.00016	0.00026	--	0.0000047	0.00013	0.00032	--	0.000034
PCB-181	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-182/187	0.0000042	0.00018	0.00019	--	0.0000039 J	0.00014	0.0003	--	0.000027
PCB-183	0.0000023	0.000048	0.00008	--	0.0000017 J	0.000045	0.000095	--	0.000011
PCB-184	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-185	0.000002 U	0.00001	0.000014	--	0.000002 U	0.0000098	0.000016	--	0.0000023
PCB-186	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-188	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-189	0.0000011 U	0.0000013 J	0.0000033	--	0.00000097 U	0.000001 U	0.0000026	--	0.00000093 U
PCB-19	0.000002 U	0.000002 U	0.0000022	--	0.000002 U	0.000002 U	0.0000024	--	0.000002 U
PCB-190	0.000002 U	0.0000059	0.000021	--	0.000002 U	0.0000056	0.000014	--	0.0000024
PCB-191	0.000002 U	0.000002 U	0.0000049	--	0.000002 U	0.000002 U	0.0000026	--	0.000002 U
PCB-192	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-193	0.000002 U	0.0000053	0.000012	--	0.000002 U	0.0000051	0.000012	--	0.0000025
PCB-194	0.000002 U	0.00016	0.00013	--	0.0000015 J	0.0001	0.00026	--	0.000027
PCB-195	0.000002 U	0.000027	0.000035	--	0.000002 U	0.000022	0.000056	--	0.0000059
PCB-196/203	0.0000032 J	0.00028	0.00022	--	0.0000023 J	0.00021	0.00048	--	0.000044
PCB-197	0.000002 U	0.0000056	0.0000058	--	0.000002 U	0.000006	0.0000099	--	0.000002 U
PCB-198	0.000002 U	0.000011	0.000008	--	0.000002 U	0.0000088	0.000015	--	0.0000016 J
PCB-199	0.0000035	0.00029	0.00022	--	0.0000026	0.0002	0.00044	--	0.000041
PCB-2	0.000002 U	0.00002	0.00003	--	0.000002 U	0.000012	0.000036	--	0.000002 U
PCB-20/21/33	0.000006 U	0.000006 U	0.0000073	--	0.000006 U	0.000006 U	0.000006 U	--	0.000006 U
PCB-200	0.000002 U	0.000024	0.000022	--	0.000002 U	0.00002	0.000041	--	0.0000036
PCB-201	0.000002 U	0.000037	0.000029	--	0.000002 U	0.00003	0.00006	--	0.0000051
PCB-202	0.000002 U	0.000086	0.000059	--	0.000002 U	0.000061	0.00012	--	0.0000089
PCB-204	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-205	0.000002 U	0.0000046	0.0000053	--	0.000002 U	0.000003	0.0000086	--	0.000002 U
PCB-206	0.0000035	0.00024	0.00017	--	0.000002 U	0.00014	0.00035	--	0.000035
PCB-207	0.000002 U	0.000029	0.00002	--	0.000002 U	0.000019	0.000047	--	0.0000045
PCB-208	0.000002 U	0.000062	0.000047	--	0.000002 U	0.000039	0.000088	--	0.0000075
PCB-209	0.0000036	0.000028	0.000047	--	0.000002 U	0.000018	0.000053	--	0.0000068
PCB-22	0.000002 U	0.000002 U	0.000003	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-23	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-24	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-25	0.000002 U	0.000002 U	0.0000018 J	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-26	0.000002 U	0.000002 U	0.000003	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-27	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-28	0.000002 U	0.000002 U	0.0000092	--	0.000002 U	0.000002 U	0.0000022	--	0.000002 U
PCB-29	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-3	0.000002 U	0.000014	0.000029	--	0.000002 U	0.0000099	0.000026	--	0.000002 U
PCB-30	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-31	0.000002 U	0.000002 U	0.000011	--	0.000002 U	0.000002 U	0.0000044	--	0.000002 U
PCB-32	0.000002 U	0.000002 U	0.0000028	--	0.000002 U	0.000002 U	0.0000021	--	0.000002 U
PCB-34	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-35	0.000002 U	0.000002 U	0.0000047	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-36	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-37	0.000002 U	0.000002 U	0.0000068	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-38	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-39	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-4	0.000002 U	0.0000046	0.0000068	--	0.000002 U	0.000002 U	0.0000049	--	0.000002 U
PCB-40	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-41/64/71/72	0.000008 U	0.0000026 J	0.0000088	--	0.000008 U	0.000008 U	0.0000033 J	--	0.000008 U
PCB-42/59	0.000004 U	0.000004 U	0.0000042	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-345	SB-345	SB-345	SB-345	SB-346	SB-346	SB-346	SB-346	SB-347
SAMPLE ID	SB345-20191114-0006	SB345-20191114-0624	SB345-20191114-2448	SB345-20191114-4872	SB346-20191114-0006	SB346-20191114-0624	SB346-20191114-7296	SB346-20191114-96120	SB347-20191114-0006
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS
PCB-43/49	0.000004 U	0.0000036 J	0.000012	--	0.000004 U	0.000004 U	0.0000052	--	0.000004 U
PCB-44	0.000002 U	0.0000025	0.000012	--	0.000002 U	0.000002 U	0.0000046	--	0.000002 U
PCB-45	0.000002 U	0.000002 U	0.0000027	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-46	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-47	0.000002 U	0.000002 U	0.0000059	--	0.000002 U	0.000002 U	0.0000025	--	0.000002 U
PCB-48/75	0.000004 U	0.000004 U	0.0000027 J	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U
PCB-5	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-50	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-51	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-52/69	0.000004 U	0.0000048	0.00002	--	0.000004 U	0.000004 U	0.000007	--	0.000004 U
PCB-53	0.000002 U	0.000002 U	0.0000027	--	0.000002 U	0.000002 U	0.0000022	--	0.000002 U
PCB-54	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-55	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-56/60	0.000004 U	0.0000015 J	0.0000068	--	0.000004 U	0.000004 U	0.0000024 J	--	0.000004 U
PCB-57	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-58	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-6	0.000002 U	0.0000034	0.0000042	--	0.000002 U	0.000002 U	0.0000027	--	0.000002 U
PCB-61/70	0.000004 U	0.000005	0.000019	--	0.000004 U	0.000004 U	0.0000067	--	0.000004 U
PCB-62	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-63	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-65	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-66/76	0.000004 U	0.0000039 J	0.000016	--	0.000004 U	0.000004 U	0.0000044	--	0.000004 U
PCB-67	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-68	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-7	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000011 J	--	0.000002 U
PCB-73	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-74	0.000002 U	0.0000018 J	0.0000073	--	0.000002 U	0.000002 U	0.0000027	--	0.000002 U
PCB-77	0.0000013 U	0.0000012 J	0.000003	--	0.0000013 U	0.00000097 U	0.0000022	--	0.000001 U
PCB-78	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-79	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-8	0.000002 U	0.0000046	0.0000097	--	0.000002 U	0.000002 U	0.0000071	--	0.000002 U
PCB-80	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-81	0.0000011 U	0.00000067 U	0.00000097 U	--	0.0000011 U	0.00000095 U	0.0000014 U	--	0.00000084 U
PCB-82	0.000002 U	0.000002 U	0.0000032	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-83/112	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U
PCB-84/92	0.000004 U	0.0000055	0.000018	--	0.000004 U	0.0000018 J	0.0000073	--	0.000004 U
PCB-85/116	0.000004 U	0.0000018 J	0.0000049	--	0.000004 U	0.000004 U	0.0000023 J	--	0.000004 U
PCB-86	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-87/117/125	0.000006 U	0.0000044 J	0.000014	--	0.000006 U	0.0000012 J	0.0000053 J	--	0.000006 U
PCB-88/91	0.000004 U	0.0000023 J	0.0000045	--	0.000004 U	0.000004 U	0.0000036 J	--	0.000004 U
PCB-89	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-9	0.000002 U	0.0000015 J	0.000002	--	0.000002 U	0.000002 U	0.0000026	--	0.000002 U
PCB-93	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-94	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-95	0.000002 U	0.000013	0.00007	--	0.000002 U	0.0000041	0.000019	--	0.000002 U
PCB-96	0.000002 U	0.0000022	0.000002 U	--	0.000002 U	0.000002 U	0.0000016 J	--	0.000002 U
PCB-97	0.000002 U	0.0000026	0.0000077	--	0.000002 U	0.000002 U	0.000004	--	0.000002 U
PCB-98/102	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U
PCB-99	0.0000015 J	0.0000031	0.0000095	--	0.000002 U	0.0000018 J	0.0000038	--	0.0000021
PENTACHLOROBIPHENYLS	0.0000048 J	0.000066 J	0.0003 J	--	0.000004 J	0.000021 J	0.000097 J	--	0.000014 J
TEQ DIOXIN-LIKE PCBs (BIRD)	0.0000013 U	6.0473E-08	1.52287E-07	--	0.00000083 U	1.2E-10	1.12763E-07	--	3.2E-10
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	0.0000013 U	1.35572E-07	2.43827E-07	--	0.00000083 U	1.05905E-07	2.42822E-07	--	1.16843E-07
TEQ DIOXIN-LIKE PCBs (FISH)	0.0000013 U	1.49E-10	4.53E-10	--	0.00000083 U	6E-12	3.81E-10	--	2.5E-11
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	0.0000013 U	2.398E-09	2.847E-09	--	0.00000083 U	1.996E-09	3.735E-09	--	2.763E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	0.0000013 U	2.97E-10	1.221E-09	--	0.00000083 U	3.6E-11	5.4652E-08	--	1.5E-10
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	0.0000013 U	5.6449E-08	5.8739E-08	--	0.00000083 U	4.565E-08	1.14892E-07	--	6.2274E-08
TETRACHLOROBIPHENYLS	0 UJ	0.000027 J	0.00012 J	--	0 UJ	0 UJ	0.000043 J	--	0 UJ
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0 U	0.0000071	0.0000337	--	0 U	0.0000012	0.0000184	--	0.000005
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.0000602	0.0021888	0.0034244	--	0.000056	0.0015148	0.0037015	--	0.0004178
TOTAL PCB CONGENERS ZEROND	0.0000602	0.0021959	0.0034581	--	0.000056	0.001516	0.0037199	--	0.0004228
TOTAL PCB CONGENERS-NOAA	0.0000372	0.0007583	0.0013502	--	0.0000264	0.0005191	0.00131	--	0.0001681
TOTAL PCB CONGENERS-NOAA HALFND	0.000241635	0.002296935	0.003529295	--	0.000235855	0.00165321	0.003806235	--	0.000574335
TOTAL PCB CONGENERS-NOAA X2	0.0000744	0.0015166	0.0027004	--	0.0000528	0.0010382	0.00262	--	0.0003362
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.000099	0.0015206	0.0027004	--	0.00007963	0.0010582	0.00262	--	0.0003522
TRICHLOROBIPHENYLS	0 UJ	0 UJ	0.000063 J	--	0 UJ	0 UJ	0.000018 J	--	0 UJ
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	270	100	250	--	210	170	150	--	210
1,2,3,4,6,7,8,9-OCDF	0.32 U	3.7 JZ	9.5 J	--	0.47 U	8.2 J	2.7 JZ	--	0.98 JZ
1,2,3,4,6,7,8-HPCDD	5.9	6.6	17	--	6.2	11	19	--	6.7
1,2,3,4,6,7,8-HPCDF	0.33 J	3 J	9.2	--	0.18 U	8.9	4.1 J	--	1.1 J
1,2,3,4,7,8,9-HPCDF	0.19 U	0.22 U	0.41 JZ	--	0.18 U	0.22 JZ	0.2 U	--	0.3 U
1,2,3,4,7,8-HXCDD	0.14 U	0.16 U	0.56 J	--	0.16 U	0.24 JZ	0.43 JZ	--	0.15 U
1,2,3,4,7,8-HXCDF	0.13 U	0.15 J	1.9 J	--	0.14 U	0.47 J	1.6 J	--	0.33 JZ
1,2,3,6,7,8-HXCDD	0.19 J	0.16 U	1.7 J	--	0.16 U	0.77 JZ	2.9 J	--	0.16 JZ
1,2,3,6,7,8-HXCDF	0.093 U	0.12 U	0.9 JZ	--	0.14 U	0.36 JZ	0.85 J	--	0.21 U
1,2,3,7,8,9-HXCDD	0.17 J	0.16 U	1.1 JZ	--	0.17 U	0.53 JZ	1.3 J	--	0.27 J
1,2,3,7,8,9-HXCDF	0.21 U	0.21 U	0.35 J	--	0.21 U	0.21 U	0.21 U	--	0.25 U
1,2,3,7,8-PECDD	0.21 U	0.18 U	0.34 U	--	0.18 U	0.22 U	1.2 J	--	0.18 U
1,2,3,7,8-PECDF	0.17 U	0.24 U	1.3 J	--	0.17 U	0.29 U	1.3 JZ	--	0.23 U
2,3,4,6,7,8-HXCDF	0.091 U	0.12 U	0.88 JZ	--	0.15 U	0.26 JZ	0.15 U	--	0.22 U
2,3,4,7,8-PECDF	0.16 U	0.22 U	0.92 J	--	0.16 U	0.25 U	0.97 J	--	0.2 U
2,3,7,8-TCDD	0.17 U	0.17 U	0.26 JZ	--	0.31 U	0.28 U	0.24 U	--	0.19 U
2,3,7,8-TCDF	0.15 U	0.26 U	1.3	--	0.25 U	0.37 U	1.1 JZ	--	0.29 J

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-345	SB-345	SB-345	SB-345	SB-346	SB-346	SB-346	SB-346	SB-347
SAMPLE ID	SB345-20191114-0006	SB345-20191114-0624	SB345-20191114-2448	SB345-20191114-4872	SB346-20191114-0006	SB346-20191114-0624	SB346-20191114-7296	SB346-20191114-96120	SB347-20191114-0006
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20191114
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB	SS
TEQ DIOXINS (BIRD)	0.0551	0.06197	3.30705	--	0.0272	0.30172	3.90077	--	0.390398
TEQ DIOXINS (BIRD) HALFND	0.439266	0.52537	3.47705	--	0.5328235	0.88672	4.03977	--	0.726148
TEQ DIOXINS (FISH)	0.0398	0.06197	1.70005	--	0.0272	0.36202	2.38227	--	0.090598
TEQ DIOXINS (FISH) HALFND	0.339966	0.36967	1.87005	--	0.3981735	0.70152	2.52127	--	0.404348
TEQ DIOXINS (HUMANS/MAMMALS)	0.1793	0.14211	1.78795	--	0.125	0.51766	2.62481	--	0.246294
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	0.437548	0.41431	1.95795	--	0.4674205	0.83851	2.76381	--	0.507744
TOTAL HPCDD	10 J	14 J	38 J	--	11 J	11 J	31 J	--	12 J
TOTAL HPCDF	0.33 J	5.6 J	14 J	--	0 UJ	17 J	4.1 J	--	1.1 J
TOTAL HXCDD	1.1 J	2.1 J	21 J	--	0 UJ	5.4 J	50 J	--	1.8 J
TOTAL HXCDF	0 UJ	0.15 J	9.5 J	--	0 UJ	4.7 J	2.9 J	--	0 UJ
TOTAL PECDD	0 UJ	0.24 J	4.6 J	--	0 UJ	0 UJ	15 J	--	0 UJ
TOTAL PECDF	0.42 J	0.8 J	5.4 J	--	0 UJ	1.1 J	2.5 J	--	0.4 J
TOTAL TCDD	0.4 J	0.82 J	10 J	--	0 UJ	2.2 J	12 J	--	0.33 J
TOTAL TCDF	0.21 J	0 UJ	5 J	--	0 UJ	0 UJ	1.7 J	--	0.29 J
METALS (MG/KG)									
ALUMINUM	14500	10300	8090	--	11500	11100	6880	--	10200
ANTIMONY	1.1 U	0.29 J	0.26 J	--	1.2 U	1.1 U	1.1 U	--	1.2 U
ARSENIC	9.1	27.3	19	--	6.2	0.56 U	12.9	--	4.9
BARIUM	55	93.9	87.7	--	31.5	5.6 U	61.5	--	43
BERYLLIUM	0.78	1.3	1.2	--	0.5 J	0.56 U	0.78	--	0.35 J
CADMIUM	0.57 U	0.077 J	0.53 U	--	0.62 U	0.56 U	0.56 U	--	0.6 U
CALCIUM	559 J	323 J	287 J	--	588 J	388 J	965	--	482 J
CHROMIUM	15.1	16.6	15.5	--	10	1.1 U	15.3	--	8.1
COBALT	5.6	6.8	9.1	--	4.1	0.56 U	14.1	--	4.4
COPPER	23.1	37.6	28.9	--	15.2	1.1 U	25.3	--	8.7
CYANIDE	0.61 R	0.54 R	0.51 R	--	0.63 R	0.59 R	0.55 R	--	0.56 R
IRON	20000	17700	18900	--	25900	27700	31900	--	11600
LEAD	19.2	20.3	19.2	--	12.7	0.56 U	15	--	10.5
MAGNESIUM	1490	1530	1920	--	903	1090	1170	--	724
MANGANESE	158	206	255	--	114	0.56 U	325	--	149
MERCURY	0.11 UJ	0.11 UJ	0.78	--	0.13 UJ	0.12 UJ	0.12	--	0.11 UJ
NICKEL	9.6	15.7	16.9	--	5.9	0.56 U	11.2	--	3.3
POTASSIUM	2400	2640	1890	--	2070	2380	1890	--	1580
SELENIUM	1.1 J	2 J	1.6 J	--	0.28 J	2.8 U	0.98 J	--	0.38 J
SILVER	0.57 U	0.57 U	0.53 U	--	0.62 U	0.56 U	0.56 U	--	0.6 U
SODIUM	41.4 J	168 J	69.5 J	--	30.6 J	77 J	144 J	--	25.2 J
THALLIUM	0.57 U	0.57 U	0.53 U	--	0.62 U	0.56 U	0.2 J	--	0.6 U
VANADIUM	21.4	17.8	15.4	--	13.3	2.8 U	17.5	--	14.4
ZINC	41.3	48.4	50.9	--	25.7	1.1 UJ	36.4	--	15.2
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	80	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	8300	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	86	--	88	--	86	--	87	--

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-347	SB-347	SB-347	SB-348	SB-348	SB-348	SB-348	SB-349	SB-349
SAMPLE ID	SB347-20191114-0624	SB347-20191114-2448	SB347-20191114-4872	SB348-20191113-0006	SB348-20191113-0624	SB348-20191113-7296	SB348-20191113-96120	SB349-20191113-0006	SB349-20191113-0624
SAMPLE DATE	20191114	20191114	20191114	20191113	20191113	20191113	20191113	20191113	20191113
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0.5	2	4	0	0.5	6	8	0	0.5
BOTTOM DEPTH	2	4	6	0.5	2	8	10	0.5	2
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
1,1,2,2-TETRACHLOROETHANE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
1,1,2-TRICHLOROETHANE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
1,1-DICHLOROETHANE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 U	0.0055 U	0.0064 UJ
1,1-DICHLOROETHENE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 U	0.0055 U	0.0064 UJ
1,2,3-TRICHLOROBENZENE	0.0067 UJ	--	0.0074 R	0.0057 UJ	0.0049 U	--	0.0064 R	0.0055 UJ	0.0064 R
1,2,4-TRICHLOROBENZENE	0.0067 UJ	--	0.0074 R	0.0057 UJ	0.0049 U	--	0.0064 R	0.0055 UJ	0.0064 R
1,2-DIBROMO-3-CHLOROPROPANE	0.0067 UJ	--	0.0074 R	0.0057 U	0.0049 U	--	0.0064 R	0.0055 U	0.0064 R
1,2-DIBROMOETHANE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
1,2-DICHLOROBENZENE	0.0067 UJ	--	0.0074 R	0.0057 UJ	0.0049 U	--	0.0064 R	0.0055 UJ	0.0064 R
1,2-DICHLOROETHANE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
1,2-DICHLOROPROPANE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 UJ	0.0064 UJ
1,3-DICHLOROBENZENE	0.0067 UJ	--	0.0074 R	0.0057 UJ	0.0049 U	--	0.0064 R	0.0055 UJ	0.0064 R
1,4-DICHLOROBENZENE	0.0067 UJ	--	0.0074 R	0.0057 UJ	0.0049 U	--	0.0064 R	0.0055 UJ	0.0064 R
2-BUTANONE	0.013 U	--	0.015 UJ	0.011 U	0.0098 U	--	0.013 U	0.011 U	0.013 UJ
2-HEXANONE	0.013 U	--	0.015 UJ	0.011 U	0.0098 U	--	0.013 UJ	0.011 U	0.013 UJ
4-METHYL-2-PENTANONE	0.013 U	--	0.015 UJ	0.011 U	0.0098 U	--	0.013 UJ	0.011 U	0.013 UJ
ACETONE	0.013 U	--	0.015 UJ	0.011 U	0.0098 U	--	0.013 U	0.011 U	0.013 UJ
BENZENE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.014 J+	0.0055 U	0.012 J+
BROMOCHLOROMETHANE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 U	0.0055 U	0.0064 UJ
BROMODICHLOROMETHANE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 UJ	0.0064 UJ
BROMOFORM	0.0067 UJ	--	0.0074 R	0.0057 U	0.0049 U	--	0.0064 R	0.0055 U	0.0064 R
BROMOMETHANE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 U	0.0055 U	0.0064 UJ
CARBON DISULFIDE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 U	0.0055 U	0.0064 UJ
CARBON TETRACHLORIDE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
CHLOROBENZENE	0.0067 UJ	--	0.0074 UJ	0.0057 UJ	0.0049 U	--	0.0064 UJ	0.0055 UJ	0.0064 UJ
CHLORODIBROMOMETHANE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
CHLOROETHANE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 U	0.0055 U	0.0064 UJ
CHLOROFORM	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 U	0.0055 U	0.0064 UJ
CHLOROMETHANE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 U	0.0055 U	0.0064 UJ
CIS-1,2-DICHLOROETHENE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 U	0.0055 U	0.0064 UJ
CIS-1,3-DICHLOROPROPENE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
CYCLOHEXANE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0048 J	0.0055 UJ	0.0096 J+
DICHLORODIFLUOROMETHANE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 U	0.0055 U	0.0064 UJ
ETHYLBENZENE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
ISOPROPYLBENZENE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
M+P-XYLENES	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0072 J+	0.0055 U	0.0064 UJ
METHYL ACETATE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
METHYL CYCLOHEXANE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.012 J+	0.0055 UJ	0.017 J+
METHYL TERT-BUTYL ETHER	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
METHYLENE CHLORIDE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
O-XYLENE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
STYRENE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
TETRACHLOROETHENE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
TOLUENE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.013 J+	0.0055 U	0.012 J+
TRANS-1,2-DICHLOROETHENE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 U	0.0055 U	0.0064 UJ
TRANS-1,3-DICHLOROPROPENE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
TRICHLOROETHENE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
TRICHLOROFLUOROMETHANE	0.0067 UJ	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 UJ	0.0055 U	0.0064 UJ
VINYL CHLORIDE	0.0067 U	--	0.0074 UJ	0.0057 U	0.0049 U	--	0.0064 U	0.0055 U	0.0064 UJ
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.2 U	--	0.13 J	0.22 U	0.2 U	--	0.095 J	0.22 U	0.037 J
1,2,4,5-TETRACHLOROBENZENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
1,4-DIOXANE	0.077 U	--	0.076 UJ	0.088 UJ	0.078 U	--	0.074 UJ	0.086 U	0.077 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
2,3,4,6-TETRACHLOROPHENOL	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
2,4,5-TRICHLOROPHENOL	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
2,4,6-TRICHLOROPHENOL	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
2,4-DICHLOROPHENOL	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
2,4-DIMETHYLPHENOL	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
2,4-DINITROPHENOL	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
2,4-DINITROTOLUENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
2,6-DINITROTOLUENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
2-CHLORONAPHTHALENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
2-CHLOROPHENOL	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
2-METHYLNAPHTHALENE	0.046 J	--	0.1 J	0.22 U	0.2 U	--	0.61	0.22 U	0.089 J
2-METHYLPHENOL	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.053 J	0.42 U	0.38 U
2-NITROANILINE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
2-NITROPHENOL	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
3&4-METHYLPHENOL	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.073 J	0.42 U	0.38 U
3,3'-DICHLOROBENZIDINE	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
3-NITROANILINE	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
4,6-DINITRO-2-METHYLPHENOL	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
4-BROMOPHENYL PHENYL ETHER	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
4-CHLORO-3-METHYLPHENOL	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
4-CHLOROANILINE	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
4-CHLOROPHENYL PHENYL ETHER	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
4-NITROANILINE	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
4-NITROPHENOL	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-347	SB-347	SB-347	SB-348	SB-348	SB-348	SB-348	SB-349	SB-349
SAMPLE ID	SB347-20191114-0624	SB347-20191114-2448	SB347-20191114-4872	SB348-20191113-0006	SB348-20191113-0624	SB348-20191113-7296	SB348-20191113-96120	SB349-20191113-0006	SB349-20191113-0624
SAMPLE DATE	20191114	20191114	20191114	20191113	20191113	20191113	20191113	20191113	20191113
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
ACENAPHTHENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
ACENAPHTHYLENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
ACETOPHENONE	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.046 J	0.42 U	0.38 U
ANTHRACENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.083 J	0.22 U	0.2 U
ATRAZINE	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
BAP EQUIVALENT-HALFND	0.224873	--	0.21615	0.22 U	0.2 U	--	0.21498	0.22 U	0.223872
BAP EQUIVALENT-POS	0.003873	--	0.0062	0.22 U	0.2 U	--	0.01453	0.22 U	0.002872
BENZALDEHYDE	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
BENZO(A)ANTHRACENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.093 J	0.22 U	0.2 U
BENZO(A)PYRENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
BENZO(B)FLUORANTHENE	0.038 J	--	0.06 J	0.22 U	0.2 U	--	0.05 J	0.22 U	0.028 J
BENZO(G,H,I)PERYLENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
BENZO(K)FLUORANTHENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
BIS(2-CHLOROETHOXY)METHANE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
BIS(2-CHLOROETHYL)ETHER	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
BUTYL BENZYL PHTHALATE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
CAPROLACTAM	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
CARBAZOLE	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
CHRYSENE	0.073 J	--	0.2	0.22 U	0.2 U	--	0.23	0.22 U	0.072 J
DIBENZO(A,H)ANTHRACENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
DIBENZOFURAN	0.2 U	--	0.059 J	0.22 U	0.2 U	--	0.088 J	0.22 U	0.027 J
DIETHYL PHTHALATE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
DIMETHYL PHTHALATE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
DI-N-BUTYL PHTHALATE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
DI-N-OCTYL PHTHALATE	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
FLUORANTHENE	0.033 J	--	0.065 J	0.43 U	0.39 U	--	0.58	0.42 U	0.035 J
FLUORENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.029 J	0.22 U	0.2 U
HEXACHLOROBENZENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
HEXACHLOROBUTADIENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
HEXACHLOROCYCLOPENTADIENE	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
HEXACHLOROETHANE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
HIGH MOLECULAR WEIGHT PAHS	0.145	--	0.308	0 U	0 U	--	0.903	0 U	0.132
INDENO(1,2,3-CD)PYRENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
ISOPHORONE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
LOW MOLECULAR WEIGHT PAHS	0.232	--	0.893	0 U	0 U	--	1.782	0 U	0.345
NAPHTHALENE	0.029 J	--	0.068 J	0.22 U	0.2 U	--	0.37	0.22 U	0.11 J
NITROBENZENE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
N-NITROSO-DI-N-PROPYLAMINE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
N-NITROSODIPHENYLAMINE	0.2 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
PENTACHLOROPHENOL	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
PHENANTHRENE	0.17 J	--	0.76	0.22 U	0.2 U	--	0.72	0.22 U	0.2
PHENOL	0.38 U	--	0.38 U	0.43 U	0.39 U	--	0.36 U	0.42 U	0.38 U
PYRENE	0.034 J	--	0.048 J	0.22 U	0.2 U	--	0.53	0.22 U	0.032 J
TOTAL PAHS	0.377	--	1.201	0 U	0 U	--	2.685	0 U	0.477
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	0.0077 U	--	0.0075 U	0.0086 U	0.0079 U	--	0.0072 U	0.0087 U	0.0077 U
2-METHYLNAPHTHALENE	0.071	--	0.16	0.0043 U	0.0039 U	--	0.72 J	0.0014 J	0.08
ACENAPHTHENE	0.004	--	0.013	0.0043 U	0.0039 U	--	0.02 J+	0.0042 U	0.0044
ACENAPHTHYLENE	0.0038 U	--	0.0038 U	0.0043 U	0.0039 U	--	0.0036 UJ	0.0042 U	0.0038 U
ANTHRACENE	0.0034 J	--	0.0034 J	0.0043 U	0.0039 U	--	0.081	0.0042 U	0.0047
BAP EQUIVALENT-HALFND	0.014519	--	0.025559	0.003978	0.004505	--	0.040408	0.004852	0.012838
BAP EQUIVALENT-POS	0.0145	--	0.02554	0.001592	0.000001	--	0.04039	0.000001	0.012819
BENZO(A)ANTHRACENE	0.013	--	0.016	0.001 J	0.0039 U	--	0.15	0.0042 U	0.012
BENZO(A)PYRENE	0.0034 J	--	0.005	0.0012 J	0.0039 U	--	0.0099	0.0042 U	0.0031 J
BENZO(B)FLUORANTHENE	0.039	--	0.082	0.0029 J	0.0039 U	--	0.057	0.0042 U	0.033
BENZO(G,H,I)PERYLENE	0.0052	--	0.0078	0.0043 U	0.0039 U	--	0.01	0.0042 U	0.004
BENZO(K)FLUORANTHENE	0.0038 U	--	0.0038 U	0.0043 U	0.0039 U	--	0.0036 U	0.0042 U	0.0038 U
CHRYSENE	0.15	--	0.3	0.0022 J	0.0014 J	--	0.42 J	0.0011 J	0.079
DIBENZO(A,H)ANTHRACENE	0.0055	--	0.01	0.0043 U	0.0039 U	--	0.0089	0.0042 U	0.0049
FLUORANTHENE	0.031	--	0.12	0.0023 J	0.00076 J	--	0.52 J	0.00056 J	0.034
FLUORENE	0.0041	--	0.014	0.0043 U	0.0039 U	--	0.042 J+	0.0042 U	0.0057
HIGH MOLECULAR WEIGHT PAHS	0.2446	--	0.4288	0.0102	0.0014	--	1.2005	0.0011	0.1664
INDENO(1,2,3-CD)PYRENE	0.0025 J	--	0.0044	0.0043 U	0.0039 U	--	0.0047	0.0042 U	0.0024 J
LOW MOLECULAR WEIGHT PAHS	0.3155	--	1.0804	0.0046	0.00386	--	1.963	0.00396	0.3048
NAPHTHALENE	0.043	--	0.11	0.0043 U	0.0039 U	--	0.51 J	0.0015 J	0.096
PENTACHLOROPHENOL	0.0077 U	--	0.0076 U	0.0088 U	0.0078 U	--	0.0074 U	0.0086 U	0.0077 U
PHENANTHRENE	0.23	--	0.82 J	0.0023 J	0.0031 J	--	0.79 J	0.0019 J	0.16
PYRENE	0.026	--	0.0036 J	0.0029 J	0.0039 U	--	0.54 J	0.0042 U	0.028
TOTAL PAHS	0.15	--	0.3	0.0022	0.0014	--	0.42	0.0011	0.079
PESTICIDES (MG/KG)									
4,4'-DDD	0.0013 R	--	0.0023 R	0.0043 U	0.0038 U	--	0.0039 R	0.0042 U	0.00053 R
4,4'-DDE	0.00064 R	--	0.0008 R	0.0043 U	0.0038 U	--	0.0036 U	0.0042 U	0.0011 J
4,4'-DDT	0.0019 J	--	0.0021 R	0.0043 U	0.0038 U	--	0.002 R	0.0042 U	0.0011 J
ALDRIN	0.00033 R	--	0.0019 U	0.0022 U	0.002 U	--	0.00071 R	0.0022 U	0.002 U
ALPHA-BHC	0.0019 U	--	0.00016 J	0.0022 U	0.002 U	--	0.0019 U	0.0022 U	0.002 U
ALPHA-CHLORDANE	0.0017 J	--	0.0092 J	0.00039 R	0.002 U	--	0.0023 R	0.0022 U	0.0013 J
BETA-BHC	0.00061 J	--	0.00039 R	0.00042 J	0.002 U	--	0.0011 J	0.00038 J	0.00052 J
DELTA-BHC	0.0019 U	--	0.0019 U	0.0022 U	0.002 U	--	0.0019 U	0.0022 U	0.002 U
DIELDRIN	0.00087 R	--	0.0017 R	0.0043 U	0.0038 U	--	0.0027 R	0.0042 U	0.00067 R
ENDOSULFAN I	0.0019 U	--	0.0019 U	0.0022 U	0.002 U	--	0.0019 U	0.0022 U	0.002 U
ENDOSULFAN II	0.0012 J	--	0.0052 R	0.0043 U	0.0038 U	--	0.0036	0.0042 U	0.0038 U
ENDOSULFAN SULFATE	0.0038 U	--	0.00041 R	0.00035 J	0.0038 U	--	0.00029 R	0.0042 U	0.0038 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-347	SB-347	SB-347	SB-348	SB-348	SB-348	SB-348	SB-349	SB-349
SAMPLE ID	SB347-20191114-0624	SB347-20191114-2448	SB347-20191114-4872	SB348-20191113-0006	SB348-20191113-0624	SB348-20191113-7296	SB348-20191113-96120	SB349-20191113-0006	SB349-20191113-0624
SAMPLE DATE	20191114	20191114	20191114	20191113	20191113	20191113	20191113	20191113	20191113
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
ENDRIN	0.00049 R	--	0.00081 R	0.0043 U	0.0038 U	--	0.0024 J	0.0042 U	0.0021 J
ENDRIN ALDEHYDE	0.0025 J	--	0.0088 J	0.0043 U	0.0038 U	--	0.006 J	0.0042 U	0.0014 J
ENDRIN KETONE	0.0042 R	--	0.022 R	0.0043 U	0.0038 U	--	0.012 R	0.0042 U	0.0028 R
GAMMA-BHC (LINDANE)	0.0025 J	--	0.027 J	0.0022 U	0.002 U	--	0.0087 J	0.0022 U	0.0016 J
GAMMA-CHLORDANE	0.0019 U	--	0.015	0.0022 U	0.002 U	--	0.00034 R	0.0022 U	0.002 U
HEPTACHLOR	0.00035 J	--	0.0013 R	0.0022 U	0.002 U	--	0.0029 R	0.0022 U	0.002 U
HEPTACHLOR EPOXIDE	0.0019 U	--	0.00025 R	0.0022 U	0.002 U	--	0.00036 R	0.0022 U	0.002 U
METHOXYCHLOR	0.022	--	0.089	0.022 U	0.02 U	--	0.064	0.022 U	0.015 J
TOXAPHENE	0.19 U	--	0.19 U	0.22 U	0.2 U	--	0.19 U	0.22 U	0.2 U
PCBS (MG/KG)									
AROCLOR-1016	--	--	0.037 U	--	--	--	0.036 U	--	--
AROCLOR-1221	--	--	0.037 U	--	--	--	0.036 U	--	--
AROCLOR-1232	--	--	0.037 U	--	--	--	0.036 U	--	--
AROCLOR-1242	--	--	0.037 U	--	--	--	0.036 U	--	--
AROCLOR-1248	--	--	0.037 U	--	--	--	0.036 U	--	--
AROCLOR-1254	--	--	0.037 U	--	--	--	0.036 U	--	--
AROCLOR-1260	--	--	0.037 U	--	--	--	0.036 U	--	--
AROCLOR-1262	--	--	0.037 U	--	--	--	0.036 U	--	--
AROCLOR-1268	--	--	0.037 U	--	--	--	0.036 U	--	--
TOTAL AROCLOR	--	--	0 U	--	--	--	0 U	--	--
TOTAL AROCLOR HALFND	--	--	0.1665	--	--	--	0.162	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	0.294 U	0.291 U	--	--	0.305 U	0.278 U	--	--	0.291 U
AROCLOR-1221	0.588 U	0.581 U	--	--	0.61 U	0.556 U	--	--	0.581 U
AROCLOR-1232	0.294 U	0.291 U	--	--	0.305 U	0.278 U	--	--	0.291 U
AROCLOR-1242	0.294 U	0.291 U	--	--	0.305 U	0.278 U	--	--	0.291 U
AROCLOR-1248	0.294 U	0.291 U	--	--	0.305 U	0.278 U	--	--	0.291 U
AROCLOR-1254	0.294 U	0.291 U	--	--	0.305 U	0.278 U	--	--	0.291 U
AROCLOR-1260	0.294 U	0.291 U	--	--	0.305 U	0.166 J	--	--	0.291 U
AROCLOR-1262	0.294 U	0.291 U	--	--	0.305 U	0.278 U	--	--	0.291 U
AROCLOR-1268	0.294 U	0.291 U	--	--	0.305 U	0.278 U	--	--	0.291 U
TOTAL AROCLOR	0 U	0 U	--	--	0 U	0.166	--	--	0 U
TOTAL AROCLOR HALFND	1.47	1.4545	--	--	1.525	1.417	--	--	1.4545
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	0.00004 J	--	0 UJ	0.000017 J	0 UJ	--	0.000036 J	0.0000098 J	0.0000058 J
HEPTACHLOROBIPHENYLS	0.0013 J	--	0.000021 J	0.000091 J	0.0000051 J	--	0.00085 J	0.000032 J	0.00029 J
HEXACHLOROBIPHENYLS	0.00035 J	--	0 UJ	0.000094 J	0 UJ	--	0.0002 J	0.000025 J	0.000064 J
MONOCHLOROBIPHENYLS	0.000092 J	--	0.000045 J	0 UJ	0 UJ	--	0.000051 J	0 UJ	0.000014 J
NONACHLOROBIPHENYLS	0.00056 J	--	0.0000074 J	0.000003 J	0.0000016 J	--	0.00033 J	0.0000018 J	0.00015 J
OCTACHLOROBIPHENYLS	0.0017 J	--	0.000024 J	0.000025 J	0.0000067 J	--	0.0012 J	0.000011 J	0.00045 J
PCB-1	0.000014	--	0.0000092	0.000002 U	0.000002 U	--	0.000016	0.000002 U	0.0000033
PCB-10	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-100	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-101/90	0.000014	--	0.000004 U	0.0000072	0.000004 U	--	0.000023	0.0000037 J	0.0000043
PCB-103	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-104	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-105	0.0000025	--	0.0000016 U	0.0000032	0.00000091 U	--	0.000003	0.0000012 U	0.0000014 J
PCB-108/107	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U
PCB-109	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-11	0.000011	--	0.000002 U	0.000017	0.000002 U	--	0.0000039	0.0000098	0.0000018 J
PCB-110	0.0000058	--	0.000002 U	0.0000033	0.000002 U	--	0.000017	0.0000019 J	0.0000032
PCB-111/115	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U
PCB-113	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-114	0.0000011 U	--	0.0000016 U	0.00000098 U	0.00000086 U	--	0.0000011 U	0.0000011 U	0.00000083 U
PCB-118/106	0.0000074	--	0.0000017 U	0.0000057	0.00000087 U	--	0.0000085	0.0000028 J	0.0000035 J
PCB-119	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-12	0.0000046	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-120	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-121	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-122	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-123	0.000001 U	--	0.0000014 U	0.00000077 U	0.00000067 U	--	0.00000085 U	0.00000084 U	0.00000057 U
PCB-124	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-126	0.0000021	--	0.0000015 U	0.0000012 U	0.0000013 U	--	0.0000011 U	0.0000014 U	0.0000007 U
PCB-127	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-128/162	0.0000024 J	--	0.000004 U	0.000002 J	0.000004 U	--	0.000002 J	0.000004 U	0.0000018 J
PCB-129	0.0000021	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-13	0.0000048	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-130	0.0000026	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-131/133	0.000002 J	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U
PCB-132/161	0.0000055	--	0.000004 U	0.000003 J	0.000004 U	--	0.0000049	0.000004 U	0.0000021 J
PCB-134/143	0.0000033 J	--	0.000004 U	0.000004 U	0.000004 U	--	0.0000021 J	0.000004 U	0.000004 U
PCB-135	0.0000092	--	0.000002 U	0.000002	0.000002 U	--	0.000004	0.000002 U	0.0000017 J
PCB-136	0.000012	--	0.000002 U	0.0000024	0.000002 U	--	0.000002 U	0.000002 U	0.0000025
PCB-137	0.0000028	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-138/163/164	0.000028	--	0.000006 U	0.000023	0.000006 U	--	0.00002	0.000008	0.0000087
PCB-139/149	0.000077	--	0.000004 U	0.000014	0.000004 U	--	0.000043	0.0000055	0.000013
PCB-14	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-140	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-141	0.000013	--	0.000002 U	0.0000055	0.000002 U	--	0.0000075	0.000002 U	0.0000027
PCB-142	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-144	0.0000038	--	0.000002 U	0.0000019 J	0.000002 U	--	0.0000019 J	0.000002 U	0.000002 U
PCB-145	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-146/165	0.000013	--	0.000004 U	0.0000036 J	0.000004 U	--	0.0000069	0.000004 U	0.0000026 J

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-347	SB-347	SB-347	SB-348	SB-348	SB-348	SB-348	SB-349	SB-349
SAMPLE ID	SB347-20191114-0624	SB347-20191114-2448	SB347-20191114-4872	SB348-20191113-0006	SB348-20191113-0624	SB348-20191113-7296	SB348-20191113-96120	SB349-20191113-0006	SB349-20191113-0624
SAMPLE DATE	20191114	20191114	20191114	20191113	20191113	20191113	20191113	20191113	20191113
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
PCB-147	0.0000016 J	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-148	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000012	0.000002 U	0.000002 U
PCB-15	0.0000081	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-150	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-151	0.000043	--	0.000002 U	0.0000063	0.000002 U	--	0.000024	0.0000025	0.000007
PCB-152	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-153	0.0001	--	0.000002 U	0.000025	0.000002 U	--	0.000059	0.0000093	0.00002
PCB-154	0.0000029	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-155	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-156	0.0000032	--	0.0000015 U	0.0000022	0.00000099 U	--	0.0000011 U	0.0000014 U	0.0000009 U
PCB-157	0.0000014 J	--	0.0000017 U	0.00000095 U	0.00000095 U	--	0.0000012 U	0.0000013 U	0.00000088 U
PCB-158/160	0.0000034 J	--	0.000004 U	0.0000033 J	0.000004 U	--	0.0000021 J	0.000004 U	0.000004 U
PCB-159	0.00001	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000062	0.000002 U	0.0000022
PCB-16	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000039	0.000002 U	0.000002 U
PCB-166	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-167	0.0000033	--	0.0000016 U	0.0000011 U	0.000001 U	--	0.0000012 U	0.0000017 U	0.00000087 U
PCB-168	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-169	0.00000091 U	--	0.0000015 U	0.0000011 U	0.000001 U	--	0.000001 U	0.0000015 U	0.00000082 U
PCB-17	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-170	0.00004	--	0.000002 U	0.000012	0.000002 U	--	0.000023	0.000005	0.0000092
PCB-171	0.000015	--	0.000002 U	0.000004	0.000002 U	--	0.0000077	0.000002 U	0.000003
PCB-172	0.00002	--	0.000002 U	0.000002 U	0.000002 U	--	0.00001	0.000002 U	0.0000045
PCB-173	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-174	0.00012	--	0.000002 U	0.000011	0.000002 U	--	0.000077	0.0000049	0.000027
PCB-175	0.0000055	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000024	0.000002 U	0.000002 U
PCB-176	0.000019	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000096	0.000002 U	0.0000041
PCB-177	0.00005	--	0.000002 U	0.0000073	0.000002 U	--	0.000031	0.0000027	0.0000089
PCB-178	0.000042	--	0.000002 U	0.0000039	0.000002 U	--	0.000029	0.000002 U	0.0000093
PCB-179	0.000094	--	0.0000031	0.0000038	0.000002 U	--	0.000056	0.000002 U	0.000018
PCB-18	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000035	0.000002 U	0.000002 U
PCB-180	0.00037	--	0.0000064	0.000021	0.0000019 J	--	0.00024	0.0000092	0.000083
PCB-181	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-182/187	0.00037	--	0.0000073	0.000016	0.0000018 J	--	0.00027	0.000006	0.000084
PCB-183	0.00012	--	0.0000042	0.0000066	0.0000014 J	--	0.000073	0.0000038	0.000023
PCB-184	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-185	0.000021	--	0.000002 U	0.000002 U	0.000002 U	--	0.000011	0.000002 U	0.0000056
PCB-186	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-188	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-189	0.0000029	--	0.0000016 U	0.0000012 U	0.00000082 U	--	0.00000082 U	0.0000015 U	0.00000074 U
PCB-19	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000013	0.000002 U	0.000002 U
PCB-190	0.000014	--	0.000002 U	0.0000029	0.000002 U	--	0.0000068	0.000002 U	0.0000029
PCB-191	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-192	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-193	0.000014	--	0.000002 U	0.0000022	0.000002 U	--	0.0000076	0.000002 U	0.0000031
PCB-194	0.00033	--	0.0000049	0.0000052	0.0000013 J	--	0.00018	0.0000024	0.000072
PCB-195	0.000069	--	0.0000018 J	0.0000031	0.000002 U	--	0.000037	0.000002 U	0.000014
PCB-196/203	0.00052	--	0.0000076	0.0000075	0.0000031 J	--	0.00035	0.0000043	0.00014
PCB-197	0.000015	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000077	0.000002 U	0.0000029
PCB-198	0.000025	--	0.000002 U	0.000002 U	0.000002 U	--	0.000012	0.000002 U	0.0000033
PCB-199	0.00048	--	0.0000066	0.0000069	0.0000023	--	0.0004	0.000004	0.00015
PCB-2	0.000046	--	0.000016	0.000002 U	0.000002 U	--	0.000023	0.000002 U	0.0000068
PCB-20/21/33	0.000006 U	--	0.000006 U	0.000006 U	0.000006 U	--	0.000006 U	0.000006 U	0.000006 U
PCB-200	0.000046	--	0.000002 U	0.000002 U	0.000002 U	--	0.000034	0.000002 U	0.000013
PCB-201	0.00007	--	0.000002 U	0.000002 U	0.000002 U	--	0.000053	0.000002 U	0.000017
PCB-202	0.00016	--	0.000003	0.000002	0.000002 U	--	0.00012	0.000002 U	0.000038
PCB-204	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-205	0.000012	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000048	0.000002 U	0.000002
PCB-206	0.0004	--	0.0000056	0.000002	0.0000016 J	--	0.00023	0.0000018 J	0.0001
PCB-207	0.000056	--	0.000002 U	0.000002 U	0.000002 U	--	0.00003	0.000002 U	0.000015
PCB-208	0.0001	--	0.0000018 J	0.000001 J	0.000002 U	--	0.000067	0.000002 U	0.000032
PCB-209	0.000055	--	0.0000024	0.0000019 J	0.000002 U	--	0.000023	0.000002 U	0.000054
PCB-22	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-23	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-24	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-25	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-26	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-27	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-28	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-29	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-3	0.000032	--	0.00002	0.000002 U	0.000002 U	--	0.000012	0.000002 U	0.0000043
PCB-30	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-31	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-32	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-34	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-35	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-36	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-37	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-38	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-39	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-4	0.0000038	--	0.000002 U	0.000002 U	0.000002 U	--	0.000019	0.000002 U	0.0000025
PCB-40	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-41/64/71/72	0.000008 U	--	0.000008 U	0.000008 U	0.000008 U	--	0.0000044 J	0.000008 U	0.000008 U
PCB-42/59	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-347	SB-347	SB-347	SB-348	SB-348	SB-348	SB-348	SB-349	SB-349
SAMPLE ID	SB347-20191114-0624	SB347-20191114-2448	SB347-20191114-4872	SB348-20191113-0006	SB348-20191113-0624	SB348-20191113-7296	SB348-20191113-96120	SB349-20191113-0006	SB349-20191113-0624
SAMPLE DATE	20191114	20191114	20191114	20191113	20191113	20191113	20191113	20191113	20191113
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
PCB-43/49	0.0000024 J	--	0.000004 U	0.000004 U	0.000004 U	--	0.0000048	0.000004 U	0.000004 U
PCB-44	0.0000036	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000079	0.000002 U	0.000002 U
PCB-45	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000031	0.000002 U	0.000002 U
PCB-46	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-47	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-48/75	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U
PCB-5	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-50	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-51	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002	0.000002 U	0.000002 U
PCB-52/69	0.0000031 J	--	0.000004 U	0.000004 U	0.000004 U	--	0.000013	0.000004 U	0.0000014 J
PCB-53	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000054	0.000002 U	0.000002 U
PCB-54	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000047	0.000002 U	0.000002 U
PCB-55	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-56/60	0.0000025 J	--	0.000004 U	0.000004 U	0.000004 U	--	0.0000019 J	0.000004 U	0.000004 U
PCB-57	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-58	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-6	0.0000041	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000044	0.000002 U	0.000002 U
PCB-61/70	0.0000041	--	0.000004 U	0.000004 U	0.000004 U	--	0.0000093	0.000004 U	0.0000022 J
PCB-62	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-63	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-65	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-66/76	0.0000048	--	0.000004 U	0.000004 U	0.000004 U	--	0.0000051	0.000004 U	0.000004 U
PCB-67	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-68	0.0000029	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-7	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-73	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-74	0.0000025	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000034	0.000002 U	0.000002 U
PCB-77	0.0000032	--	0.0000017 U	0.0000017 U	0.0000012 U	--	0.000001 U	0.0000016 U	0.000001 U
PCB-78	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-79	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-8	0.0000034	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000085	0.000002 U	0.0000015 J
PCB-80	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-81	0.0000041	--	0.0000019 U	0.0000013 U	0.00000092 U	--	0.0000011 U	0.0000014 U	0.00000095 U
PCB-82	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-83/112	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U
PCB-84/92	0.000005	--	0.000004 U	0.000004 U	0.000004 U	--	0.00001	0.000004 U	0.0000016 J
PCB-85/116	0.0000019 J	--	0.000004 U	0.000004 U	0.000004 U	--	0.0000029 J	0.000004 U	0.000004 U
PCB-86	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-87/117/125	0.0000026 J	--	0.000006 U	0.000006 U	0.000006 U	--	0.000008	0.000006 U	0.0000015 J
PCB-88/91	0.0000025 J	--	0.000004 U	0.000004 U	0.000004 U	--	0.000003 J	0.000004 U	0.000004 U
PCB-89	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-9	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-93	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-94	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-95	0.000013	--	0.000002 U	0.0000039	0.000002 U	--	0.000027	0.0000026	0.0000052
PCB-96	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000041	0.000002 U	0.000002 U
PCB-97	0.0000024	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000055	0.000002 U	0.000002 U
PCB-98/102	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U
PCB-99	0.0000038	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000058	0.000002 U	0.000002 U
PENTACHLOROBIPHENYLS	0.000063 J	--	0 UJ	0.000023 J	0 UJ	--	0.00012 J	0.000011 J	0.000021 J
TEQ DIOXIN-LIKE PCBs (BIRD)	7.80772E-07	--	0.0000016 U	5.4E-10	0.00000091 U	--	3E-10	0.0000012 U	1.4E-10
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	7.81287E-07	--	0.0000016 U	1.687E-07	0.00000091 U	--	1.35984E-07	0.0000012 U	1.08189E-07
TEQ DIOXIN-LIKE PCBs (FISH)	1.2935E-08	--	0.0000016 U	2.7E-11	0.00000091 U	--	1.5E-11	0.0000012 U	7E-12
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	1.2961E-08	--	0.0000016 U	3.474E-09	0.00000091 U	--	3.129E-09	0.0000012 U	2.074E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	2.11949E-07	--	0.0000016 U	1.62E-10	0.00000091 U	--	9E-11	0.0000012 U	4.2E-11
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	2.2563E-07	--	0.0000016 U	7.7015E-08	0.00000091 U	--	7.0397E-08	0.0000012 U	4.7604E-08
TETRACHLOROBIPHENYLS	0.000033 J	--	0 UJ	0 UJ	0 UJ	--	0.000065 J	0 UJ	0.0000036 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0000227	--	0 U	0.0000054	0 U	--	0.000003	0 U	0.0000014
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.0042062	--	0.0000999	0.0002494	0.0000134	--	0.0028852	0.0000902	0.0010462
TOTAL PCB CONGENERS ZEROND	0.0042289	--	0.0000999	0.0002548	0.0000134	--	0.0028882	0.0000902	0.0010476
TOTAL PCB CONGENERS-NOAA	0.0014732	--	0.0000235	0.0001221	0.0000053	--	0.0009765	0.0000458	0.0003868
TOTAL PCB CONGENERS-NOAA HALFND	0.004328405	--	0.00028855	0.00041095	0.000206145	--	0.002990435	0.00026967	0.00118173
TOTAL PCB CONGENERS-NOAA X2	0.0029464	--	0.000047	0.0002442	0.0000106	--	0.001953	0.0000916	0.0007736
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0029504	--	0.0000843	0.0002602	0.00005038	--	0.001955	0.0001168	0.0007836
TRICHLOROBIPHENYLS	0 UJ	--	0 UJ	0 UJ	0 UJ	--	0.00002 J	0 UJ	0 UJ
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	160	--	340	500	40	--	200	180	150
1,2,3,4,6,7,8,9-OCDF	5.8 J	--	22	0.81 J	1.3 JZ	--	9.8 J	8 J	5.3 J
1,2,3,4,6,7,8-HPCDD	10	--	31	11	2.2 J	--	21	17 JZ	9.1
1,2,3,4,6,7,8-HPCDF	5.8	--	24	0.77 JZ	1.2 J	--	11	7.6	4.7 J
1,2,3,4,7,8,9-HPCDF	0.24 U	--	0.96 JZ	0.18 U	0.23 U	--	0.51 J	0.32 U	0.18 U
1,2,3,4,7,8-HXCDD	0.19 U	--	1.1 JZ	0.24 U	0.17 U	--	0.84 JZ	0.75 JZ	0.29 U
1,2,3,4,7,8-HXCDF	0.29 J	--	5.3	0.13 U	0.13 U	--	3 J	2.6 JZ	0.46 JZ
1,2,3,6,7,8-HXCDD	0.37 J	--	3.3 J	0.25 U	0.18 U	--	2.8 JZ	2.3 J	0.49 JZ
1,2,3,6,7,8-HXCDF	0.26 JZ	--	2.9 J	0.11 U	0.13 U	--	1.5 J	1.3 J	0.21 U
1,2,3,7,8,9-HXCDD	0.35 JZ	--	2.2 J	0.3 JZ	0.18 U	--	1.7 J	1.4 JZ	0.31 U
1,2,3,7,8,9-HXCDF	0.21 U	--	0.51 JZ	0.21 U	0.21 U	--	0.21 U	0.35 U	0.25 U
1,2,3,7,8-PECDD	0.22 U	--	1.6 J	0.19 U	0.23 U	--	1.3 J	0.39 U	0.23 U
1,2,3,7,8-PECDF	0.26 U	--	3.9 J	0.25 U	0.42 U	--	2 J	1.7 JZ	0.38 U
2,3,4,6,7,8-HXCDF	0.16 JZ	--	2 JZ	0.12 U	0.14 U	--	1.2 J	0.51 JZ	0.22 U
2,3,4,7,8-PECDF	0.23 U	--	2.9 J	0.24 U	0.37 U	--	1.7 J	1.1 J	0.4 JZ
2,3,7,8-TCDD	0.18 U	--	0.43 U	0.22 U	0.3 U	--	0.44 JZ	0.57 U	0.44 U
2,3,7,8-TCDF	0.34 U	--	4.3	0.29 U	0.46 U	--	2	2.3	0.48 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-347	SB-347	SB-347	SB-348	SB-348	SB-348	SB-348	SB-349	SB-349
SAMPLE ID	SB347-20191114-0624	SB347-20191114-2448	SB347-20191114-4872	SB348-20191113-0006	SB348-20191113-0624	SB348-20191113-7296	SB348-20191113-96120	SB349-20191113-0006	SB349-20191113-0624
SAMPLE DATE	20191114	20191114	20191114	20191113	20191113	20191113	20191113	20191113	20191113
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
TEQ DIOXINS (BIRD)	0.19428	--	10.8858	0.098781	0.01833	--	6.60708	4.3233	0.52253
TEQ DIOXINS (BIRD) HALFND	0.70873	--	11.1008	0.617931	0.76513	--	6.61758	4.8224	1.17418
TEQ DIOXINS (FISH)	0.16278	--	5.4528	0.071781	0.01833	--	3.98208	1.7148	0.32253
TEQ DIOXINS (FISH) HALFND	0.49448	--	5.6678	0.440931	0.47378	--	3.99258	2.2139	0.78798
TEQ DIOXINS (HUMANS/MAMMALS)	0.35074	--	5.4162	0.297943	0.04639	--	4.00204	1.7994	0.39959
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	0.62734	--	5.6312	0.611093	0.45434	--	4.01254	2.2985	0.82919
TOTAL HPCDD	22 J	--	60 J	22 J	2.2 J	--	39 J	29 J	18 J
TOTAL HPCDF	11 J	--	40 J	0 UJ	1.2 J	--	17 J	7.6 J	4.7 J
TOTAL HXCDD	4.2 J	--	43 J	1.9 J	0.48 J	--	33 J	29 J	6.1 J
TOTAL HXCDF	3.2 J	--	30 J	0.59 J	0.25 J	--	15 J	6.1 J	2 J
TOTAL PECDD	0 UJ	--	4.7 J	0 UJ	0 UJ	--	15 J	14 J	2.1 J
TOTAL PECDF	0 UJ	--	32 J	0 UJ	0 UJ	--	8.9 J	10 J	1.2 J
TOTAL TCDD	1.1 J	--	17 J	0.41 J	0 UJ	--	20 J	11 J	2.3 J
TOTAL TCDF	0 UJ	--	52 J	0 UJ	0 UJ	--	14 J	6.1 J	0 UJ
METALS (MG/KG)									
ALUMINUM	8230	--	5230	13700	14600	--	4660	14800	10800
ANTIMONY	0.29 J	--	0.62 J	1.3 U	1.1 U	--	0.38 J	1.3 U	1.1 U
ARSENIC	34.3	--	33.2	5.7	5	--	28.3	13.9	17.2
BARIUM	92.3	--	141	38.7	39.5	--	85.3	67.4	54.4
BERYLLIUM	0.83	--	1.2	0.59 J	0.52 J	--	0.62	1.1	0.73
CADMIUM	0.54 U	--	0.12 J	0.67 U	0.57 U	--	0.52 U	0.65 U	0.56 U
CALCIUM	294 J	--	423 J	1390	156 J	--	511 J	837	192 J
CHROMIUM	15.3	--	14.8	11	10.5	--	8.1	23.3	16.9
COBALT	5	--	6	6.4	5.4	--	4.1	18.5	4.3
COPPER	40.1	--	64.9	15.6	18.8	--	29.6	30.7	26.8
CYANIDE	0.57 R	--	0.55 R	0.67 R	0.58 R	--	0.54 R	0.66 R	0.59 R
IRON	24500	--	17300	74100	26500	--	13900	33500	23700
LEAD	21.8	--	18.7	13.7	14.3	--	10.6	23.9	17.6
MAGNESIUM	1160	--	1160	1320	1010	--	1120	1150	970
MANGANESE	117	--	103	185	144	--	77.6	446	136
MERCURY	0.25	--	0.11 UJ	0.13 UJ	0.12 UJ	--	0.1 UJ	0.12 UJ	0.11 UJ
NICKEL	12	--	16.5	6.9	6.5	--	9.5	12.4	8.1
POTASSIUM	2110	--	2060	2560	2640	--	1600	2580	2160
SELENIUM	2.3 J	--	3.2	0.39 J	0.49 J	--	2.1 J	1 J	1.2 J
SILVER	0.54 U	--	0.072 J	0.67 U	0.57 U	--	0.52 U	0.65 U	0.56 U
SODIUM	160 J	--	72.4 J	40.7 J	45.8 J	--	94.7 J	42.1 J	56.5 J
THALLIUM	0.54 U	--	0.55 U	0.67 U	0.57 U	--	0.52 U	0.65 U	0.56 U
VANADIUM	19.3	--	22.7	17.1	16.1	--	8.7	28.5	25.7
ZINC	42.8	--	53	30.1	24	--	34.5	48	35.3
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	78	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	6440	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	85	86	--	--	82	90	--	--	86

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-349	SB-349	SB-350	SB-350	SB-350	SB-350	SB-350	SB-351	SB-351
SAMPLE ID	SB349-20191113-2448	SB349-20191113-4872	SB350-20191113-0006	SB350-20191113-0006-D	SB350-20191113-0624	SB350-20191113-2448	SB350-20191113-4872	SB351-20191114-0006	SB351-20191114-0006-D
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191114	20191114
DUPLICATE				SB350-20191113-0006					SB351-20191114-0006
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SB	SB	SS	SS	SS	SB	SB	SS	SS
TOP DEPTH	2	4	0	0	0.5	2	4	0	0
BOTTOM DEPTH	4	6	0.5	0.5	2	4	6	0.5	0.5
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
1,1,2,2-TETRACHLOROETHANE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
1,1,2-TRICHLOROETHANE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
1,1-DICHLOROETHANE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
1,1-DICHLOROETHENE	0.0062 UJ	--	0.0052 UJ	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
1,2,3-TRICHLOROBENZENE	0.0062 R	--	0.0052 UJ	0.0053 UJ	0.0068 R	--	0.0061 R	0.0047 U	0.0054 U
1,2,4-TRICHLOROBENZENE	0.0062 R	--	0.0052 UJ	0.0053 UJ	0.0068 R	--	0.0061 R	0.0047 U	0.0054 U
1,2-DIBROMO-3-CHLOROPROPANE	0.0062 R	--	0.0052 U	0.0053 U	0.0068 R	--	0.0061 R	0.0047 U	0.0054 U
1,2-DIBROMOETHANE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
1,2-DICHLOROBENZENE	0.0062 R	--	0.0052 UJ	0.0053 UJ	0.0068 R	--	0.0061 R	0.0047 U	0.0054 U
1,2-DICHLOROETHANE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
1,2-DICHLOROPROPANE	0.0062 UJ	--	0.0052 UJ	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
1,3-DICHLOROBENZENE	0.0062 R	--	0.0052 UJ	0.0053 UJ	0.0068 R	--	0.0061 R	0.0047 U	0.0054 U
1,4-DICHLOROBENZENE	0.0062 R	--	0.0052 UJ	0.0053 UJ	0.0068 R	--	0.0061 R	0.0047 U	0.0054 U
2-BUTANONE	0.012 UJ	--	0.01 U	0.011 U	0.014 UJ	--	0.012 UJ	0.0094 U	0.011 U
2-HEXANONE	0.012 UJ	--	0.01 U	0.011 U	0.014 UJ	--	0.012 R	0.0094 U	0.011 U
4-METHYL-2-PENTANONE	0.012 UJ	--	0.01 U	0.011 U	0.014 UJ	--	0.012 R	0.0094 U	0.011 U
ACETONE	0.012 UJ	--	0.01 U	0.011 U	0.014 UJ	--	0.02 J+	0.0094 U	0.011 U
BENZENE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.015 J+	0.0047 U	0.0054 U
BROMOCHLOROMETHANE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
BROMODICHLOROMETHANE	0.0062 UJ	--	0.0052 UJ	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
BROMOFORM	0.0062 R	--	0.0052 U	0.0053 U	0.0068 R	--	0.0061 R	0.0047 U	0.0054 U
BROMOMETHANE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
CARBON DISULFIDE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
CARBON TETRACHLORIDE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
CHLOROBENZENE	0.0062 UJ	--	0.0052 UJ	0.0053 UJ	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
CHLORODIBROMOMETHANE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
CHLOROETHANE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
CHLOROFORM	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
CHLOROMETHANE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
CIS-1,2-DICHLOROETHENE	0.0062 UJ	--	0.0052 UJ	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
CIS-1,3-DICHLOROPROPENE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
CYCLOHEXANE	0.0025 J	--	0.0052 UJ	0.0053 U	0.007 J+	--	0.0068 J+	0.0047 U	0.0054 U
DICHLORODIFLUOROMETHANE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
ETHYLBENZENE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
ISOPROPYLBENZENE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
M+P-XYLENES	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
METHYL ACETATE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
METHYL CYCLOHEXANE	0.0062 UJ	--	0.0052 UJ	0.0053 U	0.011 J+	--	0.01 J+	0.0047 U	0.0054 U
METHYL TERT-BUTYL ETHER	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
METHYLENE CHLORIDE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
O-XYLENE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
STYRENE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
TETRACHLOROETHENE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
TOLUENE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0064 J	--	0.009 J+	0.0047 U	0.0054 U
TRANS-1,2-DICHLOROETHENE	0.0062 UJ	--	0.0052 UJ	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
TRANS-1,3-DICHLOROPROPENE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
TRICHLOROETHENE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 R	0.0047 U	0.0054 U
TRICHLOROFLUOROMETHANE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
VINYL CHLORIDE	0.0062 UJ	--	0.0052 U	0.0053 U	0.0068 UJ	--	0.0061 UJ	0.0047 U	0.0054 U
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.069 J	--	0.22 U	0.21 U	0.072 J	--	0.19	0.19 U	0.2 U
1,2,4,5-TETRACHLOROBENZENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
1,4-DIOXANE	0.077 U	--	0.085 U	0.084 U	0.078 U	--	0.074 U	0.076 UJ	0.078 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U
2,3,4,6-TETRACHLOROPHENOL	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
2,4,5-TRICHLOROPHENOL	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
2,4,6-TRICHLOROPHENOL	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
2,4-DICHLOROPHENOL	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
2,4-DIMETHYLPHENOL	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.028 J	0.19 U	0.2 U
2,4-DINITROPHENOL	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U
2,4-DINITROTOLUENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
2,6-DINITROTOLUENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
2-CHLORONAPHTHALENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
2-CHLOROPHENOL	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
2-METHYLNAPHTHALENE	0.19	--	0.22 U	0.21 U	0.25	--	0.82	0.19 U	0.2 U
2-METHYLPHENOL	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.037 J	0.38 U	0.38 U
2-NITROANILINE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 UJ	0.19 U	0.2 U
2-NITROPHENOL	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
3&4-METHYLPHENOL	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.041 J	0.38 U	0.38 U
3,3'-DICHLOROBENZIDINE	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U
3-NITROANILINE	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U
4,6-DINITRO-2-METHYLPHENOL	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U
4-BROMOPHENYL PHENYL ETHER	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
4-CHLORO-3-METHYLPHENOL	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
4-CHLOROANILINE	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U
4-CHLOROPHENYL PHENYL ETHER	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
4-NITROANILINE	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U
4-NITROPHENOL	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-349	SB-349	SB-350	SB-350	SB-350	SB-350	SB-350	SB-351	SB-351
SAMPLE ID	SB349-20191113-2448	SB349-20191113-4872	SB350-20191113-0006	SB350-20191113-0006-D	SB350-20191113-0624	SB350-20191113-2448	SB350-20191113-4872	SB351-20191114-0006	SB351-20191114-0006-D
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191114	20191114
DUPLICATE				SB350-20191113-0006					SB351-20191114-0006
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SB	SB	SS	SS	SS	SB	SB	SS	SS
ACENAPHTHENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
ACENAPHTHYLENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
ACETOPHENONE	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.077 J	0.38 U	0.38 U
ANTHRACENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.056 J	0.19 U	0.2 U
ATRAZINE	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U
BAP EQUIVALENT-HALFND	0.21261	--	0.22 U	0.21 U	0.22103	--	0.11411	0.19 U	0.2 U
BAP EQUIVALENT-POS	0.01216	--	0.22 U	0.21 U	0.01003	--	0.11316	0.19 U	0.2 U
BENZALDEHYDE	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.051 J	0.38 U	0.38 U
BENZO(A)ANTHRACENE	0.034 J	--	0.22 U	0.21 U	0.035 J	--	0.13 J	0.19 U	0.2 U
BENZO(A)PYRENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.048 J	0.19 U	0.2 U
BENZO(B)FLUORANTHENE	0.085 J	--	0.22 U	0.21 U	0.064 J	--	0.2	0.19 U	0.2 U
BENZO(G,H,I)PERYLENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.042 J	0.19 U	0.2 U
BENZO(K)FLUORANTHENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
BIS(2-CHLOROETHOXY)METHANE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
BIS(2-CHLOROETHYL)ETHER	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.026 J	0.19 U	0.2 U
BUTYL BENZYL PHTHALATE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
CAPROLACTAM	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U
CARBAZOLE	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U
CHRYSENE	0.26	--	0.22 U	0.21 U	0.13 J	--	0.46	0.19 U	0.2 U
DIBENZO(A,H)ANTHRACENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.029 J	0.19 U	0.2 U
DIBENZOFURAN	0.051 J	--	0.22 U	0.21 U	0.063 J	--	0.19	0.19 U	0.2 U
DIETHYL PHTHALATE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
DIMETHYL PHTHALATE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
DI-N-BUTYL PHTHALATE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
DI-N-OCTYL PHTHALATE	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U
FLUORANTHENE	0.094 J	--	0.42 U	0.41 U	0.084 J	--	0.27 J	0.38 U	0.38 U
FLUORENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.025 J	0.19 U	0.2 U
HEXACHLOROBENZENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
HEXACHLOROBUTADIENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
HEXACHLOROCYCLOPENTADIENE	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U
HEXACHLOROETHANE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
HIGH MOLECULAR WEIGHT PAHS	0.464	--	0 U	0 U	0.312	--	1.196	0 U	0 U
INDENO(1,2,3-CD)PYRENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.027 J	0.19 U	0.2 U
ISOPHORONE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
LOW MOLECULAR WEIGHT PAHS	0.754	--	0 U	0 U	0.754	--	2.291	0 U	0 U
NAPHTHALENE	0.15 J	--	0.22 U	0.21 U	0.19 J	--	0.54	0.19 U	0.2 U
NITROBENZENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 UJ	0.19 U	0.2 U
N-NITROSO-DI-N-PROPYLAMINE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
N-NITROSODIPHENYLAMINE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.025 J	0.19 U	0.2 U
PENTACHLOROPHENOL	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.36 U	0.38 U	0.38 U
PHENANTHRENE	0.51	--	0.22 U	0.21 U	0.48	--	1.4	0.19 U	0.2 U
PHENOL	0.38 U	--	0.42 U	0.41 U	0.39 U	--	0.056 J	0.38 U	0.38 U
PYRENE	0.085 J	--	0.22 U	0.21 U	0.083 J	--	0.26	0.19 U	0.2 U
TOTAL PAHS	1.218	--	0 U	0 U	1.066	--	3.487	0 U	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	0.0076 U	--	0.0085 U	0.0084 U	0.0077 U	--	0.0075 U	0.0075 U	0.0077 U
2-METHYLNAPHTHALENE	0.22	--	0.0017 J	0.0015 J	0.37 J	--	0.62 J	0.0038 U	0.0038 U
ACENAPHTHENE	0.0081	--	0.0042 U	0.0041 U	0.011	--	0.019	0.0038 U	0.0038 U
ACENAPHTHYLENE	0.0038 U	--	0.0042 U	0.0041 U	0.0024 J	--	0.0038	0.0038 U	0.0038 U
ANTHRACENE	0.0077	--	0.0042 U	0.0041 U	0.012	--	0.021	0.0038 U	0.0038 U
BAP EQUIVALENT-HALFND	0.028969	--	0.004674	0.004735	0.037679	--	0.044488	0.0038 U	0.0038 U
BAP EQUIVALENT-POS	0.02895	--	0.000033	0	0.03766	--	0.04447	0.0038 U	0.0038 U
BENZO(A)ANTHRACENE	0.03	--	0.00033 J	0.0041 U	0.043	--	0.065	0.0038 U	0.0038 U
BENZO(A)PYRENE	0.0083	--	0.0042 U	0.0041 U	0.013	--	0.015	0.0038 U	0.0038 U
BENZO(B)FLUORANTHENE	0.077	--	0.0042 U	0.0041 U	0.075	--	0.1	0.0038 U	0.0038 U
BENZO(G,H,I)PERYLENE	0.01	--	0.0042 U	0.0041 U	0.011	--	0.013	0.0038 U	0.0038 U
BENZO(K)FLUORANTHENE	0.0038 U	--	0.0042 U	0.0041 U	0.0039 U	--	0.0036 U	0.0038 U	0.0038 U
CHRYSENE	0.23	--	0.00073 J	0.0008 J	0.22	--	0.31 J	0.0038 U	0.0038 U
DIBENZO(A,H)ANTHRACENE	0.0093	--	0.0042 U	0.0041 U	0.012	--	0.012	0.0038 U	0.0038 U
FLUORANTHENE	0.052	--	0.00052 J	0.00056 J	0.062	--	0.11	0.0038 U	0.0038 U
FLUORENE	0.0098	--	0.0042 U	0.0041 U	0.015	--	0.028	0.0038 U	0.0038 U
HIGH MOLECULAR WEIGHT PAHS	0.4198	--	0.00157	0.00126	0.4554	--	0.6216	0 U	0 U
INDENO(1,2,3-CD)PYRENE	0.0042	--	0.0042 U	0.0041 U	0.0064	--	0.0066	0.0038 U	0.0038 U
LOW MOLECULAR WEIGHT PAHS	0.6776	--	0.00352	0.00346	0.9924	--	1.4518	0.00091	0 U
NAPHTHALENE	0.18	--	0.0017 J	0.0015 J	0.28	--	0.43 J	0.0038 U	0.0038 U
PENTACHLOROPHENOL	0.0077 U	--	0.0085 U	0.0084 U	0.0078 U	--	0.0074 U	0.0076 U	0.0078 U
PHENANTHRENE	0.42 J	--	0.0013 J	0.0014 J	0.61 J	--	0.84 J	0.00091 J	0.0038 U
PYRENE	0.051	--	0.00051 J	0.00046 J	0.075	--	0.1	0.0038 U	0.0038 U
TOTAL PAHS	0.23	--	0.00073	0.0008	0.22	--	0.31	0.0038	0.0038
PESTICIDES (MG/KG)									
4,4'-DDD	0.0056 R	--	0.0042 U	0.0041 U	0.0035 R	--	0.0033 R	0.0037 U	0.0039 U
4,4'-DDE	0.0018 R	--	0.0042 U	0.00062 R	0.0038 U	--	0.0037 U	0.0037 U	0.0039 U
4,4'-DDT	0.01 J	--	0.0042 U	0.0041 U	0.0054	--	0.0031 J	0.0037 U	0.0039 U
ALDRIN	0.00087 R	--	0.0022 U	0.0021 U	0.00049 R	--	0.00042 R	0.0019 U	0.002 U
ALPHA-BHC	0.0019 U	--	0.0022 U	0.0021 U	0.002 U	--	0.0019 U	0.0019 U	0.002 U
ALPHA-CHLORDANE	0.0044 J	--	0.00033 J	0.00041 R	0.0028 J	--	0.0019 J	0.0019 U	0.002 U
BETA-BHC	0.002	--	0.0022 U	0.0021 U	0.00047 J	--	0.00044 R	0.0019 U	0.002 U
DELTA-BHC	0.00026 J	--	0.0022 U	0.0021 U	0.002 U	--	0.0019 U	0.0019 U	0.002 U
DIELDRIN	0.0041 R	--	0.0042 U	0.00033 J	0.0024 J	--	0.0022 R	0.00073 J	0.0039 U
ENDOSULFAN I	0.0019 U	--	0.0019 J	0.00062 R	0.002 U	--	0.0019 U	0.0019 U	0.002 U
ENDOSULFAN II	0.0052	--	0.0042 U	0.0041 U	0.0027 J	--	0.0022 J	0.0037 U	0.0039 U
ENDOSULFAN SULFATE	0.0016 R	--	0.00061 J	0.0004 R	0.00067 R	--	0.0037 U	0.0037 U	0.0039 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-349	SB-349	SB-350	SB-350	SB-350	SB-350	SB-350	SB-351	SB-351
SAMPLE ID	SB349-20191113-2448	SB349-20191113-4872	SB350-20191113-0006	SB350-20191113-0006-D	SB350-20191113-0624	SB350-20191113-2448	SB350-20191113-4872	SB351-20191114-0006	SB351-20191114-0006-D
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191114	20191114
DUPLICATE				SB350-20191113-0006					SB351-20191114-0006
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SB	SB	SS	SS	SS	SB	SB	SS	SS
ENDRIN	0.0062 R	--	0.0042 U	0.0041 U	0.0023 R	--	0.0037 U	0.00038 R	0.0039 U
ENDRIN ALDEHYDE	0.011	--	0.0042 U	0.0041 U	0.0068	--	0.0047 J	0.0037 U	0.0039 U
ENDRIN KETONE	0.015 R	--	0.0042 U	0.0041 U	0.0084 R	--	0.0097 R	0.0037 U	0.0039 U
GAMMA-BHC (LINDANE)	0.011 J	--	0.0022 U	0.0021 U	0.002 U	--	0.0053 J	0.0019 U	0.002 U
GAMMA-CHLORDANE	0.00047 J	--	0.0022 U	0.0021 U	0.002 U	--	0.0019 U	0.0019 U	0.002 U
HEPTACHLOR	0.00034 J	--	0.0022 U	0.0021 U	0.0017 R	--	0.0018 R	0.0019 U	0.002 U
HEPTACHLOR EPOXIDE	0.00033 R	--	0.0022 U	0.0021 U	0.002 U	--	0.00021 R	0.0019 U	0.002 U
METHOXYCHLOR	0.073	--	0.022 U	0.021 U	0.034	--	0.038	0.019 U	0.02 U
TOXAPHENE	0.19 U	--	0.22 U	0.21 U	0.2 U	--	0.19 U	0.19 U	0.2 U
PCBS (MG/KG)									
AROCLOR-1016	0.037 U	--	--	--	--	--	0.037 U	--	--
AROCLOR-1221	0.037 U	--	--	--	--	--	0.037 U	--	--
AROCLOR-1232	0.037 U	--	--	--	--	--	0.037 U	--	--
AROCLOR-1242	0.037 U	--	--	--	--	--	0.037 U	--	--
AROCLOR-1248	0.037 U	--	--	--	--	--	0.037 U	--	--
AROCLOR-1254	0.037 U	--	--	--	--	--	0.037 U	--	--
AROCLOR-1260	0.037 U	--	--	--	--	--	0.037 U	--	--
AROCLOR-1262	0.037 U	--	--	--	--	--	0.037 U	--	--
AROCLOR-1268	0.037 U	--	--	--	--	--	0.037 U	--	--
TOTAL AROCLOR	0 U	--	--	--	--	--	0 U	--	--
TOTAL AROCLOR HALFND	0.1665	--	--	--	--	--	0.1665	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	0.287 U	--	--	0.287 U	0.284 U	--	--	--
AROCLOR-1221	--	0.575 U	--	--	0.575 U	0.568 U	--	--	--
AROCLOR-1232	--	0.287 U	--	--	0.287 U	0.284 U	--	--	--
AROCLOR-1242	--	0.287 U	--	--	0.287 U	0.284 U	--	--	--
AROCLOR-1248	--	0.287 U	--	--	0.287 U	0.284 U	--	--	--
AROCLOR-1254	--	0.287 U	--	--	0.287 U	0.284 U	--	--	--
AROCLOR-1260	--	0.287 U	--	--	0.287 U	0.284 U	--	--	--
AROCLOR-1262	--	0.287 U	--	--	0.287 U	0.284 U	--	--	--
AROCLOR-1268	--	0.287 U	--	--	0.287 U	0.284 U	--	--	--
TOTAL AROCLOR	--	0 U	--	--	0 U	0 U	--	--	--
TOTAL AROCLOR HALFND	--	1.4355	--	--	1.4355	1.42	--	--	--
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	0.000031 J	--	0.0000081 J	0.000012 J	0.000036 J	--	0.000073 J	0 UJ	0 UJ
HEPTACHLOROBIPHENYLS	0.0004 J	--	0.000014 J	0.000017 J	0.00097 J	--	0.0019 J	0 UJ	0 UJ
HEXACHLOROBIPHENYLS	0.000096 J	--	0.000019 J	0.000021 J	0.00025 J	--	0.00056 J	0 UJ	0 UJ
MONOCHLOROBIPHENYLS	0.000039 J	--	0.0000026 J	0 UJ	0.000055 J	--	0.00017 J	0 UJ	0 UJ
NONACHLOROBIPHENYLS	0.00016 J	--	0.0000026 J	0.0000035 J	0.00045 J	--	0.00076 J	0 UJ	0 UJ
OCTACHLOROBIPHENYLS	0.00055 J	--	0.0000058 J	0.0000082 J	0.0014 J	--	0.0022 J	0 UJ	0 UJ
PCB-1	0.0000088	--	0.000002 U	0.000002 U	0.000011	--	0.000024	0.000002 U	0.000002 U
PCB-10	0.000002 U	--	0.000002 U	0.000002 U	0.000001 J	--	0.000002 U	0.000002 U	0.000002 U
PCB-100	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-101/90	0.0000097	--	0.0000026 J	0.0000026 J	0.000017	--	0.000054	0.000004 U	0.000004 U
PCB-103	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-104	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-105	0.0000047	--	0.00000088 U	0.0000013 J	0.0000048	--	0.00001	0.0000011 U	0.0000011 U
PCB-108/107	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.0000021 J	0.000004 U	0.000004 U
PCB-109	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-11	0.0000027	--	0.0000081	0.000012	0.0000055	--	0.000018	0.000002 U	0.000002 U
PCB-110	0.0000075	--	0.0000011 J	0.000002 U	0.000011	--	0.00003	0.000002 U	0.000002 U
PCB-111/115	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.0000019 J	0.000004 U	0.000004 U
PCB-113	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-114	0.00000097 U	--	0.00000083 U	0.00000083 U	0.0000011 U	--	0.000002	0.0000011 U	0.0000011 U
PCB-118/106	0.000008	--	0.0000022 J	0.0000024 J	0.000011	--	0.000027	0.0000011 U	0.0000011 U
PCB-119	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-12	0.000002	--	0.000002 U	0.000002 U	0.0000016 J	--	0.0000045	0.000002 U	0.000002 U
PCB-120	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-121	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-122	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-123	0.00000077 U	--	0.00000071 U	0.0000005 U	0.00000089 U	--	0.000001 U	0.00000087 U	0.00000087 U
PCB-124	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-126	0.00000094 U	--	0.0000012 U	0.00000074 U	0.0000011 U	--	0.000002	0.0000015 U	0.0000016 U
PCB-127	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-128/162	0.000004 U	--	0.00000098 J	0.00000086 J	0.0000056	--	0.0000066	0.000004 U	0.000004 U
PCB-129	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000028	0.000002 U	0.000002 U
PCB-13	0.0000022	--	0.000002 U	0.000002 U	0.0000045	--	0.0000092	0.000002 U	0.000002 U
PCB-130	0.000002 U	--	0.000002 U	0.000002 U	0.0000021	--	0.0000031	0.000002 U	0.000002 U
PCB-131/133	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.0000037 J	0.000004 U	0.000004 U
PCB-132/161	0.0000027 J	--	0.000004 U	0.000004 U	0.0000062	--	0.000021	0.000004 U	0.000004 U
PCB-134/143	0.000004 U	--	0.000004 U	0.000004 U	0.0000018 J	--	0.0000044	0.000004 U	0.000004 U
PCB-135	0.0000026	--	0.000002 U	0.000002 U	0.0000058	--	0.000011	0.000002 U	0.000002 U
PCB-136	0.0000037	--	0.000002 U	0.000002 U	0.000011	--	0.000025	0.000002 U	0.000002 U
PCB-137	0.000002 U	--	0.000002 U	0.000002 U	0.0000018 J	--	0.0000043	0.000002 U	0.000002 U
PCB-138/163/164	0.000012	--	0.0000057 J	0.0000061	0.000029	--	0.000078	0.000006 U	0.000006 U
PCB-139/149	0.00002	--	0.0000025 J	0.0000028 J	0.000048	--	0.00011	0.000004 U	0.000004 U
PCB-14	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-140	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-141	0.0000043	--	0.00000094 J	0.0000011 J	0.000011	--	0.000026	0.000002 U	0.000002 U
PCB-142	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-144	0.000002 U	--	0.000002 U	0.000002 U	0.0000022	--	0.0000049	0.000002 U	0.000002 U
PCB-145	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-146/165	0.0000047	--	0.0000014 J	0.0000013 J	0.0000078	--	0.000018	0.000004 U	0.000004 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-349	SB-349	SB-350	SB-350	SB-350	SB-350	SB-350	SB-351	SB-351
SAMPLE ID	SB349-20191113-2448	SB349-20191113-4872	SB350-20191113-0006	SB350-20191113-0006-D	SB350-20191113-0624	SB350-20191113-2448	SB350-20191113-4872	SB351-20191114-0006	SB351-20191114-0006-D
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191114	20191114
DUPLICATE				SB350-20191113-0006					SB351-20191114-0006
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SB	SB	SS	SS	SS	SB	SB	SS	SS
PCB-147	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000017 J	0.000002 U	0.000002 U
PCB-148	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-15	0.0000063	--	0.000002 U	0.000002 U	0.0000033	--	0.0000073	0.000002 U	0.000002 U
PCB-150	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-151	0.000011	--	0.000002 U	0.000002 U	0.000026	--	0.000056	0.000002 U	0.000002 U
PCB-152	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-153	0.000032	--	0.0000079	0.0000085	0.000072	--	0.00015	0.000002 U	0.000002 U
PCB-154	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000039	0.000002 U	0.000002 U
PCB-155	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-156	0.0000013 U	--	0.00000057 U	0.00000061 U	0.000003	--	0.0000072	0.00000097 U	0.00000078 U
PCB-157	0.0000012 U	--	0.00000053 U	0.00000059 U	0.0000011 U	--	0.0000022	0.00000094 U	0.00000077 U
PCB-158/160	0.000004 U	--	0.000004 U	0.000004 U	0.0000029 J	--	0.0000068	0.000004 U	0.000004 U
PCB-159	0.0000032	--	0.000002 U	0.000002 U	0.0000065	--	0.00001	0.000002 U	0.000002 U
PCB-16	0.0000065	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000031	0.000002 U	0.000002 U
PCB-166	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-167	0.0000012 U	--	0.00000055 U	0.00000059 U	0.0000026	--	0.0000044	0.0000011 U	0.00000077 U
PCB-168	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-169	0.0000011 U	--	0.00000069 U	0.00000072 U	0.0000012 U	--	0.0000013 U	0.0000011 U	0.00000077 U
PCB-17	0.0000046	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000027	0.000002 U	0.000002 U
PCB-170	0.000012	--	0.0000021	0.000002	0.000031	--	0.000077	0.000002 U	0.000002 U
PCB-171	0.000004	--	0.000002 U	0.000002 U	0.0000086	--	0.000024	0.000002 U	0.000002 U
PCB-172	0.000006	--	0.000002 U	0.000002 U	0.000012	--	0.000025	0.000002 U	0.000002 U
PCB-173	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-174	0.000038	--	0.0000015 J	0.0000024	0.000091	--	0.00019	0.000002 U	0.000002 U
PCB-175	0.000002 U	--	0.000002 U	0.000002 U	0.0000052	--	0.00001	0.000002 U	0.000002 U
PCB-176	0.0000047	--	0.000002 U	0.000002 U	0.000014	--	0.000025	0.000002 U	0.000002 U
PCB-177	0.000015	--	0.000002 U	0.0000016 J	0.000036	--	0.000075	0.000002 U	0.000002 U
PCB-178	0.000013	--	0.000002 U	0.000002 U	0.000033	--	0.000055	0.000002 U	0.000002 U
PCB-179	0.000026	--	0.000002 U	0.000002 U	0.000084	--	0.00012	0.000002 U	0.000002 U
PCB-18	0.0000068	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000044	0.000002 U	0.000002 U
PCB-180	0.00011	--	0.0000048	0.0000045	0.00025	--	0.00053	0.000002 U	0.000002 U
PCB-181	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-182/187	0.00012	--	0.0000033 J	0.0000044	0.00029	--	0.00054	0.000004 U	0.000004 U
PCB-183	0.000035	--	0.0000018 J	0.0000022	0.000083	--	0.00017	0.000002 U	0.000002 U
PCB-184	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-185	0.0000076	--	0.000002 U	0.000002 U	0.000016	--	0.000022	0.000002 U	0.000002 U
PCB-186	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-188	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-189	0.00000096 U	--	0.00000069 U	0.00000065 U	0.0000017 J	--	0.0000038	0.00000092 U	0.00000076 U
PCB-19	0.0000028	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000037	0.000002 U	0.000002 U
PCB-190	0.0000039	--	0.000002 U	0.000002 U	0.0000099	--	0.000023	0.000002 U	0.000002 U
PCB-191	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000043	0.000002 U	0.000002 U
PCB-192	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-193	0.000004	--	0.000002 U	0.000002 U	0.0000091	--	0.000018	0.000002 U	0.000002 U
PCB-194	0.000084	--	0.0000015 J	0.0000017 J	0.00021	--	0.00034	0.000002 U	0.000002 U
PCB-195	0.000017	--	0.000002 U	0.000002 U	0.00004	--	0.000081	0.000002 U	0.000002 U
PCB-196/203	0.00017	--	0.0000021 J	0.0000034 J	0.00041	--	0.0007	0.000004 U	0.000004 U
PCB-197	0.000004	--	0.000002 U	0.000002 U	0.000011	--	0.00002	0.000002 U	0.000002 U
PCB-198	0.000005	--	0.000002 U	0.000002 U	0.000012	--	0.000021	0.000002 U	0.000002 U
PCB-199	0.00018	--	0.0000022	0.0000031	0.00046	--	0.00064	0.000002 U	0.000002 U
PCB-2	0.000019	--	0.0000015 J	0.000002 U	0.000028	--	0.000095	0.000002 U	0.000002 U
PCB-20/21/33	0.000016	--	0.000006 U	0.000006 U	0.000006 U	--	0.0000086	0.000006 U	0.000006 U
PCB-200	0.000017	--	0.000002 U	0.000002 U	0.000038	--	0.000074	0.000002 U	0.000002 U
PCB-201	0.000023	--	0.000002 U	0.000002 U	0.000059	--	0.000096	0.000002 U	0.000002 U
PCB-202	0.000046	--	0.000002 U	0.000002 U	0.00014	--	0.00019	0.000002 U	0.000002 U
PCB-204	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-205	0.0000025	--	0.000002 U	0.000002 U	0.000006	--	0.000012	0.000002 U	0.000002 U
PCB-206	0.00011	--	0.000002	0.0000025	0.00032	--	0.00054	0.000002 U	0.000002 U
PCB-207	0.000016	--	0.000002 U	0.000002 U	0.000041	--	0.000073	0.000002 U	0.000002 U
PCB-208	0.00003	--	0.00000064 J	0.00000098 J	0.000084	--	0.00015	0.000002 U	0.000002 U
PCB-209	0.000043	--	0.0000019 J	0.0000022	0.000043	--	0.00012	0.000002 U	0.000002 U
PCB-22	0.0000078	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000033	0.000002 U	0.000002 U
PCB-23	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-24	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-25	0.0000016 J	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-26	0.0000035	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-27	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-28	0.000013	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000074	0.000002 U	0.000002 U
PCB-29	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-3	0.000011	--	0.0000011 J	0.000002 U	0.000016	--	0.000051	0.000002 U	0.000002 U
PCB-30	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-31	0.000021	--	0.000002 U	0.000002 U	0.000002 U	--	0.000014	0.000002 U	0.000002 U
PCB-32	0.0000032	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000036	0.000002 U	0.000002 U
PCB-34	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-35	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-36	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-37	0.000016	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000096	0.000002 U	0.000002 U
PCB-38	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-39	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-4	0.0000047	--	0.000002 U	0.000002 U	0.0000078	--	0.0000092	0.000002 U	0.000002 U
PCB-40	0.0000033	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-41/64/71/72	0.000013	--	0.000008 U	0.000008 U	0.0000036 J	--	0.00001	0.000008 U	0.000008 U
PCB-42/59	0.0000052	--	0.000004 U	0.000004 U	0.000004 U	--	0.000003 J	0.000004 U	0.000004 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-349	SB-349	SB-350	SB-350	SB-350	SB-350	SB-350	SB-351	SB-351
SAMPLE ID	SB349-20191113-2448	SB349-20191113-4872	SB350-20191113-0006	SB350-20191113-0006-D	SB350-20191113-0624	SB350-20191113-2448	SB350-20191113-4872	SB351-20191114-0006	SB351-20191114-0006-D
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191114	20191114
DUPLICATE				SB350-20191113-0006					SB351-20191114-0006
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SB	SB	SS	SS	SS	SB	SB	SS	SS
PCB-43/49	0.0000095	--	0.000004 U	0.000004 U	0.0000042	--	0.0000096	0.000004 U	0.000004 U
PCB-44	0.000011	--	0.000002 U	0.000002 U	0.0000044	--	0.000012	0.000002 U	0.000002 U
PCB-45	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000037	0.000002 U	0.000002 U
PCB-46	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-47	0.0000023	--	0.000002 U	0.000002 U	0.0000028	--	0.0000047	0.000002 U	0.000002 U
PCB-48/75	0.0000027 J	--	0.000004 U	0.000004 U	0.000004 U	--	0.0000027 J	0.000004 U	0.000004 U
PCB-5	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-50	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-51	0.000002 U	--	0.000002 U	0.000002 U	0.0000016 J	--	0.000002 U	0.000002 U	0.000002 U
PCB-52/69	0.0000095	--	0.000004 U	0.000004 U	0.0000064	--	0.000016	0.000004 U	0.000004 U
PCB-53	0.000002 U	--	0.000002 U	0.000002 U	0.0000023	--	0.0000032	0.000002 U	0.000002 U
PCB-54	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000019 J	0.000002 U	0.000002 U
PCB-55	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-56/60	0.000015	--	0.000004 U	0.000004 U	0.000004 U	--	0.0000062	0.000004 U	0.000004 U
PCB-57	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-58	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-6	0.0000027	--	0.000002 U	0.000002 U	0.0000035	--	0.0000063	0.000002 U	0.000002 U
PCB-61/70	0.000025	--	0.000004 U	0.000004 U	0.0000068	--	0.0000018	0.000004 U	0.000004 U
PCB-62	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-63	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-65	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-66/76	0.000022	--	0.000004 U	0.000004 U	0.0000045	--	0.0000013	0.000004 U	0.000004 U
PCB-67	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-68	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-7	0.000002 U	--	0.000002 U	0.000002 U	0.0000011 J	--	0.0000019 J	0.000002 U	0.000002 U
PCB-73	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-74	0.000011	--	0.000002 U	0.000002 U	0.0000023	--	0.0000068	0.000002 U	0.000002 U
PCB-77	0.0000032	--	0.0000009 U	0.00000062 U	0.0000015 U	--	0.0000037	0.0000014 U	0.0000011 U
PCB-78	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-79	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-8	0.00001	--	0.000002 U	0.000002 U	0.0000054	--	0.000014	0.000002 U	0.000002 U
PCB-80	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-81	0.0000012 U	--	0.00000068 U	0.00000055 U	0.0000016 U	--	0.0000012 U	0.0000011 U	0.00000086 U
PCB-82	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000026	0.000002 U	0.000002 U
PCB-83/112	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.0000026 J	0.000004 U	0.000004 U
PCB-84/92	0.000004	--	0.000004 U	0.000004 U	0.0000052	--	0.000017	0.000004 U	0.000004 U
PCB-85/116	0.000004 U	--	0.000004 U	0.000004 U	0.0000028 J	--	0.0000038 J	0.000004 U	0.000004 U
PCB-86	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-87/117/125	0.0000034 J	--	0.000006 U	0.000006 U	0.0000051 J	--	0.000012	0.000006 U	0.000006 U
PCB-88/91	0.000004 U	--	0.000004 U	0.000004 U	0.0000034 J	--	0.0000064	0.000004 U	0.000004 U
PCB-89	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-9	0.000002 U	--	0.000002 U	0.000002 U	0.0000021	--	0.0000029	0.000002 U	0.000002 U
PCB-93	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-94	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-95	0.0000098	--	0.000002 U	0.000002 U	0.000022	--	0.000052	0.000002 U	0.000002 U
PCB-96	0.000002 U	--	0.000002 U	0.000002 U	0.0000029	--	0.0000025	0.000002 U	0.000002 U
PCB-97	0.0000022	--	0.000002 U	0.000002 U	0.0000034	--	0.0000085	0.000002 U	0.000002 U
PCB-98/102	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U
PCB-99	0.0000031	--	0.000002 U	0.000002 U	0.0000037	--	0.0000093	0.000002 U	0.000002 U
PENTACHLOROBIPHENYLS	0.000052 J	--	0.0000059 J	0.0000063 J	0.000092 J	--	0.00025 J	0 UJ	0 UJ
TEQ DIOXIN-LIKE PCBs (BIRD)	1.6047E-07	--	0.00000088 U	1.3E-10	8.23E-10	--	3.87222E-07	0.0000011 U	0.0000011 U
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	2.68206E-07	--	0.00000088 U	8.0597E-08	1.74037E-07	--	4.47877E-07	0.0000011 U	0.0000011 U
TEQ DIOXIN-LIKE PCBs (FISH)	3.43E-10	--	0.00000088 U	6E-12	6E-11	--	1.0518E-08	0.0000011 U	0.0000011 U
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	3.034E-09	--	0.00000088 U	2.049E-09	3.321E-09	--	1.0852E-08	0.0000011 U	0.0000011 U
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	4.61E-10	--	0.00000088 U	3.9E-11	3.63E-10	--	2.01258E-07	0.0000011 U	0.0000011 U
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	6.4235E-08	--	0.00000088 U	4.8005E-08	7.3723E-08	--	2.20953E-07	0.0000011 U	0.0000011 U
TETRACHLOROBIPHENYLS	0.00013 J	--	0 UJ	0 UJ	0.000039 J	--	0.00011 J	0 UJ	0 UJ
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0000079	--	0 U	0.0000013	0.0000121	--	0.0000353	0 U	0 U
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.0015923	--	0.00005986	0.00006864	0.0033037	--	0.0061587	0 U	0 U
TOTAL PCB CONGENERS ZEROND	0.0016002	--	0.00005986	0.00006994	0.0033158	--	0.006194	0 U	0 U
TOTAL PCB CONGENERS-NOAA	0.0005507	--	0.00003348	0.00003736	0.0011341	--	0.0022804	0 U	0 U
TOTAL PCB CONGENERS-NOAA HALFND	0.00169902	--	0.000229975	0.00024114	0.003415045	--	0.00625975	0.00020255	0.00020179
TOTAL PCB CONGENERS-NOAA X2	0.0011014	--	0.00006696	0.00007472	0.0022682	--	0.0045608	0 U	0 U
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0011054	--	0.00008584	0.00009272	0.0022722	--	0.0045608	0.0000482	0.0000482
TRICHLOROBIPHENYLS	0.0001 J	--	0 UJ	0 UJ	0 UJ	--	0.00006 J	0 UJ	0 UJ
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	500	--	470	300	190	--	50	840	710
1,2,3,4,6,7,8,9-OCDF	21	--	5.5 J	2.9 J	5.9 J	--	2.5 J	0.51 U	0.33 U
1,2,3,4,6,7,8-HPCDD	24	--	19	8.1	8.6	--	4.5 JZ	11	9.6
1,2,3,4,6,7,8-HPCDF	21	--	7.4	1.8 J	4.2 J	--	2.9 J	0.18 U	0.18 U
1,2,3,4,7,8,9-HPCDF	0.84 J	--	0.47 JZ	0.18 U	0.18 U	--	0.4 U	0.18 U	0.18 U
1,2,3,4,7,8-HXCDD	0.87 J	--	0.73 JZ	0.14 U	0.23 JZ	--	0.26 U	0.32 JZ	0.24 U
1,2,3,4,7,8-HXCDF	3.9 J	--	1.7 J	0.14 U	0.45 J	--	0.57 J	0.13 U	0.13 U
1,2,3,6,7,8-HXCDD	2.7 JZ	--	2.2 J	0.38 J	0.5 J	--	0.4 JZ	0.25 U	0.22 U
1,2,3,6,7,8-HXCDF	2.4 J	--	1.1 J	0.22 JZ	0.3 J	--	0.36 J	0.11 U	0.093 U
1,2,3,7,8,9-HXCDD	1.8 J	--	1.3 J	0.29 JZ	0.49 J	--	0.27 U	0.26 U	0.24 U
1,2,3,7,8,9-HXCDF	0.49 J	--	0.27 JZ	0.21 U	0.21 U	--	0.21 U	0.21 U	0.21 U
1,2,3,7,8-PECDD	1.2 JZ	--	1.1 J	0.33 U	0.21 U	--	0.27 U	0.23 U	0.18 U
1,2,3,7,8-PECDF	3 J	--	1.4 J	0.25 U	0.23 U	--	0.33 U	0.22 U	0.17 U
2,3,4,6,7,8-HXCDF	1.9 J	--	0.92 J	0.12 U	0.33 J	--	0.33 JZ	0.12 U	0.092 U
2,3,4,7,8-PECDF	1.8 JZ	--	1 J	0.23 U	0.31 JZ	--	0.28 U	0.19 U	0.16 U
2,3,7,8-TCDD	0.32 U	--	0.33 J	0.36 U	0.18 U	--	0.26 U	0.28 U	0.22 U
2,3,7,8-TCDF	2.8	--	1.5	0.4 U	0.34 JZ	--	0.41 U	0.28 U	0.23 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-349	SB-349	SB-350	SB-350	SB-350	SB-350	SB-350	SB-351	SB-351
SAMPLE ID	SB349-20191113-2448	SB349-20191113-4872	SB350-20191113-0006	SB350-20191113-0006-D	SB350-20191113-0624	SB350-20191113-2448	SB350-20191113-4872	SB351-20191114-0006	SB351-20191114-0006-D
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191114	20191114
DUPLICATE				SB350-20191113-0006					SB351-20191114-0006
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	ORIG	DUP
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SB	SB	SS	SS	SS	SB	SB	SS	SS
TEQ DIOXINS (BIRD)	7.514	--	4.80275	0.11119	0.89369	--	0.16875	0.111	0.0806
TEQ DIOXINS (BIRD) HALFND	7.674	--	4.80275	0.81159	1.11159	--	0.82775	0.6565755	0.5312665
TEQ DIOXINS (FISH)	4.0335	--	3.01925	0.08509	0.47509	--	0.16875	0.255	0.0806
TEQ DIOXINS (FISH) HALFND	4.1935	--	3.01925	0.56324	0.68724	--	0.6011	0.6028755	0.4209665
TEQ DIOXINS (HUMANS/MAMMALS)	4.1307	--	3.15535	0.27887	0.54377	--	0.25575	0.394	0.309
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	4.2907	--	3.15535	0.71352	0.75362	--	0.6272	0.7506765	0.6101495
TOTAL HPCDD	43 J	--	32 J	16 J	16 J	--	4.4 J	19 J	17 J
TOTAL HPCDF	34 J	--	7.4 J	4.4 J	7.8 J	--	2.9 J	0 UJ	0 UJ
TOTAL HXCDD	31 J	--	35 J	4.8 J	5.5 J	--	9.2 J	0 UJ	0.71 J
TOTAL HXCDF	26 J	--	7.1 J	0 UJ	1.6 J	--	2.6 J	0 UJ	0 UJ
TOTAL PECDD	22 J	--	20 J	0 UJ	2.2 J	--	2.1 J	0 UJ	0 UJ
TOTAL PECDF	25 J	--	11 J	0 UJ	2.1 J	--	1.8 J	0 UJ	0 UJ
TOTAL TCDD	18 J	--	18 J	0 UJ	1.9 J	--	3.6 J	0 UJ	0 UJ
TOTAL TCDF	11 J	--	15 J	0 UJ	0 UJ	--	1.6 J	0 UJ	0 UJ
METALS (MG/KG)									
ALUMINUM	7230	--	15100	12900	8080	--	6690	15400	13700
ANTIMONY	0.42 J	--	1.2 UJ	1.2 U	0.25 J	--	0.28 J	1.2 U	0.5 J
ARSENIC	44	--	5.4 J	4.6	21.5	--	29.3	2.7 J	42.5
BARIUM	125	--	40.2	28.5	78.2	--	75	61.6 J	152
BERYLLIUM	0.87	--	0.4 J	0.34 J	0.63	--	0.5 J	1.3	1.2
CADMIUM	0.57 U	--	0.6 U	0.62 U	0.56 U	--	0.53 U	0.58 U	0.14 J
CALCIUM	307 J	--	828	703	574	--	1180	143 J	152 J
CHROMIUM	10	--	10.8	7.1	10.4	--	8.2	15.6 J	14.6
COBALT	4.6	--	2.9	7.8	5.9	--	3.2	38 J	9.6
COPPER	44.5	--	13.9 J	11.1	29.3	--	33.9	28 J	56.2
CYANIDE	0.57 R	--	0.63 R	0.6 R	0.52 R	--	0.56 R	0.59 R	0.59 R
IRON	16400	--	20200 J	19300	16800	--	18600	27000 J	23200
LEAD	15.1	--	12.4	13.6	13.7	--	13.1	20.4 J	21.8
MAGNESIUM	1680	--	959	1020	1110	--	1090	1400	1260
MANGANESE	98	--	73.9 J	321	148	--	72.1	964 J	134
MERCURY	0.11 UJ	--	0.12 UJ	0.12 UJ	0.11 UJ	--	0.4	0.12 UJ	0.11 UJ
NICKEL	13.2	--	4.1	5.9	9.5	--	7.8	16.4 J	20.8
POTASSIUM	2000	--	2420	1870	1820	--	1940	2880	2530
SELENIUM	3.6	--	3 U	0.4 J	2.3 J	--	2.4 J	0.87 J	3.4
SILVER	0.57 U	--	0.6 U	0.62 U	0.56 U	--	0.53 U	0.58 U	0.066 J
SODIUM	108 J	--	620 U	32.5 J	73.1 J	--	122 J	48 J	41 J
THALLIUM	0.57 U	--	0.072 J	0.62 U	0.56 U	--	0.53 U	0.58 U	0.47 J
VANADIUM	11.5	--	18.8	11.7	15.4	--	8.5	24.1 J	15.5
ZINC	31.7	--	17.3	18.5	31.1	--	22.9	57.4 J	69.6
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	86	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	256000	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	87	--	--	87	88	--	--	--

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-351	SB-351	SB-351	SB-352	SB-352	SB-352	SB-352	SS-225	SS-226
SAMPLE ID	SB351-20191114-0624	SB351-20191114-4872	SB351-20191114-7296	SB352-20191114-0006	SB352-20191114-0624	SB352-20191114-4872	SB352-20191114-96120	SEC-SS-225	SEC-SS-226
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20180626	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
TOP DEPTH	0.5	4	6	0	0.5	4	8	0	0
BOTTOM DEPTH	2	6	8	0.5	2	6	10	6	6
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
1,1,2,2-TETRACHLOROETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
1,1,2-TRICHLOROETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
1,1-DICHLOROETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
1,1-DICHLOROETHENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
1,2,3-TRICHLOROBENZENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
1,2,4-TRICHLOROBENZENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
1,2-DIBROMO-3-CHLOROPROPANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
1,2-DIBROMOETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
1,2-DICHLOROBENZENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
1,2-DICHLOROETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
1,2-DICHLOROPROPANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
1,3-DICHLOROBENZENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
1,4-DICHLOROBENZENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
2-BUTANONE	0.01 U	--	0.01 U	0.011 U	0.01 U	--	0.0095 U	--	--
2-HEXANONE	0.01 U	--	0.01 U	0.011 U	0.01 U	--	0.0095 U	--	--
4-METHYL-2-PENTANONE	0.01 U	--	0.01 U	0.011 U	0.01 U	--	0.0095 U	--	--
ACETONE	0.01 U	--	0.01 U	0.0075 J	0.01 U	--	0.0095 U	--	--
BENZENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
BROMOCHLOROMETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
BROMODICHLOROMETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
BROMOFORM	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
BROMOMETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
CARBON DISULFIDE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
CARBON TETRACHLORIDE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
CHLOROBENZENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
CHLORODIBROMOMETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
CHLOROETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
CHLOROFORM	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
CHLOROMETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
CIS-1,2-DICHLOROETHENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
CIS-1,3-DICHLOROPROPENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
CYCLOHEXANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
DICHLORODIFLUOROMETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
ETHYLBENZENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
ISOPROPYLBENZENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
M+P-XYLENES	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
METHYL ACETATE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
METHYL CYCLOHEXANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
METHYL TERT-BUTYL ETHER	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
METHYLENE CHLORIDE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
O-XYLENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
STYRENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
TETRACHLOROETHENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
TOLUENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
TRANS-1,2-DICHLOROETHENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
TRANS-1,3-DICHLOROPROPENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
TRICHLOROETHENE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
TRICHLOROFLUOROMETHANE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
VINYL CHLORIDE	0.0051 U	--	0.0051 U	0.0056 U	0.0051 U	--	0.0047 U	--	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.24
1,2,4,5-TETRACHLOROBENZENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
1,4-DIOXANE	0.078 UJ	--	0.078 U	0.08 U	0.075 UJ	--	0.077 U	0.084 U	0.077 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 UJ	0.38 UJ
2,3,4,6-TETRACHLOROPHENOL	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
2,4,5-TRICHLOROPHENOL	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
2,4,6-TRICHLOROPHENOL	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
2,4-DICHLOROPHENOL	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
2,4-DIMETHYLPHENOL	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
2,4-DINITROPHENOL	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
2,4-DINITROTOLUENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
2,6-DINITROTOLUENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
2-CHLORONAPHTHALENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
2-CHLOROPHENOL	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
2-METHYLNAPHTHALENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.49
2-METHYLPHENOL	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
2-NITROANILINE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
2-NITROPHENOL	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
3&4-METHYLPHENOL	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
3,3'-DICHLOROBENZIDINE	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
3-NITROANILINE	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
4,6-DINITRO-2-METHYLPHENOL	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
4-BROMOPHENYL PHENYL ETHER	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
4-CHLORO-3-METHYLPHENOL	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
4-CHLOROANILINE	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
4-CHLOROPHENYL PHENYL ETHER	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
4-NITROANILINE	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
4-NITROPHENOL	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-351	SB-351	SB-351	SB-352	SB-352	SB-352	SB-352	SS-225	SS-226
SAMPLE ID	SB351-20191114-0624	SB351-20191114-4872	SB351-20191114-7296	SB352-20191114-0006	SB352-20191114-0624	SB352-20191114-4872	SB352-20191114-96120	SEC-SS-225	SEC-SS-226
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20180626	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
ACENAPHTHENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
ACENAPHTHYLENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
ACETOPHENONE	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
ANTHRACENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
ATRAZINE	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
BAP EQUIVALENT-HALFND	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.22936
BAP EQUIVALENT-POS	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.00836
BENZALDEHYDE	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
BENZO(A)ANTHRACENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
BENZO(A)PYRENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
BENZO(B)FLUORANTHENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.081 J
BENZO(G,H,I)PERYLENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
BENZO(K)FLUORANTHENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
BIS(2-CHLOROETHOXY)METHANE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
BIS(2-CHLOROETHYL)ETHER	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
BUTYL BENZYL PHTHALATE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
CAPROLACTAM	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
CARBAZOLE	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 UJ	0.38 UJ
CHRYSENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.26
DIBENZO(A,H)ANTHRACENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
DIBENZOFURAN	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.31
DIETHYL PHTHALATE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
DIMETHYL PHTHALATE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
DI-N-BUTYL PHTHALATE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
DI-N-OCTYL PHTHALATE	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
FLUORANTHENE	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.13 J
FLUORENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
HEXACHLOROBENZENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
HEXACHLOROBUTADIENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
HEXACHLOROCYCLOPENTADIENE	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 UJ	0.38 UJ
HEXACHLOROETHANE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0 U	0 U	0 U	--	0 U	0 U	0.423
INDENO(1,2,3-CD)PYRENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
ISOPHORONE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	0 U	0 U	--	0.037	0 U	1.94
NAPHTHALENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.61
NITROBENZENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
N-NITROSO-DI-N-PROPYLAMINE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
N-NITROSODIPHENYLAMINE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.2 U
PENTACHLOROPHENOL	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
PHENANTHRENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.037 J	0.21 U	1.2
PHENOL	0.39 U	--	0.38 U	0.4 U	0.37 U	--	0.38 U	0.41 U	0.38 U
PYRENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.082 J
TOTAL PAHS	0 U	--	0 U	0 U	0 U	--	0.037	0 U	2.363
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	0.0078 U	--	0.0077 U	0.008 U	0.0075 U	--	0.0077 U	--	--
2-METHYLNAPHTHALENE	0.0039 U	--	0.0038 U	0.004 U	0.0037 U	--	0.0038 U	0.0041 U	0.33 J
ACENAPHTHENE	0.0039 U	--	0.0038 U	0.004 U	0.0037 U	--	0.0038 U	0.0041 U	0.0077
ACENAPHTHYLENE	0.0039 U	--	0.0038 U	0.004 U	0.0037 U	--	0.0038 U	0.0041 U	0.0038 U
ANTHRACENE	0.0039 U	--	0.0038 U	0.004 U	0.0037 U	--	0.0038 U	0.0041 U	0.012
BAP EQUIVALENT-HALFND	0.0039 U	--	0.0038 U	0.004374	0.0037 U	--	0.005233	0.006303	0.032161
BAP EQUIVALENT-POS	0.0039 U	--	0.0038 U	0.000154	0.0037 U	--	0.002934	0.004233	0.032161
BENZO(A)ANTHRACENE	0.0039 U	--	0.0038 U	0.00043 J	0.0037 U	--	0.0038 U	0.0032 J	0.041
BENZO(A)PYRENE	0.0039 U	--	0.0038 U	0.004 U	0.0037 U	--	0.0023 J	0.0032 J	0.009
BENZO(B)FLUORANTHENE	0.0039 U	--	0.0038 U	0.0011 J	0.0037 U	--	0.0062	0.0046	0.063
BENZO(G,H,I)PERYLENE	0.0039 U	--	0.0038 U	0.004 U	0.0037 U	--	0.0038 U	0.0041 U	0.013
BENZO(K)FLUORANTHENE	0.0039 U	--	0.0038 U	0.004 U	0.0037 U	--	0.0038 U	0.0041 U	0.0041
CHRYSENE	0.0039 U	--	0.0038 U	0.0011 J	0.0037 U	--	0.014	0.0033 J	0.25 J
DIBENZO(A,H)ANTHRACENE	0.0039 U	--	0.0038 U	0.004 U	0.0037 U	--	0.0038 U	0.0041 U	0.012
FLUORANTHENE	0.0039 U	--	0.0038 U	0.001 J	0.0037 U	--	0.0035 J	0.0096	0.12
FLUORENE	0.0039 U	--	0.0038 U	0.004 U	0.0037 U	--	0.0038 U	0.0041 U	0.0078
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0 U	0.00356	0 U	--	0.0268	0.0168	0.4578
INDENO(1,2,3-CD)PYRENE	0.0039 U	--	0.0038 U	0.004 U	0.0037 U	--	0.0038 U	0.0025 J	0.0047
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	0.0028	0 U	--	0.0455	0.0096	1.7875
NAPHTHALENE	0.0039 U	--	0.0038 U	0.004 U	0.0037 U	--	0.0038 U	0.0041 U	0.54 J
PENTACHLOROPHENOL	0.0078 U	--	0.0078 U	0.008 U	0.0075 U	--	0.0077 U	0.0084 U	0.0012 J
PHENANTHRENE	0.0039 U	--	0.0038 U	0.0018 J	0.0037 U	--	0.042	0.0041 U	1.1 J
PYRENE	0.0039 U	--	0.0038 U	0.00093 J	0.0037 U	--	0.0043	0.0041 U	0.061
TOTAL PAHS	0.0039	--	0.0038	0.0011	0.0037	--	0.014	0.0033	0.25
PESTICIDES (MG/KG)									
4,4'-DDD	0.0039 U	--	0.0038 U	0.0039 U	0.00027 J	--	0.0038 U	0.0041 U	0.0096
4,4'-DDE	0.0039 U	--	0.0038 U	0.0039 U	0.0037 U	--	0.0038 U	0.0041 U	0.0048 J
4,4'-DDT	0.0039 U	--	0.0038 U	0.0039 U	0.0037 U	--	0.0038 U	0.0041 U	0.0038 R
ALDRIN	0.002 U	--	0.002 U	0.002 U	0.0019 U	--	0.0019 U	0.0021 U	0.0002 R
ALPHA-BHC	0.002 U	--	0.002 U	0.002 U	0.0019 U	--	0.0019 U	0.0021 U	0.0019 U
ALPHA-CHLORDANE	0.002 U	--	0.002 U	0.002 U	0.0019 U	--	0.0019 U	0.0021 U	0.0019 U
BETA-BHC	0.002 U	--	0.00038 J	0.00033 J	0.0019 U	--	0.00052 J	0.00023 R	0.00044 R
DELTA-BHC	0.002 U	--	0.002 U	0.002 U	0.0019 U	--	0.0019 U	0.0021 U	0.0019 U
DIELDRIN	0.0039 U	--	0.0038 U	0.0039 U	0.0037 U	--	0.0038 U	0.0041 U	0.0043 R
ENDOSULFAN I	0.002 U	--	0.002 U	0.002 U	0.0019 U	--	0.00032 J	0.0021 U	0.0019 U
ENDOSULFAN II	0.0039 U	--	0.0038 U	0.0039 U	0.0037 U	--	0.0038 U	0.0041 U	0.0038 R
ENDOSULFAN SULFATE	0.0039 U	--	0.0038 U	0.0039 U	0.0037 U	--	0.0038 U	0.00066 J	0.0038 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-351	SB-351	SB-351	SB-352	SB-352	SB-352	SB-352	SS-225	SS-226
SAMPLE ID	SB351-20191114-0624	SB351-20191114-4872	SB351-20191114-7296	SB352-20191114-0006	SB352-20191114-0624	SB352-20191114-4872	SB352-20191114-96120	SEC-SS-225	SEC-SS-226
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20180626	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
ENDRIN	0.0039 U	--	0.0038 U	0.0039 U	0.0037 U	--	0.0038 U	0.0041 U	0.0038 R
ENDRIN ALDEHYDE	0.0039 U	--	0.0038 U	0.0039 U	0.0037 U	--	0.0038 U	0.0041 U	0.0034 R
ENDRIN KETONE	0.0039 U	--	0.0038 U	0.0039 U	0.0037 U	--	0.001 J	0.00039 J	0.012
GAMMA-BHC (LINDANE)	0.002 U	--	0.002 U	0.002 U	0.0019 U	--	0.00061 J	0.00051 J	0.0019 U
GAMMA-CHLORDANE	0.002 U	--	0.002 U	0.002 U	0.0019 U	--	0.0019 U	0.0021 U	0.00064 R
HEPTACHLOR	0.002 U	--	0.002 U	0.002 U	0.0019 U	--	0.0019 U	0.0021 U	0.0019 U
HEPTACHLOR EPOXIDE	0.002 U	--	0.002 U	0.002 U	0.0019 U	--	0.0019 U	0.0021 U	0.0038 J
METHOXYCHLOR	0.02 U	--	0.02 U	0.02 U	0.019 U	--	0.0065 J	0.021 U	0.019 R
TOXAPHENE	0.2 U	--	0.2 U	0.2 U	0.19 U	--	0.19 U	0.21 U	0.19 U
PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	0.041 U	0.038 U
AROCLOR-1221	--	--	--	--	--	--	--	0.041 U	0.038 U
AROCLOR-1232	--	--	--	--	--	--	--	0.041 U	0.038 U
AROCLOR-1242	--	--	--	--	--	--	--	0.041 U	0.038 U
AROCLOR-1248	--	--	--	--	--	--	--	0.041 U	0.038 U
AROCLOR-1254	--	--	--	--	--	--	--	0.041 U	0.038 U
AROCLOR-1260	--	--	--	--	--	--	--	0.041 U	0.038 U
AROCLOR-1262	--	--	--	--	--	--	--	0.041 U	0.038 U
AROCLOR-1268	--	--	--	--	--	--	--	0.041 U	0.038 U
TOTAL AROCLOR	--	--	--	--	--	--	--	0 U	0 U
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	0.1845	0.171
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	0.294 U	0.291 U	--	--	0.298 U	0.284 U	--	--	--
AROCLOR-1221	0.588 U	0.581 U	--	--	0.595 U	0.568 U	--	--	--
AROCLOR-1232	0.294 U	0.291 U	--	--	0.298 U	0.284 U	--	--	--
AROCLOR-1242	0.294 U	0.291 U	--	--	0.298 U	0.284 U	--	--	--
AROCLOR-1248	0.294 U	0.291 U	--	--	0.298 U	0.284 U	--	--	--
AROCLOR-1254	0.294 U	0.291 U	--	--	0.298 U	0.284 U	--	--	--
AROCLOR-1260	0.294 U	0.291 U	--	--	0.298 U	0.284 U	--	--	--
AROCLOR-1262	0.294 U	0.291 U	--	--	0.298 U	0.284 U	--	--	--
AROCLOR-1268	0.294 U	0.291 U	--	--	0.298 U	0.284 U	--	--	--
TOTAL AROCLOR	0 U	0 U	--	--	0 U	0 U	--	--	--
TOTAL AROCLOR HALFND	1.47	1.4545	--	--	1.4895	1.42	--	--	--
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	0 UJ	--	0 UJ	0.0000053 J	0 UJ	--	0 UJ	--	--
HEPTACHLOROBIPHENYLS	0 UJ	--	0 UJ	0.000026 J	0 UJ	--	0 UJ	--	--
HEXACHLOROBIPHENYLS	0 UJ	--	0 UJ	0.000024 J	0 UJ	--	0 UJ	--	--
MONOCHLOROBIPHENYLS	0 UJ	--	0 UJ	0 UJ	0 UJ	--	0 UJ	--	--
NONACHLOROBIPHENYLS	0 UJ	--	0 UJ	0.000005 J	0 UJ	--	0 UJ	--	--
OCTACHLOROBIPHENYLS	0 UJ	--	0 UJ	0.0000086 J	0 UJ	--	0 UJ	--	--
PCB-1	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-10	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-100	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-101/90	0.000004 U	--	0.000004 U	0.0000018 J	0.000004 U	--	0.000004 U	--	--
PCB-103	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-104	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-105	0.0000013 U	--	0.00000098 U	0.0000011 U	0.00000098 U	--	0.00000083 U	--	--
PCB-108/107	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-109	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-11	0.000002 U	--	0.000002 U	0.0000053	0.000002 U	--	0.000002 U	--	--
PCB-110	0.000002 U	--	0.000002 U	0.0000012 J	0.000002 U	--	0.000002 U	--	--
PCB-111/115	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-113	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-114	0.0000012 U	--	0.0000009 U	0.0000011 U	0.00000094 U	--	0.00000083 U	--	--
PCB-118/106	0.0000012 U	--	0.00000094 U	0.000002 J	0.00000092 U	--	0.00000081 U	--	--
PCB-119	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-12	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-120	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-121	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-122	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-123	0.00000096 U	--	0.00000074 U	0.00000085 U	0.00000082 U	--	0.00000064 U	--	--
PCB-124	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-126	0.0000018 U	--	0.0000014 U	0.0000015 U	0.0000015 U	--	0.0000011 U	--	--
PCB-127	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-128/162	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-129	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-13	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-130	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-131/133	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-132/161	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-134/143	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-135	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-136	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-137	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-138/163/164	0.000006 U	--	0.000006 U	0.0000081	0.000006 U	--	0.000006 U	--	--
PCB-139/149	0.000004 U	--	0.000004 U	0.0000026 J	0.000004 U	--	0.000004 U	--	--
PCB-14	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-140	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-141	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-142	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-144	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-145	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-146/165	0.000004 U	--	0.000004 U	0.0000021 J	0.000004 U	--	0.000004 U	--	--

LOCATION	SB-351	SB-351	SB-351	SB-352	SB-352	SB-352	SB-352	SS-225	SS-226
SAMPLE ID	SB351-20191114-0624	SB351-20191114-4872	SB351-20191114-7296	SB352-20191114-0006	SB352-20191114-0624	SB352-20191114-4872	SB352-20191114-96120	SEC-SS-225	SEC-SS-226
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20180626	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
PCB-147	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-148	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-15	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-150	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-151	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-152	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-153	0.000002 U	--	0.000002 U	0.000011	0.000002 U	--	0.000002 U	--	--
PCB-154	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-155	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-156	0.00000064 U	--	0.00000081 U	0.00000076 U	0.00000089 U	--	0.00000072 U	--	--
PCB-157	0.00000061 U	--	0.00000081 U	0.00000076 U	0.00000087 U	--	0.00000068 U	--	--
PCB-158/160	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-159	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-16	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-166	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-167	0.00000065 U	--	0.00000081 U	0.0000008 U	0.00000092 U	--	0.00000071 U	--	--
PCB-168	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-169	0.00000069 U	--	0.00000084 U	0.00000087 U	0.00000098 U	--	0.00000079 U	--	--
PCB-17	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-170	0.000002 U	--	0.000002 U	0.0000039	0.000002 U	--	0.000002 U	--	--
PCB-171	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-172	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-173	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-174	0.000002 U	--	0.000002 U	0.0000023	0.000002 U	--	0.000002 U	--	--
PCB-175	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-176	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-177	0.000002 U	--	0.000002 U	0.0000026	0.000002 U	--	0.000002 U	--	--
PCB-178	0.000002 U	--	0.000002 U	0.0000018 J	0.000002 U	--	0.000002 U	--	--
PCB-179	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-18	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-180	0.000002 U	--	0.000002 U	0.0000067	0.000002 U	--	0.000002 U	--	--
PCB-181	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-182/187	0.000004 U	--	0.000004 U	0.000006	0.000004 U	--	0.000004 U	--	--
PCB-183	0.000002 U	--	0.000002 U	0.0000022	0.000002 U	--	0.000002 U	--	--
PCB-184	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-185	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-186	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-188	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-189	0.0000008 U	--	0.00000088 U	0.00000078 U	0.00000096 U	--	0.00000083 U	--	--
PCB-19	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-190	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-191	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-192	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-193	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-194	0.000002 U	--	0.000002 U	0.0000021	0.000002 U	--	0.000002 U	--	--
PCB-195	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-196/203	0.000004 U	--	0.000004 U	0.0000031 J	0.000004 U	--	0.000004 U	--	--
PCB-197	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-198	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-199	0.000002 U	--	0.000002 U	0.0000034	0.000002 U	--	0.000002 U	--	--
PCB-2	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-20/21/33	0.000006 U	--	0.000006 U	0.000006 U	0.000006 U	--	0.000006 U	--	--
PCB-200	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-201	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-202	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-204	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-205	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-206	0.000002 U	--	0.000002 U	0.0000032	0.000002 U	--	0.000002 U	--	--
PCB-207	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-208	0.000002 U	--	0.000002 U	0.0000018 J	0.000002 U	--	0.000002 U	--	--
PCB-209	0.000002 U	--	0.000002 U	0.0000042	0.000002 U	--	0.000002 U	--	--
PCB-22	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-23	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-24	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-25	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-26	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-27	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-28	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-29	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-3	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-30	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-31	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-32	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-34	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-35	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-36	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-37	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-38	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-39	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-4	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-40	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-41/64/71/72	0.000008 U	--	0.000008 U	0.000008 U	0.000008 U	--	0.000008 U	--	--
PCB-42/59	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-351	SB-351	SB-351	SB-352	SB-352	SB-352	SB-352	SS-225	SS-226
SAMPLE ID	SB351-20191114-0624	SB351-20191114-4872	SB351-20191114-7296	SB352-20191114-0006	SB352-20191114-0624	SB352-20191114-4872	SB352-20191114-96120	SEC-SS-225	SEC-SS-226
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20180626	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
PCB-43/49	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-44	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-45	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-46	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-47	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-48/75	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-5	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-50	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-51	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-52/69	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-53	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-54	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-55	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-56/60	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-57	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-58	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-6	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-61/70	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-62	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-63	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-65	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-66/76	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-67	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-68	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-7	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-73	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-74	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-77	0.00000097 U	--	0.0000016 U	0.00000098 U	0.0000014 U	--	0.00000076 U	--	--
PCB-78	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-79	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-8	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-80	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-81	0.00000077 U	--	0.0000012 U	0.00000074 U	0.0000011 U	--	0.00000061 U	--	--
PCB-82	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-83/112	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-84/92	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-85/116	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-86	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-87/117/125	0.000006 U	--	0.000006 U	0.000006 U	0.000006 U	--	0.000006 U	--	--
PCB-88/91	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-89	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-9	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-93	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-94	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-95	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-96	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-97	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PCB-98/102	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	--
PCB-99	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	--
PENTACHLOROBIPHENYLS	0 UJ	--	0 UJ	0.000005 J	0 UJ	--	0 UJ	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	0.0000013 U	--	0.00000098 U	0.0000011 U	0.00000098 U	--	0.00000083 U	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	0.0000013 U	--	0.00000098 U	0.0000011 U	0.00000098 U	--	0.00000083 U	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	0.0000013 U	--	0.00000098 U	0.0000011 U	0.00000098 U	--	0.00000083 U	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	0.0000013 U	--	0.00000098 U	0.0000011 U	0.00000098 U	--	0.00000083 U	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	0.0000013 U	--	0.00000098 U	0.0000011 U	0.00000098 U	--	0.00000083 U	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	0.0000013 U	--	0.00000098 U	0.0000011 U	0.00000098 U	--	0.00000083 U	--	--
TETRACHLOROBIPHENYLS	0 UJ	--	0 UJ	0 UJ	0 UJ	--	0 UJ	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0 U	--	0 U	0 U	0 U	--	0 U	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0 U	--	0 U	0.0000774	0 U	--	0 U	--	--
TOTAL PCB CONGENERS ZEROND	0 U	--	0 U	0.0000774	0 U	--	0 U	--	--
TOTAL PCB CONGENERS-NOAA	0 U	--	0 U	0.0000469	0 U	--	0 U	--	--
TOTAL PCB CONGENERS-NOAA HALFND	0.000201795	--	0.000201955	0.00025152	0.00020214	--	0.000200655	--	--
TOTAL PCB CONGENERS-NOAA X2	0 U	--	0 U	0.0000938	0 U	--	0 U	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0000485	--	0.00004792	0.0001169	0.0000479	--	0.00004764	--	--
TRICHLOROBIPHENYLS	0 UJ	--	0 UJ	0 UJ	0 UJ	--	0 UJ	--	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	2800	--	140	2800	7100 J	--	280	--	--
1,2,3,4,6,7,8,9-OCDF	0.41 U	--	0.6 U	0.61 U	1.5 U	--	0.31 U	--	--
1,2,3,4,6,7,8-HPCDD	27	--	0.91 JZ	35	71	--	4.1 J	--	--
1,2,3,4,6,7,8-HPCDF	0.18 U	--	0.18 U	0.27 JZ	0.56 U	--	0.18 U	--	--
1,2,3,4,7,8,9-HPCDF	0.21 U	--	0.22 U	0.28 U	0.9 U	--	0.18 U	--	--
1,2,3,4,7,8-HXCDD	0.23 U	--	0.22 U	0.56 JZ	0.79 U	--	0.16 U	--	--
1,2,3,4,7,8-HXCDF	0.13 U	--	0.14 U	0.13 U	0.34 U	--	0.13 U	--	--
1,2,3,6,7,8-HXCDD	0.23 U	--	0.22 U	0.32 J	0.73 U	--	0.15 U	--	--
1,2,3,6,7,8-HXCDF	0.1 U	--	0.14 U	0.12 U	0.32 U	--	0.093 U	--	--
1,2,3,7,8,9-HXCDD	0.24 U	--	0.23 U	0.65 J	0.79 U	--	0.16 U	--	--
1,2,3,7,8,9-HXCDF	0.21 U	--	0.21 U	0.21 U	0.52 U	--	0.21 U	--	--
1,2,3,7,8-PECDD	0.18 U	--	0.19 U	0.37 J	0.54 U	--	0.18 U	--	--
1,2,3,7,8-PECDF	0.17 U	--	0.22 U	0.18 U	0.78 U	--	0.17 U	--	--
2,3,4,6,7,8-HXCDF	0.11 U	--	0.14 U	0.14 U	0.37 U	--	0.091 U	--	--
2,3,4,7,8-PECDF	0.16 U	--	0.21 U	0.17 U	0.66 U	--	0.16 U	--	--
2,3,7,8-TCDD	0.23 U	--	0.32 U	0.27 U	0.66 U	--	0.14 U	--	--
2,3,7,8-TCDF	0.24 U	--	0.28 U	0.35 U	1 U	--	0.13 U	--	--

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-351	SB-351	SB-351	SB-352	SB-352	SB-352	SB-352	SS-225	SS-226
SAMPLE ID	SB351-20191114-0624	SB351-20191114-4872	SB351-20191114-7296	SB352-20191114-0006	SB352-20191114-0624	SB352-20191114-4872	SB352-20191114-96120	SEC-SS-225	SEC-SS-226
SAMPLE DATE	20191114	20191114	20191114	20191114	20191114	20191114	20191114	20180626	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB	SS	SS
TEQ DIOXINS (BIRD)	0.307	--	0.01491	0.7839	0.781	--	0.0321	--	--
TEQ DIOXINS (BIRD) HALFND	0.7688705	--	0.57754	1.2193305	2.397775	--	0.3863655	--	--
TEQ DIOXINS (FISH)	0.307	--	0.01491	0.9774	0.781	--	0.0321	--	--
TEQ DIOXINS (FISH) HALFND	0.6515705	--	0.42569	1.1995805	1.880475	--	0.3091655	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	1.11	--	0.0511	1.7157	2.84	--	0.125	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	1.4180615	--	0.42199	1.9278915	3.801225	--	0.3695965	--	--
TOTAL HPCDD	50 J	--	0 UJ	66 J	130 J	--	8 J	--	--
TOTAL HPCDF	0 UJ	--	0 UJ	0 UJ	0 UJ	--	0 UJ	--	--
TOTAL HXCDD	3.1 J	--	1.1 J	4.4 J	0 UJ	--	0 UJ	--	--
TOTAL HXCDF	0 UJ	--	0 UJ	0 UJ	0 UJ	--	0 UJ	--	--
TOTAL PECDD	0.2 J	--	0 UJ	0.37 J	0 UJ	--	0 UJ	--	--
TOTAL PECDF	0 UJ	--	0 UJ	0 UJ	0 UJ	--	0 UJ	--	--
TOTAL TCDD	0 UJ	--	0 UJ	0 UJ	0 UJ	--	0 UJ	--	--
TOTAL TCDF	0 UJ	--	0 UJ	1.8 J	0 UJ	--	0 UJ	--	--
METALS (MG/KG)									
ALUMINUM	14500	--	12400	8560	14100	--	9370	8330 J	5470 J
ANTIMONY	1.1 U	--	1.1 U	1.2 U	1.2 U	--	1.1 U	6.2 U	6 U
ARSENIC	5.4	--	5.5	6.7	5.1	--	8.3	5.4	23.9
BARIUM	67.2	--	120	79.3	63.4	--	74	50.9	84.3
BERYLLIUM	1.6	--	2.2	2.8	0.92	--	0.76	0.72	1.2
CADMIUM	0.55 U	--	0.56 U	0.13 J	0.6 U	--	0.55 U	0.52 U	0.37 J
CALCIUM	51.1 J	--	49.2 J	392 J	64.7 J	--	76.2 J	541	456 J
CHROMIUM	20.7	--	26.5	33.5	18.8	--	35.8	14	19.5
COBALT	27.2	--	14.4	46.9	16.4	--	2.6	14	6.2
COPPER	32.7	--	38.7	46.4	22.2	--	21	22.6	36.4
CYANIDE	0.57 R	--	0.55 R	0.57 R	0.55 R	--	0.53 R	--	--
IRON	7950	--	22000	33700	22600	--	111000	22900	24400
LEAD	21.9	--	49.9	36.6	29.7	--	25.2	17.1	13.7
MAGNESIUM	602	--	1120	563 J	587 J	--	275 J	1250	969
MANGANESE	895	--	226	1440	646	--	48.8	217	96.8
MERCURY	0.12 UJ	--	0.11 UJ	0.12 UJ	0.12 UJ	--	0.11 UJ	--	--
NICKEL	17	--	6.8	43	12.5	--	7.9	15.8	15.4
POTASSIUM	2800	--	2340	1580	1680	--	2220	1360	1390
SELENIUM	0.99 J	--	2 J	1.1 J	0.64 J	--	0.63 J	3.6 U	3.5 U
SILVER	0.55 U	--	0.56 U	0.6 U	0.6 U	--	0.55 U	1 U	1 U
SODIUM	45.4 J	--	36.6 J	22.9 J	28.6 J	--	44 J	516 U	504 U
THALLIUM	0.18 J	--	0.56 U	0.18 J	0.092 J	--	0.17 J	0.88 J	0.7 J
VANADIUM	33.6	--	36.1	49.2	23.9	--	58.3	14.3	11.9
ZINC	65.6	--	46.6	142	36.2	--	27.7	59.5	34.5
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	85	86	--	--	84	88	--	--	--

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-227	SS-228	SS-229	SS-230	SS-231	SS-232	SS-233	SS-234	SS-235
SAMPLE ID	SEC-SS-227	SEC-SS-228	SEC-SS-229	SEC-SS-230	SEC-SS-231	SEC-SS-232	SEC-SS-233	SEC-SS-234	SEC-SS-235
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.21 U	0.14 J	0.2 U	0.1 J	0.21 U	0.19 U	0.2 U	0.053 J	0.2 U
1,2,4,5-TETRACHLOROBENZENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
1,4-DIOXANE	0.082 U	0.074 U	0.08 U	0.076 U	0.081 U	0.075 U	0.081 U	0.081 U	0.077 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.4 UJ	0.37 UJ	0.4 UJ	0.37 UJ	0.4 UJ	0.37 UJ	0.4 U	0.4 UJ	0.38 UJ
2,3,4,6-TETRACHLOROPHENOL	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
2,4,5-TRICHLOROPHENOL	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
2,4,6-TRICHLOROPHENOL	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
2,4-DICHLOROPHENOL	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
2,4-DIMETHYLPHENOL	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
2,4-DINITROPHENOL	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
2,4-DINITROTOLUENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
2,6-DINITROTOLUENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
2-CHLORONAPHTHALENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
2-CHLOROPHENOL	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
2-METHYLNAPHTHALENE	0.21 U	0.49	0.2 U	0.27	0.21 U	0.062 J	0.2 U	0.12 J	0.2 U
2-METHYLPHENOL	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
2-NITROANILINE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
2-NITROPHENOL	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
3&4-METHYLPHENOL	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
3,3'-DICHLOROBENZIDINE	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
3-NITROANILINE	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
4,6-DINITRO-2-METHYLPHENOL	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
4-BROMOPHENYL PHENYL ETHER	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
4-CHLORO-3-METHYLPHENOL	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
4-CHLOROANILINE	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
4-CHLOROPHENYL PHENYL ETHER	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
4-NITROANILINE	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
4-NITROPHENOL	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-227	SS-228	SS-229	SS-230	SS-231	SS-232	SS-233	SS-234	SS-235
SAMPLE ID	SEC-SS-227	SEC-SS-228	SEC-SS-229	SEC-SS-230	SEC-SS-231	SEC-SS-232	SEC-SS-233	SEC-SS-234	SEC-SS-235
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
ACENAPHTHENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
ACENAPHTHYLENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
ACETOPHENONE	0.4 U	0.052 J	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
ANTHRACENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
ATRAZINE	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
BAP EQUIVALENT-HALFND	0.21 U	0.21767	0.2 U	0.22128	0.21 U	0.21629	0.2 U	0.23979	0.2 U
BAP EQUIVALENT-POS	0.21 U	0.01722	0.2 U	0.01133	0.21 U	0.00634	0.2 U	0.00774	0.2 U
BENZALDEHYDE	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.032 J	0.4 U	0.38 U
BENZO(A)ANTHRACENE	0.21 U	0.059 J	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
BENZO(A)PYRENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
BENZO(B)FLUORANTHENE	0.21 U	0.11 J	0.2 U	0.11 J	0.21 U	0.062 J	0.2 U	0.075 J	0.2 U
BENZO(G,H,I)PERYLENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
BENZO(K)FLUORANTHENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
BIS(2-CHLOROETHOXY)METHANE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
BIS(2-CHLOROETHYL)ETHER	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
BUTYL BENZYL PHTHALATE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
CAPROLACTAM	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
CARBAZOLE	0.4 UJ	0.37 UJ	0.4 UJ	0.37 UJ	0.4 UJ	0.37 UJ	0.4 UJ	0.4 UJ	0.38 UJ
CHRYSENE	0.21 U	0.32	0.2 U	0.33	0.21 U	0.14 J	0.2 U	0.24	0.2 U
DIBENZO(A,H)ANTHRACENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
DIBENZOFURAN	0.21 U	0.13 J	0.2 U	0.087 J	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
DIETHYL PHTHALATE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
DIMETHYL PHTHALATE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
DI-N-BUTYL PHTHALATE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
DI-N-OCTYL PHTHALATE	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
FLUORANTHENE	0.4 U	0.15 J	0.4 U	0.14 J	0.4 U	0.37 U	0.4 U	0.092 J	0.38 U
FLUORENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
HEXACHLOROBENZENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
HEXACHLOROBUTADIENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
HEXACHLOROCYCLOPENTADIENE	0.4 UJ	0.37 UJ	0.4 UJ	0.37 UJ	0.4 UJ	0.37 UJ	0.4 UJ	0.4 UJ	0.38 UJ
HEXACHLOROETHANE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 UJ	0.2 U	0.21 U	0.2 U
HIGH MOLECULAR WEIGHT PAHS	0 U	0.586	0 U	0.534	0 U	0.202	0 U	0.315	0 U
INDENO(1,2,3-CD)PYRENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
ISOPHORONE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
LOW MOLECULAR WEIGHT PAHS	0 U	1.48	0 U	1.08	0 U	0.21	0 U	0.684	0 U
NAPHTHALENE	0.21 U	0.42	0.2 U	0.21	0.21 U	0.19 U	0.2 U	0.092 J	0.2 U
NITROBENZENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
N-NITROSO-DI-N-PROPYLAMINE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
N-NITROSODIPHENYLAMINE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
PENTACHLOROPHENOL	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
PHENANTHRENE	0.21 U	0.91	0.2 U	0.73	0.21 U	0.21	0.2 U	0.5	0.2 U
PHENOL	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.37 U	0.4 U	0.4 U	0.38 U
PYRENE	0.21 U	0.097 J	0.2 U	0.094 J	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
TOTAL PAHS	0 U	2.066	0 U	1.614	0 U	0.412	0 U	0.999	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	0.0015 J	0.38 J	0.002 J	0.21	0.0012 J	0.049	0.004 U	0.084	0.0013 J
ACENAPHTHENE	0.004 U	0.008	0.004 U	0.007	0.004 U	0.0037 U	0.004 U	0.0052	0.0038 U
ACENAPHTHYLENE	0.004 U	0.0037 U	0.004 U	0.0037 U	0.004 U	0.0037 U	0.004 U	0.004 U	0.0038 U
ANTHRACENE	0.004 U	0.0037 U	0.004 U	0.0079	0.004 U	0.0038	0.004 U	0.0046	0.0038 U
BAP EQUIVALENT-HALFND	0.004622	0.049605	0.004643	0.050108	0.004623	0.027005	0.004685	0.02866	0.004424
BAP EQUIVALENT-POS	0.000002	0.049605	0.000223	0.050108	0.000003	0.027005	0.000265	0.02864	0.000225
BENZO(A)ANTHRACENE	0.004 U	0.055	0.004 U	0.058	0.004 U	0.019	0.004 U	0.031	0.0038 U
BENZO(A)PYRENE	0.004 U	0.019	0.004 U	0.016	0.004 U	0.0092	0.004 U	0.0077	0.0038 U
BENZO(B)FLUORANTHENE	0.004 U	0.1	0.0022 J	0.093	0.004 U	0.053	0.0026 J	0.062	0.0022 J
BENZO(G,H,I)PERYLENE	0.004 U	0.017	0.004 U	0.018	0.004 U	0.013	0.004 U	0.01	0.0038 U
BENZO(K)FLUORANTHENE	0.004 U	0.0075	0.004 U	0.0068	0.004 U	0.0045	0.004 U	0.004 U	0.0038 U
CHRYSENE	0.0026 J	0.34 J	0.0035 J	0.32 J	0.0031 J	0.15	0.0056	0.22 J	0.0058
DIBENZO(A,H)ANTHRACENE	0.004 U	0.014	0.004 U	0.018	0.004 U	0.0097	0.004 U	0.011	0.0038 U
FLUORANTHENE	0.0023 J	0.15	0.0023 J	0.13	0.0017 J	0.048	0.0031 J	0.083	0.0024 J
FLUORENE	0.004 U	0.011	0.004 U	0.0093	0.004 U	0.0037 U	0.004 U	0.006	0.0038 U
HIGH MOLECULAR WEIGHT PAHS	0.0026	0.6474	0.0057	0.616	0.0031	0.2945	0.011	0.3929	0.008
INDENO(1,2,3-CD)PYRENE	0.004 U	0.0069	0.004 U	0.0062	0.004 U	0.0071	0.004 U	0.0042	0.0038 U
LOW MOLECULAR WEIGHT PAHS	0.0083	1.449	0.009	1.0242	0.0071	0.3018	0.0119	0.6198	0.0124
NAPHTHALENE	0.004 U	0.41 J	0.004 U	0.2	0.004 U	0.04	0.004 U	0.081	0.0038 U
PENTACHLOROPHENOL	0.0082 U	0.0074 U	0.008 U	0.0076 U	0.0081 U	0.0075 U	0.0081 U	0.0081 U	0.0077 U
PHENANTHRENE	0.006	0.87 J	0.0067	0.67 J	0.0054	0.21	0.0088	0.44 J	0.01
PYRENE	0.004 U	0.088	0.004 U	0.08	0.004 U	0.029	0.0028 J	0.047	0.0038 U
TOTAL PAHS	0.0026	0.34	0.0035	0.32	0.0031	0.15	0.0056	0.22	0.0058
PESTICIDES (MG/KG)									
4,4'-DDD	0.004 U	0.016 J	0.004 U	0.016 J	0.004 U	0.01 J	0.004 U	0.011 J	0.0039 U
4,4'-DDE	0.004 U	0.0037 U	0.004 U	0.0037 U	0.004 U	0.0045 J	0.004 U	0.004 U	0.0039 U
4,4'-DDT	0.004 U	0.0037 R	0.004 U	0.0037 R	0.004 U	0.0044 J	0.004 U	0.004 R	0.0039 U
ALDRIN	0.0021 U	0.00042 R	0.002 U	0.00037 R	0.0021 U	0.0004 R	0.002 U	0.0021 U	0.002 U
ALPHA-BHC	0.0021 U	0.0019 U	0.002 U	0.0019 U	0.0021 U	0.0019 U	0.002 U	0.0021 U	0.002 U
ALPHA-CHLORDANE	0.0021 U	0.0019 U	0.002 U	0.0019 U	0.0021 U	0.0061 J	0.002 U	0.0021 U	0.002 U
BETA-BHC	0.00036 R	0.0015 R	0.00023 R	0.0011 R	0.0021 U	0.00024 R	0.00026 R	0.00046 R	0.002 U
DELTA-BHC	0.0021 U	0.00036 R	0.002 U	0.0019 U	0.00039 J	0.0019 U	0.00063 J	0.0004 R	0.00057 J
DIELDRIN	0.004 U	0.0066 R	0.004 U	0.006 R	0.004 U	0.0037 U	0.00044 J	0.0048 R	0.0039 U
ENDOSULFAN I	0.0021 U	0.0019 U	0.002 U	0.0019 U	0.0021 U	0.0014 R	0.002 U	0.0021 U	0.002 U
ENDOSULFAN II	0.004 U	0.0037 U	0.004 U	0.0037 U	0.004 U	0.0037 U	0.004 U	0.004 U	0.0039 U
ENDOSULFAN SULFATE	0.004 U	0.0037 U	0.004 U	0.0037 U	0.004 U	0.0052 J	0.00024 J	0.0025 R	0.0039 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-227	SS-228	SS-229	SS-230	SS-231	SS-232	SS-233	SS-234	SS-235
SAMPLE ID	SEC-SS-227	SEC-SS-228	SEC-SS-229	SEC-SS-230	SEC-SS-231	SEC-SS-232	SEC-SS-233	SEC-SS-234	SEC-SS-235
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
ENDRIN	0.004 U	0.0037 R	0.004 U	0.0037 R	0.004 U	0.0044 R	0.0015 J	0.004 R	0.0039 U
ENDRIN ALDEHYDE	0.00084 J	0.0057 R	0.00081 J	0.0048 R	0.0006 J	0.0037 U	0.004 U	0.0039 R	0.00027 J
ENDRIN KETONE	0.00061 J	0.023 J	0.00092 J	0.019 J	0.0015 J	0.013 J	0.004 U	0.012 J	0.00049 J
GAMMA-BHC (LINDANE)	0.0021 U	0.002 R	0.00031 J	0.0016 R	0.0021 U	0.0019 U	0.00035 J	0.0012 R	0.002 U
GAMMA-CHLORDANE	0.00054 J	0.0015 R	0.00056 J	0.0029 J	0.00064 J	0.00063 R	0.00036 J	0.00079 R	0.002 U
HEPTACHLOR	0.0021 U	0.0019 U	0.002 U	0.0019 U	0.0021 U	0.0019 U	0.002 U	0.00019 R	0.0005 J
HEPTACHLOR EPOXIDE	0.00058 J	0.0069 J	0.00074 J	0.0054 J	0.00095 J	0.0036 J	0.002 U	0.0039 J	0.00077 J
METHOXYCHLOR	0.021 U	0.019 R	0.02 U	0.019 R	0.021 U	0.0077 R	0.001 R	0.021 R	0.02 U
TOXAPHENE	0.21 U	0.19 U	0.2 U	0.19 U	0.21 U	0.19 U	0.2 U	0.21 U	0.2 U
PCBS (MG/KG)									
AROCLOR-1016	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.04 U	0.039 U
AROCLOR-1221	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.04 U	0.039 U
AROCLOR-1232	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.04 U	0.039 U
AROCLOR-1242	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.04 U	0.039 U
AROCLOR-1248	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.04 U	0.039 U
AROCLOR-1254	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.04 U	0.039 U
AROCLOR-1260	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.04 U	0.039 U
AROCLOR-1262	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.04 U	0.039 U
AROCLOR-1268	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.037 U	0.04 U	0.04 U	0.039 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U
TOTAL AROCLOR HALFND	0.18	0.1665	0.18	0.1665	0.18	0.1665	0.18	0.18	0.1755
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--	--
PCB-14	--	--	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--	--

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-227	SS-228	SS-229	SS-230	SS-231	SS-232	SS-233	SS-234	SS-235
SAMPLE ID	SEC-SS-227	SEC-SS-228	SEC-SS-229	SEC-SS-230	SEC-SS-231	SEC-SS-232	SEC-SS-233	SEC-SS-234	SEC-SS-235
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-147	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--
PCB-198	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--	--	--
PCB-201	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--	--

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-227	SS-228	SS-229	SS-230	SS-231	SS-232	SS-233	SS-234	SS-235
SAMPLE ID	SEC-SS-227	SEC-SS-228	SEC-SS-229	SEC-SS-230	SEC-SS-231	SEC-SS-232	SEC-SS-233	SEC-SS-234	SEC-SS-235
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-43/49	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--
PCB-74	--	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--	--
PCB-80	--	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-227	SS-228	SS-229	SS-230	SS-231	SS-232	SS-233	SS-234	SS-235
SAMPLE ID	SEC-SS-227	SEC-SS-228	SEC-SS-229	SEC-SS-230	SEC-SS-231	SEC-SS-232	SEC-SS-233	SEC-SS-234	SEC-SS-235
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--	--	--	--
METALS (MG/KG)									
ALUMINUM	6430 J	4620 J	10000	4840	7400 J	3460 J	7490 J	5860	8800
ANTIMONY	6.2 U	6 U	6.4 U	6.4 U	6 U	6.2 U	6.4 U	6.3 U	6.7 U
ARSENIC	5.5	24.8	7.5	23.3	5.6	21.6	10	24	8.4
BARIUM	43.5	80.7	49	89.3	48.3	71.3	46.3	78.8	54.9
BERYLLIUM	0.53	1.4	1	1.3	1.1	1.6	0.71	1	0.89
CADMIUM	0.52 U	0.41 J	0.17 J	0.34 J	0.15 J	0.32 J	0.24 J	0.4 J	0.17 J
CALCIUM	564	475 J	430 J	442 J	586	440 J	742	784	867
CHROMIUM	14.3	36.5	19.6 J	11.4 J	17	11.9	23.8	12.7 J	15.1 J
COBALT	2.3 J	4.8 J	7.5	6.3	16.7	6.3	5.1 J	8.5	8.7
COPPER	9.2	44.5	24.2	40.1	18.4	34.1	18	33.3	23.6
CYANIDE	--	--	--	--	--	--	--	--	--
IRON	18800	19100	50300 J	19500 J	44500	15800	41500	25300 J	26800 J
LEAD	10.7	13.7	14.8	14.1	13.2	14.2	12.3	15.3	16.1
MAGNESIUM	341 J	751	528	1310	1000	1140	696	957	1370
MANGANESE	56.4	74	150	88.1	328	65.7	130	136	202
MERCURY	--	--	--	--	--	--	--	--	--
NICKEL	5.6	24.6	10.3	14.4	14.9	16	11.3	13.5	13.4
POTASSIUM	815	1210	1140	1300	1020	869	890	1360	1220
SELENIUM	3.6 U	3.5 U	3.7 UJ	3.7 UJ	3.5 U	1.2 J	3.7 U	3.7 UJ	3.9 UJ
SILVER	1 U	1 U	1.1 U	1.1 U	1 U	1 U	0.31 J	1.1 U	1.1 U
SODIUM	519 U	311 J	531 U	530 U	502 U	516 U	533 U	526 U	560 U
THALLIUM	2.6 U	2.5 U	0.96 J	0.77 J	1.2 J	2.6 U	0.73 J	0.86 J	0.79 J
VANADIUM	13.4	13.5	13.7	12.5	13.1	18.8	21.5	12.9	15.6
ZINC	23.2	28.9	35	35.5	61.4	29.9	50	36	54.2
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	--	--	--	--	--	--	--	--

LOCATION	SS-236	SS-237	SS-238	SS-239	SS-240	SS-241	SS-246
SAMPLE ID	SEC-SS-236	SEC-SS-237	SEC-SS-238	SEC-SS-239	SEC-SS-240	SEC-SS-241	SEC-SS-246
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6
VOLATILES (MG/KG)							
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)							
1,1-BIPHENYL	0.1 J	0.2 U	0.087 J	0.081 J	0.11 J	0.12 J	0.2 U
1,2,4,5-TETRACHLOROBENZENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
1,4-DIOXANE	0.077 U	0.079 U	0.076 U	0.076 U	0.073 U	0.074 U	0.079 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.38 UJ	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
2,3,4,6-TETRACHLOROPHENOL	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2,4,5-TRICHLOROPHENOL	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2,4,6-TRICHLOROPHENOL	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2,4-DICHLOROPHENOL	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2,4-DIMETHYLPHENOL	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2,4-DINITROPHENOL	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
2,4-DINITROTOLUENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2,6-DINITROTOLUENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2-CHLORONAPHTHALENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2-CHLOROPHENOL	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2-METHYLNAPHTHALENE	0.25	0.2 U	0.2	0.08 J	0.089 J	0.091 J	0.2 U
2-METHYLPHENOL	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
2-NITROANILINE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2-NITROPHENOL	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
3&4-METHYLPHENOL	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
3,3'-DICHLOROBENZIDINE	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
3-NITROANILINE	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
4,6-DINITRO-2-METHYLPHENOL	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
4-BROMOPHENYL PHENYL ETHER	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
4-CHLORO-3-METHYLPHENOL	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
4-CHLOROANILINE	0.38 U	0.39 U	0.37 UJ	0.37 U	0.36 UJ	0.36 UJ	0.39 UJ
4-CHLOROPHENYL PHENYL ETHER	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
4-NITROANILINE	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
4-NITROPHENOL	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-236	SS-237	SS-238	SS-239	SS-240	SS-241	SS-246
SAMPLE ID	SEC-SS-236	SEC-SS-237	SEC-SS-238	SEC-SS-239	SEC-SS-240	SEC-SS-241	SEC-SS-246
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS
ACENAPHTHENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
ACENAPHTHYLENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
ACETOPHENONE	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
ANTHRACENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
ATRAZINE	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
BAP EQUIVALENT-HALFND	0.22924	0.2 U	0.21913	0.21677	0.21843	0.21887	0.2 U
BAP EQUIVALENT-POS	0.01824	0.2 U	0.00918	0.00682	0.00848	0.00892	0.2 U
BENZALDEHYDE	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
BENZO(A)ANTHRACENE	0.059 J	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
BENZO(A)PYRENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
BENZO(B)FLUORANTHENE	0.12 J	0.2 U	0.089 J	0.066 J	0.082 J	0.086 J	0.2 U
BENZO(G,H,I)PERYLENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
BENZO(K)FLUORANTHENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
BIS(2-CHLOROETHOXY)METHANE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
BIS(2-CHLOROETHYL)ETHER	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
BUTYL BENZYL PHTHALATE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
CAPROLACTAM	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
CARBAZOLE	0.38 UJ	0.39 UJ	0.37 UJ	0.37 UJ	0.36 UJ	0.36 UJ	0.39 UJ
CHRYSENE	0.34	0.2 U	0.28	0.22	0.28	0.32	0.2 U
DIBENZO(A,H)ANTHRACENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
DIBENZOFURAN	0.11 J	0.2 U	0.077 J	0.19 U	0.19 U	0.19 U	0.2 U
DIETHYL PHTHALATE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
DIMETHYL PHTHALATE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
DI-N-BUTYL PHTHALATE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
DI-N-OCTYL PHTHALATE	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
FLUORANTHENE	0.15 J	0.39 U	0.1 J	0.07 J	0.1 J	0.11 J	0.39 U
FLUORENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
HEXACHLOROBENZENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
HEXACHLOROBUTADIENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
HEXACHLOROCYCLOPENTADIENE	0.38 UJ	0.39 UJ	0.37 UJ	0.37 UJ	0.36 UJ	0.36 UJ	0.39 UJ
HEXACHLOROETHANE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
HIGH MOLECULAR WEIGHT PAHS	0.608	0 U	0.46	0.286	0.362	0.406	0 U
INDENO(1,2,3-CD)PYRENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
ISOPHORONE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
LOW MOLECULAR WEIGHT PAHS	1.4	0 U	0.95	0.624	0.87	0.961	0 U
NAPHTHALENE	0.25	0.2 U	0.22	0.074 J	0.06 J	0.061 J	0.2 U
NITROBENZENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
N-NITROSO-DI-N-PROPYLAMINE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
N-NITROSODIPHENYLAMINE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
PENTACHLOROPHENOL	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
PHENANTHRENE	1	0.2 U	0.63	0.48	0.71	0.79	0.2 U
PHENOL	0.38 U	0.39 U	0.37 U	0.37 U	0.36 U	0.36 U	0.39 U
PYRENE	0.089 J	0.2 U	0.091 J	0.19 U	0.19 U	0.19 U	0.2 U
TOTAL PAHS	2.008	0 U	1.41	0.91	1.232	1.367	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K							
1,4-DIOXANE	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	0.16	0.015	0.14	0.056	0.057	0.058	0.0068
ACENAPHTHENE	0.0065	0.00087 J	0.0056	0.0037 U	0.0036 U	0.0036 U	0.0011 J
ACENAPHTHYLENE	0.0038 U	0.0039 U	0.0037 U	0.0037 U	0.0036 U	0.0036 U	0.0039 U
ANTHRACENE	0.0089	0.0039 U	0.012	0.0037 U	0.0036 U	0.0036 U	0.0039 U
BAP EQUIVALENT-HALFND	0.042291	0.007351	0.029613	0.022808	0.024918	0.027628	0.005296
BAP EQUIVALENT-POS	0.042291	0.005382	0.029428	0.02279	0.0249	0.02761	0.003132
BENZO(A)ANTHRACENE	0.054	0.0054	0.044	0.013	0.012	0.013	0.0049
BENZO(A)PYRENE	0.013	0.0036 J	0.011	0.0037	0.0047	0.0042	0.002 J
BENZO(B)FLUORANTHENE	0.09	0.01	0.078	0.062	0.073	0.084	0.0063
BENZO(G,H,I)PERYLENE	0.013	0.0026 J	0.0054	0.01	0.0097	0.0099	0.0039 U
BENZO(K)FLUORANTHENE	0.0061	0.0039 U	0.0058	0.0037 U	0.0036 U	0.0036 U	0.0039 U
CHRYSENE	0.31 J	0.022	0.27	0.21 J	0.24 J	0.31 J	0.012
DIBENZO(A,H)ANTHRACENE	0.014	0.0039 U	0.0059	0.011	0.011	0.013	0.0039 U
FLUORANTHENE	0.13	0.012	0.11	0.07	0.078	0.095	0.021
FLUORENE	0.0078	0.0039 U	0.0059	0.0037 U	0.0036 U	0.0036 U	0.0012 J
HIGH MOLECULAR WEIGHT PAHS	0.5753	0.0533	0.4751	0.3415	0.388	0.4751	0.0314
INDENO(1,2,3-CD)PYRENE	0.0052	0.0022 J	0.0037 U	0.0038	0.0046	0.004	0.0039 U
LOW MOLECULAR WEIGHT PAHS	1.2232	0.06787	0.9535	0.592	0.647	0.774	0.051
NAPHTHALENE	0.21	0.01	0.22	0.072	0.049	0.049	0.0057
PENTACHLOROPHENOL	0.0077 U	0.0079 U	0.0076 U	0.0076 U	0.0073 U	0.0074 U	0.0079 U
PHENANTHRENE	0.86 J	0.045	0.6 J	0.45 J	0.52 J	0.63 J	0.022
PYRENE	0.07	0.0075	0.055	0.028	0.033	0.037	0.0062
TOTAL PAHS	0.31	0.022	0.27	0.21	0.24	0.31	0.012
PESTICIDES (MG/KG)							
4,4'-DDD	0.015 J	0.0039 U	0.013 J	0.017 J	0.0037 U	0.0036 U	0.0046
4,4'-DDE	0.0038 U	0.00057 J	0.0045 J	0.0057 J	0.014 J	0.016 J	0.0024 J
4,4'-DDT	0.0038 R	0.0039 U	0.0069 J	0.0066 R	0.013 J	0.016 J	0.0056
ALDRIN	0.00026 R	0.002 U	0.0002 R	0.00039 R	0.0019 U	0.0019 U	0.002 U
ALPHA-BHC	0.002 U	0.002 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.002 U
ALPHA-CHLORDANE	0.002 U	0.00033 J	0.0019 U	0.011 J	0.022 J	0.024 J	0.002 U
BETA-BHC	0.0008 J	0.00031 R	0.0013 R	0.0016 R	0.004 R	0.0048 R	0.0003 R
DELTA-BHC	0.002 U	0.002 U	0.00041 R	0.0017 J	0.0024 R	0.0025 R	0.002 U
DIELDRIN	0.0061 R	0.0039 R	0.0053 R	0.0037 U	0.0037 U	0.0047 R	0.0039 U
ENDOSULFAN I	0.002 U	0.002 U	0.0019 U	0.013 J	0.019 J	0.02 J	0.00099 R
ENDOSULFAN II	0.0038 U	0.0039 U	0.0038 R	0.0059 J	0.0092 J	0.01 J	0.0039 U
ENDOSULFAN SULFATE	0.0038 U	0.0039 U	0.0038 U	0.021 J	0.017 J	0.025 J	0.0073

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-236	SS-237	SS-238	SS-239	SS-240	SS-241	SS-246
SAMPLE ID	SEC-SS-236	SEC-SS-237	SEC-SS-238	SEC-SS-239	SEC-SS-240	SEC-SS-241	SEC-SS-246
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS
ENDRIN	0.0038 R	0.0039 R	0.0038 R	0.0029 R	0.019 R	0.0027 R	0.0039 U
ENDRIN ALDEHYDE	0.0047 R	0.00097 R	0.005 R	0.0024 R	0.016 R	0.019 R	0.0039 U
ENDRIN KETONE	0.02 J	0.0019 J	0.018 J	0.018 J	0.031 J	0.035 J	0.011
GAMMA-BHC (LINDANE)	0.0015 R	0.00032 R	0.0017 R	0.0019 U	0.0019 U	0.0016 R	0.00087 R
GAMMA-CHLORDANE	0.00096 R	0.001 J	0.00079 R	0.00071 R	0.0013 R	0.0014 R	0.0012 J
HEPTACHLOR	0.002 U	0.002 U	0.0019 U	0.0014 R	0.0019 U	0.0019 U	0.002 U
HEPTACHLOR EPOXIDE	0.0052 J	0.00093 J	0.0053 J	0.0087 J	0.014 J	0.013 J	0.0015 J
METHOXYCHLOR	0.02 R	0.02 U	0.019 R	0.01 R	0.019 R	0.021 R	0.02 R
TOXAPHENE	0.2 U	0.2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
PCBS (MG/KG)							
AROCLOR-1016	0.038 U	0.039 U	0.038 U	0.037 U	0.037 U	0.036 U	0.039 U
AROCLOR-1221	0.038 U	0.039 U	0.038 U	0.037 U	0.037 U	0.036 U	0.039 U
AROCLOR-1232	0.038 U	0.039 U	0.038 U	0.037 U	0.037 U	0.036 U	0.039 U
AROCLOR-1242	0.038 U	0.039 U	0.038 U	0.037 U	0.037 U	0.036 U	0.039 U
AROCLOR-1248	0.038 U	0.039 U	0.038 U	0.037 U	0.037 U	0.036 U	0.039 U
AROCLOR-1254	0.038 U	0.039 U	0.038 U	0.037 U	0.037 U	0.036 U	0.039 U
AROCLOR-1260	0.038 U	0.039 U	0.038 U	0.037 U	0.037 U	0.036 U	0.039 U
AROCLOR-1262	0.038 U	0.039 U	0.038 U	0.037 U	0.037 U	0.036 U	0.039 U
AROCLOR-1268	0.038 U	0.039 U	0.038 U	0.037 U	0.037 U	0.036 U	0.039 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U	0 U	0 U	0 U
TOTAL AROCLOR HALFND	0.171	0.1755	0.171	0.1665	0.1665	0.162	0.1755
MOBILE LAB PESTICIDES/PCBS (MG/KG)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--
PCB CONGENERS (MG/KG)							
DICHLOROBIPHENYLS	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--
PCB-14	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-236	SS-237	SS-238	SS-239	SS-240	SS-241	SS-246
SAMPLE ID	SEC-SS-236	SEC-SS-237	SEC-SS-238	SEC-SS-239	SEC-SS-240	SEC-SS-241	SEC-SS-246
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS
PCB-147	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--
PCB-198	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--
PCB-201	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-236	SS-237	SS-238	SS-239	SS-240	SS-241	SS-246
SAMPLE ID	SEC-SS-236	SEC-SS-237	SEC-SS-238	SEC-SS-239	SEC-SS-240	SEC-SS-241	SEC-SS-246
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS
PCB-43/49	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--
PCB-74	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--
PCB-80	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)							
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--

TABLE 8

SOIL ANALYTICAL DATA - BERWIND GREEN HILL MINE DUMP AREA
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-236	SS-237	SS-238	SS-239	SS-240	SS-241	SS-246
SAMPLE ID	SEC-SS-236	SEC-SS-237	SEC-SS-238	SEC-SS-239	SEC-SS-240	SEC-SS-241	SEC-SS-246
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill	Berwind Green Hill
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--	--
METALS (MG/KG)							
ALUMINUM	5510	5110	4660	2240	2380	2550	3970 J
ANTIMONY	5.9 U	6.3 U	6 U	6.1 U	6.1 U	6 U	6.4 U
ARSENIC	26.4	5	18.8	50.9	36.7	29.2	7.8
BARIUM	84.2	82.3	81.5	65.4	81.3	61.4	50
BERYLLIUM	1.4	0.93	1.1	1.4	1.5	1.1	0.87
CADMIUM	0.45 J	0.14 J	0.34 J	0.83	0.53	0.41 J	0.17 J
CALCIUM	942	491 J	415 J	1630	1110	812	672
CHROMIUM	10.8 J	9.3 J	23.4 J	11.8 J	13.1 J	8.9 J	9.3
COBALT	6.8	8.2	8	13	5.8	4.5 J	22.7
COPPER	41.6	9.3	28	83.4	39.2	31.6	8.6
CYANIDE	--	--	--	--	--	--	--
IRON	18500 J	25500 J	14800 J	100000 J	21600 J	16800 J	12200
LEAD	16.9	25.2	19.8	10.5	12.6	10.1	40.4
MAGNESIUM	1120	240 J	676	421 J	547	745	505 J
MANGANESE	120	674	264	149	40.7	70.8	444
MERCURY	--	--	--	--	--	--	--
NICKEL	15.3	7.1	17.8	21.6	15.9	10.9	12.5
POTASSIUM	1370	525	982	762	979	791	774
SELENIUM	1.7 J-	3.7 UJ	3.5 UJ	3.6 UJ	2.2 J-	3.5 UJ	3.7 U
SILVER	0.98 U	1.1 U	1 U	1 U	1 U	1 U	1.1 U
SODIUM	260 J	527 U	189 J	202 J	157 J	337 J	533 U
THALLIUM	0.78 J	1.7 J	1 J	0.91 J	2.5 U	2.5 U	1.2 J
VANADIUM	11.9	10	10.8	5.1 U	18.1	10.9	6.5
ZINC	35.5	26.6	29.1	69.2	28.9	30.4	40.2
MISCELLANEOUS (%)							
TOTAL SOLIDS	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)							
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)							
PERCENT SOLIDS	--	--	--	--	--	--	--

APPENDIX G.6

ROCKLICK ROAD ANALYTICAL DATA

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-353	SB-353	SB-353	SB-353	SB-354	SB-354	SB-354	SB-354
SAMPLE ID	SB353-20191113-0006	SB353-20191113-0624	SB353-20191113-2448	SB353-20191113-6084	SB354-20191113-0006	SB354-20191113-0624	SB354-20191113-4872	SB354-20191113-7296
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191113
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	0	0.5	2	5	0	0.5	4	6
BOTTOM DEPTH	0.5	2	4	7	0.5	2	6	8
VOLATILES (MG/KG)								
1,1,1-TRICHLOROETHANE	0.0052 UJ	0.0064 UJ	--	0.0057 U	0.0057 UJ	0.0062 UJ	--	0.0046 U
1,1,2,2-TETRACHLOROETHANE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
1,1,2-TRICHLOROETHANE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0052 UJ	0.0064 UJ	--	0.0057 U	0.0057 UJ	0.0062 UJ	--	0.0046 U
1,1-DICHLOROETHANE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
1,1-DICHLOROETHENE	0.0052 UJ	0.0064 UJ	--	0.0057 U	0.0057 UJ	0.0062 UJ	--	0.0046 U
1,2,3-TRICHLOROBENZENE	0.0052 UJ	0.0064 UJ	--	0.0057 UJ	0.0057 UJ	0.0062 UJ	--	0.0046 UJ
1,2,4-TRICHLOROBENZENE	0.0052 UJ	0.0064 UJ	--	0.0057 UJ	0.0057 UJ	0.0062 UJ	--	0.0046 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.0052 UJ	0.0064 U	--	0.0057 U	0.0057 UJ	0.0062 U	--	0.0046 U
1,2-DIBROMOETHANE	0.0052 UJ	0.0064 UJ	--	0.0057 U	0.0057 UJ	0.0062 UJ	--	0.0046 U
1,2-DICHLOROBENZENE	0.0052 UJ	0.0064 UJ	--	0.0057 UJ	0.0057 UJ	0.0062 UJ	--	0.0046 UJ
1,2-DICHLOROETHANE	0.0052 UJ	0.0064 UJ	--	0.0057 U	0.0057 UJ	0.0062 UJ	--	0.0046 U
1,2-DICHLOROPROPANE	0.0052 U	0.0064 UJ	--	0.0057 U	0.0057 U	0.0062 UJ	--	0.0046 U
1,3-DICHLOROBENZENE	0.0052 UJ	0.0064 UJ	--	0.0057 UJ	0.0057 UJ	0.0062 UJ	--	0.0046 UJ
1,4-DICHLOROBENZENE	0.0052 UJ	0.0064 UJ	--	0.0057 UJ	0.0057 UJ	0.0062 UJ	--	0.0046 UJ
2-BUTANONE	0.01 U	0.013 U	--	0.011 U	0.011 U	0.012 U	--	0.0093 U
2-HEXANONE	0.01 U	0.013 U	--	0.011 U	0.011 U	0.012 U	--	0.0093 U
4-METHYL-2-PENTANONE	0.01 U	0.013 U	--	0.011 U	0.011 U	0.012 U	--	0.0093 U
ACETONE	0.01 U	0.013 U	--	0.011	0.011 U	0.012 U	--	0.0091 J
BENZENE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
BROMOCHLOROMETHANE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
BROMODICHLOROMETHANE	0.0052 U	0.0064 UJ	--	0.0057 U	0.0057 U	0.0062 UJ	--	0.0046 U
BROMOFORM	0.0052 UJ	0.0064 U	--	0.0057 U	0.0057 UJ	0.0062 U	--	0.0046 U
BROMOMETHANE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
CARBON DISULFIDE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
CARBON TETRACHLORIDE	0.0052 UJ	0.0064 UJ	--	0.0057 U	0.0057 UJ	0.0062 UJ	--	0.0046 U
CHLOROBENZENE	0.0052 UJ	0.0064 UJ	--	0.0057 UJ	0.0057 UJ	0.0062 UJ	--	0.0046 UJ
CHLORODIBROMOMETHANE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
CHLOROETHANE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
CHLOROFORM	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
CHLOROMETHANE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
CIS-1,2-DICHLOROETHENE	0.0052 UJ	0.0064 UJ	--	0.0057 U	0.0057 UJ	0.0062 UJ	--	0.0046 U
CIS-1,3-DICHLOROPROPENE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
CYCLOHEXANE	0.0052 U	0.0064 UJ	--	0.0057 U	0.0057 U	0.0062 UJ	--	0.0046 U
DICHLORODIFLUOROMETHANE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
ETHYLBENZENE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
ISOPROPYLBENZENE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
M+P-XYLENES	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
METHYL ACETATE	0.0052 UJ	0.0064 UJ	--	0.0057 U	0.0057 UJ	0.0062 UJ	--	0.0046 U
METHYL CYCLOHEXANE	0.0052 U	0.0064 UJ	--	0.0057 U	0.0057 U	0.0062 UJ	--	0.0046 U
METHYL TERT-BUTYL ETHER	0.0052 UJ	0.0064 UJ	--	0.0057 U	0.0057 UJ	0.0062 UJ	--	0.0046 U
METHYLENE CHLORIDE	0.0052 UJ	0.0064 UJ	--	0.0057 U	0.0057 UJ	0.0062 UJ	--	0.0046 U
O-XYLENE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
STYRENE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
TETRACHLOROETHENE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
TOLUENE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
TRANS-1,2-DICHLOROETHENE	0.0052 UJ	0.0064 UJ	--	0.0057 U	0.0057 UJ	0.0062 UJ	--	0.0046 U
TRANS-1,3-DICHLOROPROPENE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
TRICHLOROETHENE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U
TRICHLOROFLUOROMETHANE	0.0052 UJ	0.0064 UJ	--	0.0057 U	0.0057 UJ	0.0062 UJ	--	0.0046 U
VINYL CHLORIDE	0.0052 U	0.0064 U	--	0.0057 U	0.0057 U	0.0062 U	--	0.0046 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-353	SB-353	SB-353	SB-353	SB-354	SB-354	SB-354	SB-354
SAMPLE ID	SB353-20191113-0006	SB353-20191113-0624	SB353-20191113-2448	SB353-20191113-6084	SB354-20191113-0006	SB354-20191113-0624	SB354-20191113-4872	SB354-20191113-7296
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191113
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	0	0.5	2	5	0	0.5	4	6
BOTTOM DEPTH	0.5	2	4	7	0.5	2	6	8
SEMIVOLATILES (MG/KG)								
1,1-BIPHENYL	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
1,2,4,5-TETRACHLOROBENZENE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
1,4-DIOXANE	0.077 U	0.08 U	--	0.084 U	0.081 U	0.086 U	--	0.071 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
2,3,4,6-TETRACHLOROPHENOL	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
2,4,5-TRICHLOROPHENOL	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
2,4,6-TRICHLOROPHENOL	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
2,4-DICHLOROPHENOL	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
2,4-DIMETHYLPHENOL	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
2,4-DINITROPHENOL	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
2,4-DINITROTOLUENE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
2,6-DINITROTOLUENE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
2-CHLORONAPHTHALENE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
2-CHLOROPHENOL	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
2-METHYLNAPHTHALENE	0.2 U	0.039 J	--	0.21 U	0.2 U	0.05 J	--	0.18 U
2-METHYLPHENOL	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
2-NITROANILINE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
2-NITROPHENOL	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
3&4-METHYLPHENOL	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
3,3'-DICHLOROBENZIDINE	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
3-NITROANILINE	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
4,6-DINITRO-2-METHYLPHENOL	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
4-BROMOPHENYL PHENYL ETHER	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
4-CHLORO-3-METHYLPHENOL	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
4-CHLOROANILINE	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
4-CHLOROPHENYL PHENYL ETHER	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
4-NITROANILINE	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
4-NITROPHENOL	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
ACENAPHTHENE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
ACENAPHTHYLENE	0.2 U	0.039 J	--	0.21 U	0.2 U	0.17 J	--	0.18 U
ACETOPHENONE	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
ANTHRACENE	0.2 U	0.037 J	--	0.21 U	0.2 U	0.14 J	--	0.18 U
ATRAZINE	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
BAP EQUIVALENT-HALFND	0.156581	0.27352	--	0.21 U	0.150236	0.85118	--	0.18 U
BAP EQUIVALENT-POS	0.056581	0.17352	--	0.21 U	0.039236	0.74118	--	0.18 U
BENZALDEHYDE	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
BENZO(A)ANTHRACENE	0.039 J	0.14 J	--	0.21 U	0.028 J	0.61	--	0.18 U
BENZO(A)PYRENE	0.043 J	0.13 J	--	0.21 U	0.031 J	0.57	--	0.18 U
BENZO(B)FLUORANTHENE	0.068 J	0.21	--	0.21 U	0.054 J	0.79	--	0.18 U
BENZO(G,H,I)PERYLENE	0.021 J	0.062 J	--	0.21 U	0.023 J	0.27	--	0.18 U
BENZO(K)FLUORANTHENE	0.022 J	0.082 J	--	0.21 U	0.2 U	0.24	--	0.18 U
BIS(2-CHLOROETHOXY)METHANE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
BIS(2-CHLOROETHYL)ETHER	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.027 J	0.2 U	--	0.21 U	0.066 J	0.052 J	--	0.18 U
BUTYL BENZYL PHTHALATE	0.032 J	0.2 U	--	0.21 U	0.028 J	0.039 J	--	0.18 U
CAPROLACTAM	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
CARBAZOLE	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
CHRYSENE	0.061 J	0.2	--	0.21 U	0.036 J	0.78	--	0.18 U
DIBENZO(A,H)ANTHRACENE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
DIBENZOFURAN	0.2 U	0.2 U	--	0.21 U	0.2 U	0.024 J	--	0.18 U
DIETHYL PHTHALATE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
DIMETHYL PHTHALATE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
DI-N-BUTYL PHTHALATE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
DI-N-OCTYL PHTHALATE	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
FLUORANTHENE	0.063 J	0.25 J	--	0.41 U	0.045 J	1.1	--	0.35 U
FLUORENE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.043 J	--	0.18 U
HEXACHLOROBENZENE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
HEXACHLOROBUTADIENE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
HEXACHLOROCYCLOPENTADIENE	0.38 UJ	0.39 UJ	--	0.41 UJ	0.4 UJ	0.42 UJ	--	0.35 UJ
HEXACHLOROETHANE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
HIGH MOLECULAR WEIGHT PAHS	0.345	1.149	--	0 U	0.218	4.84	--	0 U
INDENO(1,2,3-CD)PYRENE	0.026 J	0.075 J	--	0.21 U	0.2 U	0.28	--	0.18 U
ISOPHORONE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
LOW MOLECULAR WEIGHT PAHS	0.099	0.476	--	0 U	0.083	2.082	--	0 U
NAPHTHALENE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.029 J	--	0.18 U
NITROBENZENE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
N-NITROSO-DI-N-PROPYLAMINE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
N-NITROSODIPHENYLAMINE	0.2 U	0.2 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
PENTACHLOROPHENOL	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-353	SB-353	SB-353	SB-353	SB-354	SB-354	SB-354	SB-354
SAMPLE ID	SB353-20191113-0006	SB353-20191113-0624	SB353-20191113-2448	SB353-20191113-6084	SB354-20191113-0006	SB354-20191113-0624	SB354-20191113-4872	SB354-20191113-7296
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191113
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	0	0.5	2	5	0	0.5	4	6
BOTTOM DEPTH	0.5	2	4	7	0.5	2	6	8
PHENANTHRENE	0.036 J	0.15 J	--	0.21 U	0.038 J	0.6	--	0.18 U
PHENOL	0.38 U	0.39 U	--	0.41 U	0.4 U	0.42 U	--	0.35 U
PYRENE	0.065 J	0.25	--	0.21 U	0.046 J	1.3	--	0.18 U
TOTAL PAHS	0.444	1.625	--	0 U	0.301	6.922	--	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/KG								
1,4-DIOXANE	0.0077 U	0.008 U	--	0.0085 U	0.008 U	0.0085 U	--	0.0071 U
2-METHYLNAPHTHALENE	0.021 J+	0.054	--	0.0062	0.023	0.078	--	0.0022 J
ACENAPHTHENE	0.0038 U	0.0098	--	0.00058 J	0.004 U	0.017	--	0.0035 U
ACENAPHTHYLENE	0.018	0.046	--	0.0009 J	0.01	0.14	--	0.0011 J
ANTHRACENE	0.0094	0.035	--	0.0012 J	0.0087	0.1	--	0.00084 J
BAP EQUIVALENT-HALFND	0.064263	0.17821	--	0.00545	0.044331	0.63259	--	0.005662
BAP EQUIVALENT-POS	0.062363	0.17626	--	0.0034	0.042331	0.63049	--	0.003912
BENZO(A)ANTHRACENE	0.045	0.14	--	0.0031 J	0.03	0.54 J	--	0.003 J
BENZO(A)PYRENE	0.047 J+	0.13	--	0.0023 J	0.031 J+	0.49 J	--	0.0029 J
BENZO(B)FLUORANTHENE	0.084	0.26	--	0.0053	0.066	0.62 J	--	0.0056
BENZO(G,H,I)PERYLENE	0.017 J+	0.041 J+	--	0.0035 J	0.015 J+	0.19	--	0.0014 J
BENZO(K)FLUORANTHENE	0.03 J+	0.084	--	0.0014 J	0.019 J+	0.28	--	0.0017 J
CHRYSENE	0.063	0.22	--	0.0068	0.041	0.69 J	--	0.0058
DIBENZO(A,H)ANTHRACENE	0.0038 UJ	0.0039 UJ	--	0.0041 U	0.004 UJ	0.0042 UJ	--	0.0035 U
FLUORANTHENE	0.084	0.32	--	0.0035 J	0.061 J	0.72 J	--	0.0052
FLUORENE	0.0045	0.019	--	0.0012 J	0.0059	0.055	--	0.0035 U
HIGH MOLECULAR WEIGHT PAHS	0.363	1.147	--	0.0308	0.26	3.95	--	0.029
INDENO(1,2,3-CD)PYRENE	0.021 J+	0.052 J+	--	0.0024 J	0.015 J+	0.21	--	0.0013 J
LOW MOLECULAR WEIGHT PAHS	0.1729	0.6438	--	0.01998	0.1446	1.59	--	0.01574
NAPHTHALENE	0.012 J+	0.024	--	0.004 J	0.011	0.048	--	0.0019 J
PENTACHLOROPHENOL	0.0077 UJ	0.008 UJ	--	0.0084 U	0.0081 UJ	0.0086 UJ	--	0.0071 U
PHENANTHRENE	0.045	0.19	--	0.0086	0.048	0.51 J	--	0.0067
PYRENE	0.056	0.22	--	0.006	0.043	0.93 J	--	0.0073
TOTAL PAHS	0.063	0.22	--	0.0068	0.041	0.69	--	0.0058
PESTICIDES (MG/KG)								
4,4'-DDD	0.0039 U	0.0015 J	--	0.0041 U	0.0039 U	0.00042 R	--	0.0035 U
4,4'-DDE	0.0039 U	0.0052	--	0.0041 U	0.0039 U	0.00045 R	--	0.0035 U
4,4'-DDT	0.0039 U	0.0066	--	0.0041 U	0.00044 J	0.00089 J	--	0.0035 U
ALDRIN	0.002 U	0.0021 U	--	0.0021 U	0.002 U	0.0022 U	--	0.0018 U
ALPHA-BHC	0.002 U	0.0021 U	--	0.0021 U	0.002 U	0.0022 U	--	0.0018 U
ALPHA-CHLORDANE	0.002 U	0.002 J	--	0.00037 J	0.00035 J	0.0012 J	--	0.0018 U
BETA-BHC	0.002 U	0.0021 U	--	0.0021 U	0.00042 J	0.0022 U	--	0.0018 U
DELTA-BHC	0.002 U	0.0021 U	--	0.0021 U	0.002 U	0.0022 U	--	0.0018 U
DIELDRIN	0.00031 R	0.004 U	--	0.0041 U	0.0039 U	0.0042 U	--	0.0035 U
ENDOSULFAN I	0.002 U	0.00074 R	--	0.0021 U	0.002 U	0.0003 R	--	0.0018 U
ENDOSULFAN II	0.0039 U	0.004 U	--	0.0041 U	0.0039 U	0.0042 U	--	0.0035 U
ENDOSULFAN SULFATE	0.0039 U	0.004 U	--	0.0041 U	0.0039 U	0.0042 U	--	0.0035 U
ENDRIN	0.00034 J	0.0014 J	--	0.0041 U	0.0039 U	0.00094 J	--	0.0035 U
ENDRIN ALDEHYDE	0.00036 J	0.00065 J	--	0.0041 U	0.0039 U	0.0015 J	--	0.0035 U
ENDRIN KETONE	0.0039 U	0.004 U	--	0.0041 U	0.0039 U	0.0042 U	--	0.0035 U
GAMMA-BHC (LINDANE)	0.002 U	0.0021 U	--	0.0021 U	0.002 U	0.0011 J	--	0.0018 U
GAMMA-CHLORDANE	0.002 U	0.0029	--	0.00041 J	0.002 U	0.00055 J	--	0.0018 U
HEPTACHLOR	0.002 U	0.0021 U	--	0.0021 U	0.002 U	0.00027 R	--	0.0018 U
HEPTACHLOR EPOXIDE	0.002 U	0.0011 J	--	0.0021 U	0.002 U	0.0022 U	--	0.0018 U
METHOXYCHLOR	0.011 J	0.008 J	--	0.00061 J	0.0022 J	0.025	--	0.00047 J
TOXAPHENE	0.2 U	0.21 U	--	0.21 U	0.2 U	0.22 U	--	0.18 U
PCBS (MG/KG)								
AROCLOR-1016	0.039 U	--	--	--	--	0.042 U	--	--
AROCLOR-1221	0.039 U	--	--	--	--	0.042 U	--	--
AROCLOR-1232	0.039 U	--	--	--	--	0.042 U	--	--
AROCLOR-1242	0.039 U	--	--	--	--	0.01 J	--	--
AROCLOR-1248	0.039 U	--	--	--	--	0.042 U	--	--
AROCLOR-1254	0.039 U	--	--	--	--	0.01 J	--	--
AROCLOR-1260	0.039 U	--	--	--	--	0.042 U	--	--
AROCLOR-1262	0.039 U	--	--	--	--	0.042 U	--	--
AROCLOR-1268	0.039 U	--	--	--	--	0.042 U	--	--
TOTAL AROCLOR	0 U	--	--	--	--	0.02	--	--
TOTAL AROCLOR HALFND	0.1755	--	--	--	--	0.167	--	--

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-353	SB-353	SB-353	SB-353	SB-354	SB-354	SB-354	SB-354
SAMPLE ID	SB353-20191113-0006	SB353-20191113-0624	SB353-20191113-2448	SB353-20191113-6084	SB354-20191113-0006	SB354-20191113-0624	SB354-20191113-4872	SB354-20191113-7296
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191113
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	0	0.5	2	5	0	0.5	4	6
BOTTOM DEPTH	0.5	2	4	7	0.5	2	6	8
MOBILE LAB PESTICIDES/PCBS (MG/KG)								
AROCLOR-1016	--	0.305 U	0.309 U	--	--	0.298 U	0.298 U	--
AROCLOR-1221	--	0.61 U	0.617 U	--	--	0.595 U	0.595 U	--
AROCLOR-1232	--	0.305 U	0.309 U	--	--	0.298 U	0.298 U	--
AROCLOR-1242	--	0.305 U	0.309 U	--	--	0.298 U	0.298 U	--
AROCLOR-1248	--	0.305 U	0.309 U	--	--	0.298 U	0.298 U	--
AROCLOR-1254	--	0.305 U	0.309 U	--	--	0.298 U	0.298 U	--
AROCLOR-1260	--	0.305 U	0.309 U	--	--	0.298 U	0.298 U	--
AROCLOR-1262	--	0.305 U	0.309 U	--	--	0.298 U	0.298 U	--
AROCLOR-1268	--	0.305 U	0.309 U	--	--	0.298 U	0.298 U	--
TOTAL AROCLOR	--	0 U	0 U	--	--	0 U	0 U	--
TOTAL AROCLOR HALFND	--	1.525	1.5445	--	--	1.4895	1.4895	--
PCB CONGENERS (MG/KG)								
DICHLOROBIPHENYLS	0.000054 J	0.000064 J	--	0 UJ	0.000047 J	0.0046 J	--	0.000012 J
HEPTACHLOROBIPHENYLS	0.00037 J	0.00048 J	--	0.000011 J	0.00029 J	0.002 J	--	0.0000058 J
HEXACHLOROBIPHENYLS	0.00049 J	0.00059 J	--	0.00001 J	0.00036 J	0.0025 J	--	0.0000075 J
MONOCHLOROBIPHENYLS	0.000015 J	0.000032 J	--	0 UJ	0.0000082 J	0.0019 J	--	0.0000057 J
NONACHLOROBIPHENYLS	0.00023 J	0.00063 J	--	0.000024 J	0.0002 J	0.00098 J	--	0.0000099 J
OCTACHLOROBIPHENYLS	0.00019 J	0.00039 J	--	0.000011 J	0.00012 J	0.00079 J	--	0.0000054 J
PCB-1	0.0000038	0.0000064	--	0.000002 U	0.0000023	0.00058	--	0.0000022
PCB-10	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000032	--	0.000002 U
PCB-100	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000022	--	0.000002 U
PCB-101/90	0.000039	0.000073	--	0.0000021 J	0.00003	0.00052	--	0.0000026 J
PCB-103	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000027	--	0.000002 U
PCB-104	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-105	0.000037	0.000062	--	0.0000013 J	0.000022	0.00033	--	0.0000015 J
PCB-108/107	0.0000061	0.00001	--	0.000004 U	0.0000043	0.000054	--	0.000004 U
PCB-109	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-11	0.000025	0.000016	--	0.000002 U	0.000023	0.00014	--	0.0000017 J
PCB-110	0.000087	0.00016	--	0.0000031	0.00005	0.00077	--	0.0000038
PCB-111/115	0.000004 U	0.0000027 J	--	0.000004 U	0.0000012 J	0.00002	--	0.000004 U
PCB-113	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-114	0.000002	0.000003	--	0.00000083 U	0.0000017 J	0.000022	--	0.00000083 U
PCB-118/106	0.000078	0.00014	--	0.0000028 J	0.000051	0.00064	--	0.0000027 J
PCB-119	0.0000015 J	0.0000038	--	0.000002 U	0.000002 U	0.000015	--	0.000002 U
PCB-12	0.0000018 J	0.0000038	--	0.000002 U	0.0000013 J	0.000096	--	0.000002 U
PCB-120	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-121	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-122	0.0000014 J	0.0000033	--	0.000002 U	0.000002 U	0.000011	--	0.000002 U
PCB-123	0.0000014 J	0.0000037	--	0.00000055 U	0.0000013 J	0.00002	--	0.00000062 U
PCB-124	0.0000037	0.0000072	--	0.000002 U	0.000003	0.000031	--	0.000002 U
PCB-126	0.0000014 J	0.0000021	--	0.00000081 U	0.0000011 U	0.0000087	--	0.00000089 U
PCB-127	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-128/162	0.000022	0.000029	--	0.000004 U	0.000015	0.0001	--	0.000004 U
PCB-129	0.0000062	0.0000078	--	0.000002 U	0.0000037	0.000027	--	0.000002 U
PCB-13	0.0000017 J	0.0000031	--	0.000002 U	0.0000015 J	0.00034	--	0.000002 U
PCB-130	0.00001	0.000013	--	0.000002 U	0.000007	0.000042	--	0.000002 U
PCB-131/133	0.0000034 J	0.0000039 J	--	0.000004 U	0.0000026 J	0.000016	--	0.000004 U
PCB-132/161	0.000023	0.000026	--	0.000001 J	0.000013	0.00015	--	0.000004 U
PCB-134/143	0.0000039 J	0.000005	--	0.000004 U	0.000003 J	0.000026	--	0.000004 U
PCB-135	0.000012	0.000012	--	0.000002 U	0.0000075	0.000067	--	0.000002 U
PCB-136	0.0000073	0.0000094	--	0.000002 U	0.0000052	0.000062	--	0.000002 U
PCB-137	0.0000062	0.0000079	--	0.000002 U	0.0000029	0.000031	--	0.000002 U
PCB-138/163/164	0.00012	0.00015	--	0.0000032 J	0.000096	0.00062	--	0.0000031 J
PCB-139/149	0.00007	0.000076	--	0.0000028 J	0.000051	0.0004	--	0.0000017 J
PCB-14	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-140	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000031	--	0.000002 U
PCB-141	0.000016	0.000022	--	0.000002 U	0.000016	0.00011	--	0.000002 U
PCB-142	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-144	0.0000027	0.0000032	--	0.000002 U	0.0000027	0.000016	--	0.000002 U
PCB-145	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-146/165	0.000016	0.00002	--	0.000004 U	0.000012	0.000078	--	0.000004 U
PCB-147	0.0000018 J	0.0000023	--	0.000002 U	0.000002 U	0.000011	--	0.000002 U
PCB-148	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-15	0.000013	0.000021	--	0.000002 U	0.000011	0.0017	--	0.0000063
PCB-150	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-151	0.000015	0.000018	--	0.000002 U	0.000013	0.000097	--	0.000002 U
PCB-152	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-153	0.00011	0.00013	--	0.0000034	0.000081	0.00048	--	0.0000027
PCB-154	0.0000014 J	0.0000016 J	--	0.000002 U	0.000002 U	0.0000051	--	0.000002 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-353	SB-353	SB-353	SB-353	SB-354	SB-354	SB-354	SB-354
SAMPLE ID	SB353-20191113-0006	SB353-20191113-0624	SB353-20191113-2448	SB353-20191113-6084	SB354-20191113-0006	SB354-20191113-0624	SB354-20191113-4872	SB354-20191113-7296
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191113
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	0	0.5	2	5	0	0.5	4	6
BOTTOM DEPTH	0.5	2	4	7	0.5	2	6	8
PCB-155	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-156	0.000016	0.000019	--	0.00000064 U	0.00001	0.000069	--	0.00000064 U
PCB-157	0.0000042	0.0000049	--	0.00000063 U	0.0000025	0.000016	--	0.00000063 U
PCB-158/160	0.000017	0.000019	--	0.000004 U	0.000011	0.000075	--	0.000004 U
PCB-159	0.0000015 J	0.0000021	--	0.000002 U	0.000002 U	0.0000063	--	0.000002 U
PCB-16	0.0000013 J	0.000002 U	--	0.000002 U	0.0000017 J	0.00025	--	0.000002 U
PCB-166	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000025	--	0.000002 U
PCB-167	0.0000072	0.0000089	--	0.00000065 U	0.000005	0.000033	--	0.00000064 U
PCB-168	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-169	0.00000082 U	0.0000014 U	--	0.00000066 U	0.00000097 U	0.0000012 U	--	0.00000064 U
PCB-17	0.0000023	0.0000023	--	0.000002 U	0.0000021	0.00033	--	0.000002 U
PCB-170	0.000044	0.000046	--	0.000002 U	0.000032	0.00021	--	0.000002 U
PCB-171	0.000012	0.000013	--	0.000002 U	0.0000087	0.000061	--	0.000002 U
PCB-172	0.0000092	0.000013	--	0.000002 U	0.0000072	0.000047	--	0.000002 U
PCB-173	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000046	--	0.000002 U
PCB-174	0.000042	0.00005	--	0.0000018 J	0.000033	0.00025	--	0.000002 U
PCB-175	0.0000026	0.000002 U	--	0.000002 U	0.0000013 J	0.0000072	--	0.000002 U
PCB-176	0.0000037	0.0000055	--	0.000002 U	0.0000029	0.000022	--	0.000002 U
PCB-177	0.000029	0.000032	--	0.000002 U	0.000019	0.00013	--	0.000002 U
PCB-178	0.000011	0.000015	--	0.000002 U	0.0000079	0.00005	--	0.000002 U
PCB-179	0.000015	0.000022	--	0.000002 U	0.000011	0.000089	--	0.000002 U
PCB-18	0.0000048	0.0000076	--	0.000002 U	0.000005	0.00068	--	0.0000021
PCB-180	0.00009	0.00013	--	0.0000037	0.000083	0.0006	--	0.0000023
PCB-181	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-182/187	0.000062	0.000089	--	0.0000035 J	0.000047	0.0003	--	0.0000017 J
PCB-183	0.000023	0.000035	--	0.0000024	0.000018	0.00013	--	0.0000018 J
PCB-184	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-185	0.0000051	0.0000074	--	0.000002 U	0.000004	0.000027	--	0.000002 U
PCB-186	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-188	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-189	0.0000022	0.0000033	--	0.00000069 U	0.0000019 J	0.000011	--	0.00000068 U
PCB-19	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000037	--	0.000002 U
PCB-190	0.000012	0.000011	--	0.000002 U	0.0000078	0.000046	--	0.000002 U
PCB-191	0.0000023	0.0000029	--	0.000002 U	0.0000018 J	0.000011	--	0.000002 U
PCB-192	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-193	0.0000073	0.0000082	--	0.000002 U	0.0000047	0.000029	--	0.000002 U
PCB-194	0.000032	0.00006	--	0.000002	0.00002	0.00013	--	0.000001 J
PCB-195	0.0000099	0.000015	--	0.000002 U	0.0000068	0.000047	--	0.000002 U
PCB-196/203	0.000052	0.00012	--	0.0000042	0.000031	0.00023	--	0.0000022 J
PCB-197	0.0000015 J	0.0000037	--	0.000002 U	0.0000011 J	0.0000062	--	0.000002 U
PCB-198	0.0000028	0.0000051	--	0.000002 U	0.0000018 J	0.000011	--	0.000002 U
PCB-199	0.000062	0.00013	--	0.000005	0.000041	0.00025	--	0.0000022
PCB-2	0.0000031	0.0000099	--	0.000002 U	0.0000017 J	0.00018	--	0.000002 U
PCB-20/21/33	0.0000061	0.000012	--	0.000006 U	0.0000075	0.00075	--	0.000003 J
PCB-200	0.0000045	0.0000092	--	0.000002 U	0.0000025	0.00002	--	0.000002 U
PCB-201	0.000006	0.000011	--	0.000002 U	0.0000033	0.000024	--	0.000002 U
PCB-202	0.000017	0.000033	--	0.000002 U	0.000011	0.000062	--	0.000002 U
PCB-204	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-205	0.0000019 J	0.0000033	--	0.000002 U	0.0000016 J	0.0000084	--	0.000002 U
PCB-206	0.00015	0.00042	--	0.000016	0.00013	0.00065	--	0.0000066
PCB-207	0.000012	0.000032	--	0.0000014 J	0.0000083	0.000048	--	0.000002 U
PCB-208	0.000065	0.00018	--	0.0000069	0.000057	0.00028	--	0.0000033
PCB-209	0.00019	0.00055	--	0.000018	0.00016	0.00085	--	0.0000099
PCB-22	0.0000046	0.0000092	--	0.000002 U	0.0000059	0.00043	--	0.0000018 J
PCB-23	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000018 J	--	0.000002 U
PCB-24	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000041	--	0.000002 U
PCB-25	0.00000089 J	0.000002 U	--	0.000002 U	0.0000013 J	0.00011	--	0.000002 U
PCB-26	0.0000017 J	0.0000038	--	0.000002 U	0.000002	0.0002	--	0.00000099 J
PCB-27	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000039	--	0.000002 U
PCB-28	0.000011	0.000022	--	0.000002 U	0.000015	0.0011	--	0.000004
PCB-29	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000093	--	0.000002 U
PCB-3	0.0000079	0.000016	--	0.000002 U	0.0000042	0.0011	--	0.0000035
PCB-30	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-31	0.0000099	0.000022	--	0.000002 U	0.000013	0.0012	--	0.0000039
PCB-32	0.000002	0.0000029	--	0.000002 U	0.0000022	0.0003	--	0.000002 U
PCB-34	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000049	--	0.000002 U
PCB-35	0.0000013 J	0.000002 U	--	0.000002 U	0.0000013 J	0.000041	--	0.000002 U
PCB-36	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-37	0.0000098	0.000018	--	0.000002 U	0.0000087	0.00073	--	0.0000029
PCB-38	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-353	SB-353	SB-353	SB-353	SB-354	SB-354	SB-354	SB-354
SAMPLE ID	SB353-20191113-0006	SB353-20191113-0624	SB353-20191113-2448	SB353-20191113-6084	SB354-20191113-0006	SB354-20191113-0624	SB354-20191113-4872	SB354-20191113-7296
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191113
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	0	0.5	2	5	0	0.5	4	6
BOTTOM DEPTH	0.5	2	4	7	0.5	2	6	8
PCB-39	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000022	--	0.000002 U
PCB-4	0.0000021	0.0000038	--	0.000002 U	0.0000018 J	0.00032	--	0.000002 U
PCB-40	0.0000018 J	0.000002 U	--	0.000002 U	0.0000013 J	0.00012	--	0.000002 U
PCB-41/64/71/72	0.000012	0.000033	--	0.000008 U	0.000014	0.001	--	0.0000039 J
PCB-42/59	0.0000036 J	0.0000084	--	0.000004 U	0.000004	0.00037	--	0.0000016 J
PCB-43/49	0.0000073	0.000019	--	0.000004 U	0.0000092	0.00072	--	0.0000028 J
PCB-44	0.000008	0.000018	--	0.000002 U	0.0000079	0.00074	--	0.0000026
PCB-45	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0001	--	0.000002 U
PCB-46	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.00003	--	0.000002 U
PCB-47	0.000005	0.000009	--	0.000002 U	0.0000047	0.00037	--	0.0000014 J
PCB-48/75	0.0000016 J	0.0000035 J	--	0.000004 U	0.000002 J	0.00014	--	0.000004 U
PCB-5	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-50	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000021	--	0.000002 U
PCB-51	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000024	--	0.000002 U
PCB-52/69	0.000011	0.000025	--	0.000004 U	0.000012	0.00085	--	0.0000033 J
PCB-53	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000078	--	0.000002 U
PCB-54	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-55	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000029	--	0.000002 U
PCB-56/60	0.000014	0.000037	--	0.000004 U	0.000011	0.00096	--	0.0000036 J
PCB-57	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000072	--	0.000002 U
PCB-58	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000038	--	0.000002 U
PCB-6	0.0000018 J	0.0000038	--	0.000002 U	0.0000017 J	0.00033	--	0.000002 U
PCB-61/70	0.000028	0.0001	--	0.000002 J	0.000026	0.0017	--	0.000006
PCB-62	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-63	0.000001 J	0.0000039	--	0.000002 U	0.00000098 J	0.000055	--	0.000002 U
PCB-65	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-66/76	0.000022	0.000062	--	0.0000013 J	0.000016	0.0014	--	0.0000051
PCB-67	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000054	--	0.000002 U
PCB-68	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000074	--	0.000002 U
PCB-7	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.00014	--	0.000002 U
PCB-73	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-74	0.0000076	0.000028	--	0.000002 U	0.0000072	0.00067	--	0.0000023
PCB-77	0.000006	0.000014	--	0.00000066 U	0.0000036	0.00021	--	0.00000094 U
PCB-78	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-79	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000054	--	0.000002 U
PCB-8	0.0000081	0.000012	--	0.000002 U	0.0000067	0.0014	--	0.0000044
PCB-80	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-81	0.00000094 U	0.0000015 U	--	0.00000056 U	0.00000082 U	0.000016	--	0.00000084 U
PCB-82	0.0000058	0.00001	--	0.000002 U	0.0000034	0.0001	--	0.000002 U
PCB-83/112	0.0000024 J	0.0000045	--	0.000004 U	0.000004 U	0.000032	--	0.000004 U
PCB-84/92	0.000014	0.000022	--	0.000004 U	0.0000088	0.00019	--	0.000004 U
PCB-85/116	0.000013	0.000027	--	0.000004 U	0.0000078	0.00014	--	0.000004 U
PCB-86	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-87/117/125	0.000018	0.000041	--	0.0000012 J	0.00001	0.00025	--	0.0000012 J
PCB-88/91	0.0000058	0.000011	--	0.000004 U	0.0000041	0.000086	--	0.000004 U
PCB-89	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000083	--	0.000002 U
PCB-9	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000076	--	0.000002 U
PCB-93	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-94	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000036	--	0.000002 U
PCB-95	0.000029	0.000049	--	0.000002 U	0.000014	0.00033	--	0.0000021
PCB-96	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000034	--	0.000002 U
PCB-97	0.000012	0.000021	--	0.000002 U	0.000009	0.00022	--	0.000002 U
PCB-98/102	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U
PCB-99	0.000021	0.000042	--	0.00000098 J	0.000017	0.00027	--	0.0000013 J
PENTACHLOROBIPHENYLS	0.00038 J	0.0007 J	--	0.000011 J	0.00024 J	0.0041 J	--	0.000015 J
TEQ DIOXIN-LIKE PCBs (BIRD)	4.4603E-07	9.1905E-07	--	1.3E-10	1.837E-07	1.3014E-05	--	1.5E-10
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	4.9344E-07	9.9475E-07	--	8.5572E-08	2.8019E-07	1.3015E-05	--	1.1058E-07
TEQ DIOXIN-LIKE PCBs (FISH)	7.95E-09	1.2422E-08	--	6E-12	5.8E-10	7.5005E-08	--	7E-12
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	8.205E-09	1.2832E-08	--	2.227E-09	3.559E-09	7.5035E-08	--	2.512E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.427E-07	2.1454E-07	--	3.9E-11	1.692E-09	9.1083E-07	--	4.5E-11
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	1.5514E-07	2.3577E-07	--	5.0613E-08	7.1365E-08	9.2883E-07	--	5.4376E-08
TETRACHLOROBIPHENYLS	0.00013 J	0.00036 J	--	0.0000033 J	0.00012 J	0.0097 J	--	0.000033 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0000774	0.0001209	--	0.0000013	0.000048	0.0007357	--	0.0000015
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00202679	0.0037804	--	0.00008878	0.00155808	0.0328807	--	0.00012159
TOTAL PCB CONGENERS ZEROND	0.00210419	0.0039013	--	0.00009008	0.00160608	0.0336164	--	0.00012309
TOTAL PCB CONGENERS-NOAA	0.0010168	0.0019806	--	0.0000553	0.0008164	0.011517	--	0.0000546
TOTAL PCB CONGENERS-NOAA HALFND	0.00217007	0.00397075	--	0.00025742	0.00167753	0.033651	--	0.00026477
TOTAL PCB CONGENERS-NOAA X2	0.0020336	0.0039612	--	0.0001106	0.0016328	0.023034	--	0.0001092
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0020336	0.0039612	--	0.0001306	0.0016328	0.023034	--	0.0001172
TRICHLOROBIPHENYLS	0.000056 J	0.0001 J	--	0 UJ	0.000066 J	0.0063 J	--	0.000019 J

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-353	SB-353	SB-353	SB-353	SB-354	SB-354	SB-354	SB-354
SAMPLE ID	SB353-20191113-0006	SB353-20191113-0624	SB353-20191113-2448	SB353-20191113-6084	SB354-20191113-0006	SB354-20191113-0624	SB354-20191113-4872	SB354-20191113-7296
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191113
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	0	0.5	2	5	0	0.5	4	6
BOTTOM DEPTH	0.5	2	4	7	0.5	2	6	8
DIOXINS/FURANS (NG/KG)								
1,2,3,4,6,7,8,9-OCDD	5000 J	240	--	560	3100	14	--	5100 J
1,2,3,4,6,7,8,9-OCDF	0.4 U	0.35 U	--	12	1.4 J	0.31 U	--	1.4 Z
1,2,3,4,6,7,8-HPCDD	32	11	--	15	27	0.48 Z	--	35
1,2,3,4,6,7,8-HPCDF	1 J	0.23 JZ	--	12	4.4 J	0.19 J	--	0.96 J
1,2,3,4,7,8,9-HPCDF	0.18 U	0.25 U	--	0.27 U	0.19 J	0.18 U	--	0.88 J
1,2,3,4,7,8-HXCDD	0.65 Z	0.22 U	--	0.31 J	0.75 J	0.14 U	--	1.5 J
1,2,3,4,7,8-HXCDF	0.42 J	0.13 U	--	0.59 JZ	1.4 J	0.13 U	--	0.76 J
1,2,3,6,7,8-HXCDD	0.69 Z	0.2 U	--	0.71 J	2.1 J	0.14 U	--	0.88 J
1,2,3,6,7,8-HXCDF	0.23 J	0.12 U	--	0.38 JZ	0.81 J	0.093 U	--	0.78 Z
1,2,3,7,8,9-HXCDD	0.42 J	0.3 JZ	--	0.55 JZ	1.2 J	0.15 U	--	0.94 J
1,2,3,7,8,9-HXCDF	0.21 U	0.21 U	--	0.21 U	0.21 U	0.21 U	--	0.81 J
1,2,3,7,8-PECDD	0.24 Z	0.3 U	--	0.29 U	0.72 Z	0.18 U	--	0.75 J
1,2,3,7,8-PECDF	0.38 Z	0.21 U	--	0.51 JZ	1.3 J	0.17 U	--	0.71 J
2,3,4,6,7,8-HXCDF	0.19 Z	0.12 U	--	0.4 J	0.72 Z	0.091 U	--	0.76 Z
2,3,4,7,8-PECDF	0.29 Z	0.2 U	--	0.37 J	1.1 J	0.16 U	--	0.63 Z
2,3,7,8-TCDD	0.14 U	0.44 U	--	0.35 U	0.14 U	0.14 U	--	0.14 U
2,3,7,8-TCDF	0.23 U	0.39 U	--	0.38 U	1.6	0.13 U	--	0.096 U
TEQ DIOXINS (BIRD)	1.2754	0.0673	--	0.8278	4.40454	0.00378	--	2.50334
TEQ DIOXINS (BIRD) HALFND	1.47182	0.7795675	--	1.34965	4.48504	0.3560955	--	2.62134
TEQ DIOXINS (FISH)	1.3661	0.0403	--	0.7073	2.49904	0.00378	--	2.74324
TEQ DIOXINS (FISH) HALFND	1.45327	0.5615675	--	1.04865	2.57954	0.2748455	--	2.81564
TEQ DIOXINS (HUMANS/MAMMALS)	2.4284	0.2143	--	0.8619	3.19332	0.0109	--	3.50212
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	2.52136	0.6882525	--	1.21275	3.27382	0.2525965	--	3.57692
TOTAL HPCDD	55 J	20 J	--	26 J	44 J	0.32 J	--	59 J
TOTAL HPCDF	1 J	0 UJ	--	23 J	4.6 J	0.19 J	--	1.8 J
TOTAL HXCDD	16 J	0 UJ	--	3.5 J	57 J	0 UJ	--	8.7 J
TOTAL HXCDF	0.91 J	0 UJ	--	4.8 J	5.9 J	0 UJ	--	1.6 J
TOTAL PECDD	3.2 J	0 UJ	--	1.7 J	22 J	0 UJ	--	0.75 J
TOTAL PECDF	0 UJ	0 UJ	--	0.37 J	5.3 J	0 UJ	--	0.71 J
TOTAL TCDD	0.31 J	0.44 J	--	1.2 J	29 J	0.16 J	--	0 UJ
TOTAL TCDF	0.4 J	0 UJ	--	0.55 J	8.1 J	0.12 J	--	0 UJ
METALS (MG/KG)								
ALUMINUM	5950	6310	--	9990	6730	11900	--	8560
ANTIMONY	0.3 J	0.88 J	--	1.3 U	0.35 J	0.64 J	--	1.1 U
ARSENIC	5.2	10.7	--	4.4	8.8	16.8	--	2.3
BARIUM	46.3	91.5	--	44.5	82.4	151	--	38.2
BERYLLIUM	0.38 J	0.52 J	--	0.66	0.64	1	--	0.76
CADMIUM	0.25 J	0.25 J	--	0.65 U	0.37 J	0.54 J	--	0.57 U
CALCIUM	87700	2240	--	897	103000	11500	--	211 J
CHROMIUM	8.9	10.1	--	10.7	16.6	21.7	--	12.3
COBALT	5.9	8.2	--	4.1	10.5	13.6	--	9.3
COPPER	13.3	35.5	--	9.8	17	38.3	--	12.8
CYANIDE	0.56 R	0.59 R	--	0.65 R	0.55 R	0.57 R	--	0.57 R
IRON	11600	17300	--	21600	15300	18800	--	17600
LEAD	16.7	54.1	--	14	21.1	62.8	--	12
MAGNESIUM	8190	2070	--	878	8350	2380	--	1540
MANGANESE	362	332	--	151	629	651	--	449
MERCURY	0.11 UJ	0.12 UJ	--	0.13 UJ	0.12 UJ	0.12 UJ	--	0.11 UJ
NICKEL	13.5	17.2	--	7.3	23.2	28.5	--	14.7
POTASSIUM	1430	1470	--	1330	1660	2980	--	1560
SELENIUM	0.57 J	0.86 J	--	0.49 J	2.9 U	3 U	--	2.8 U
SILVER	0.54 U	0.12 J	--	0.65 U	0.58 U	0.061 J	--	0.57 U
SODIUM	107 J	81.6 J	--	51.6 J	573 U	574 U	--	577 U
THALLIUM	0.54 U	0.58 U	--	0.65 U	0.098 J	0.19 J	--	0.035 J
VANADIUM	8	7.9	--	13.9	17.1	16.2	--	15.7
ZINC	93.4	292	--	44.2	107	175	--	51.8
MISCELLANEOUS (%)								
TOTAL SOLIDS	--	83	--	--	88	--	--	--
MISCELLANEOUS (MG/KG)								
TOTAL ORGANIC CARBON	--	163000	--	--	58600	--	--	--
MOBILE LAB MISCELLANEOUS (%)								
PERCENT SOLIDS	--	82	81	--	--	84	84	--

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-355	SB-355	SB-355	SB-355	SB-356	SB-356	SB-356	SB-357	SB-357
SAMPLE ID	SB355-20191113-0006	SB355-20191113-0624	SB355-20191113-2448	SB355-20191113-6084	SB356-20191113-0006	SB356-20191113-0624	SB356-20191113-2448	SB357-20191112-0006	SB357-20191112-0624
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191112	20191112
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SS	SS
TOP DEPTH	0	0.5	2	5	0	0.5	2	0	0.5
BOTTOM DEPTH	0.5	2	4	7	0.5	2	4	0.5	2
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 UJ	0.0056 UJ	0.0054 UJ	0.0044 U
1,1,2,2-TETRACHLOROETHANE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
1,1,2-TRICHLOROETHANE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 U	0.0056 UJ	0.0054 UJ	0.0044 U
1,1-DICHLOROETHANE	0.0051 U	0.0058 U	--	0.0048 U	0.0045 U	0.0058 U	0.0056 U	0.0054 U	0.0044 U
1,1-DICHLOROETHENE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 U	0.0058 U	0.0056 U	0.0054 U	0.0044 U
1,2,3-TRICHLOROBENZENE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 R	0.0056 UJ	0.0054 UJ	0.0044 UJ
1,2,4-TRICHLOROBENZENE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 R	0.0056 UJ	0.0054 UJ	0.0044 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.0051 UJ	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 R	0.0056 U	0.0054 U	0.0044 UJ
1,2-DIBROMOETHANE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 UJ	0.0056 UJ	0.0054 UJ	0.0044 U
1,2-DICHLOROBENZENE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 R	0.0056 UJ	0.0054 UJ	0.0044 UJ
1,2-DICHLOROETHANE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 U	0.0056 UJ	0.0054 UJ	0.0044 U
1,2-DICHLOROPROPANE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
1,3-DICHLOROBENZENE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 R	0.0056 UJ	0.0054 UJ	0.0044 UJ
1,4-DICHLOROBENZENE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 R	0.0056 UJ	0.0054 UJ	0.0044 UJ
2-BUTANONE	0.01 U	0.012 U	--	0.0096 U	0.0091 U	0.012 U	0.0048 J	0.011 U	0.0089 U
2-HEXANONE	0.01 U	0.012 UJ	--	0.0096 U	0.0091 U	0.012 UJ	0.011 U	0.011 U	0.0089 U
4-METHYL-2-PENTANONE	0.01 U	0.012 UJ	--	0.0096 U	0.0091 U	0.012 UJ	0.011 U	0.011 U	0.0089 U
ACETONE	0.01 U	0.015	--	0.013	0.0091 U	0.02	0.017	0.011 U	0.0089 U
BENZENE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
BROMOCHLOROMETHANE	0.0051 U	0.0058 U	--	0.0048 U	0.0045 U	0.0058 U	0.0056 U	0.0054 U	0.0044 U
BROMODICHLOROMETHANE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
BROMOFORM	0.0051 UJ	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 R	0.0056 U	0.0054 U	0.0044 UJ
BROMOMETHANE	0.0051 U	0.0058 U	--	0.0048 U	0.0045 U	0.0058 U	0.0056 U	0.0054 U	0.0044 U
CARBON DISULFIDE	0.0051 U	0.0058 U	--	0.0048 U	0.0045 U	0.0058 U	0.0056 U	0.0054 U	0.0044 U
CARBON TETRACHLORIDE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 UJ	0.0056 UJ	0.0054 UJ	0.0044 U
CHLOROBENZENE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 UJ	0.0056 UJ	0.0054 UJ	0.0044 U
CHLORODIBROMOMETHANE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
CHLOROETHANE	0.0051 U	0.0058 U	--	0.0048 U	0.0045 U	0.0058 U	0.0056 U	0.0054 U	0.0044 U
CHLOROFORM	0.0051 U	0.0058 U	--	0.0048 U	0.0045 U	0.0058 U	0.0056 U	0.0054 U	0.0044 U
CHLOROMETHANE	0.0051 U	0.0058 U	--	0.0048 U	0.0045 U	0.0058 U	0.0056 U	0.0054 U	0.0044 U
CIS-1,2-DICHLOROETHENE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 U	0.0058 U	0.0056 U	0.0054 U	0.0044 U
CIS-1,3-DICHLOROPROPENE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
CYCLOHEXANE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
DICHLORODIFLUOROMETHANE	0.0051 U	0.0058 U	--	0.0048 U	0.0045 U	0.0058 U	0.0056 U	0.0054 U	0.0044 U
ETHYLBENZENE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
ISOPROPYLBENZENE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
M+P-XYLENES	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
METHYL ACETATE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 U	0.0056 UJ	0.0054 UJ	0.0044 U
METHYL CYCLOHEXANE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0018 J	0.0058 UJ	0.0056 U	0.0054 U	0.0033 J
METHYL TERT-BUTYL ETHER	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 U	0.0056 UJ	0.0054 UJ	0.0044 U
METHYLENE CHLORIDE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 U	0.0056 UJ	0.0054 UJ	0.0044 U
O-XYLENE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
STYRENE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
TETRACHLOROETHENE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
TOLUENE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
TRANS-1,2-DICHLOROETHENE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 U	0.0058 U	0.0056 U	0.0054 U	0.0044 U
TRANS-1,3-DICHLOROPROPENE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
TRICHLOROETHENE	0.0051 U	0.0058 UJ	--	0.0048 U	0.0045 U	0.0058 UJ	0.0056 U	0.0054 U	0.0044 U
TRICHLOROFLUOROMETHANE	0.0051 UJ	0.0058 UJ	--	0.0048 UJ	0.0045 UJ	0.0058 U	0.0056 UJ	0.0054 UJ	0.0044 U
VINYL CHLORIDE	0.0051 U	0.0058 U	--	0.0048 U	0.0045 U	0.0058 U	0.0056 U	0.0054 U	0.0044 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-355	SB-355	SB-355	SB-355	SB-356	SB-356	SB-356	SB-357	SB-357
SAMPLE ID	SB355-20191113-0006	SB355-20191113-0624	SB355-20191113-2448	SB355-20191113-6084	SB356-20191113-0006	SB356-20191113-0624	SB356-20191113-2448	SB357-20191112-0006	SB357-20191112-0624
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191112	20191112
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SS	SS
TOP DEPTH	0	0.5	2	5	0	0.5	2	0	0.5
BOTTOM DEPTH	0.5	2	4	7	0.5	2	4	0.5	2
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
1,2,4,5-TETRACHLOROBENZENE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
1,4-DIOXANE	0.077 U	0.077 U	--	0.078 U	0.073 U	0.083 U	0.082 U	0.079 U	0.074 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
2,3,4,6-TETRACHLOROPHENOL	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
2,4,5-TRICHLOROPHENOL	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
2,4,6-TRICHLOROPHENOL	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
2,4-DICHLOROPHENOL	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
2,4-DIMETHYLPHENOL	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
2,4-DINITROPHENOL	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
2,4-DINITROTOLUENE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
2,6-DINITROTOLUENE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
2-CHLORONAPHTHALENE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
2-CHLOROPHENOL	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
2-METHYLNAPHTHALENE	0.2 U	0.035 J	--	0.2 U	0.18 U	0.03 J	0.21 U	0.2 U	0.028 J
2-METHYLPHENOL	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
2-NITROANILINE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
2-NITROPHENOL	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
3&4-METHYLPHENOL	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
3,3'-DICHLOROBENZIDINE	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
3-NITROANILINE	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
4,6-DINITRO-2-METHYLPHENOL	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
4-BROMOPHENYL PHENYL ETHER	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
4-CHLORO-3-METHYLPHENOL	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
4-CHLOROANILINE	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
4-CHLOROPHENYL PHENYL ETHER	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
4-NITROANILINE	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
4-NITROPHENOL	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
ACENAPHTHENE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
ACENAPHTHYLENE	0.2 U	0.021 J	--	0.2 U	0.18 U	0.022 J	0.21 U	0.2 U	0.19 U
ACETOPHENONE	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
ANTHRACENE	0.2 U	0.034 J	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
ATRAZINE	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
BAP EQUIVALENT-HALFND	0.14023	0.21229	--	0.2 U	0.18 U	0.18876	0.227292	0.224127	0.213074
BAP EQUIVALENT-POS	0.02923	0.11229	--	0.2 U	0.18 U	0.08376	0.005742	0.003127	0.003124
BENZALDEHYDE	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
BENZO(A)ANTHRACENE	0.02 J	0.1 J	--	0.2 U	0.18 U	0.064 J	0.021 J	0.2 U	0.19 U
BENZO(A)PYRENE	0.023 J	0.084 J	--	0.2 U	0.18 U	0.062 J	0.21 U	0.2 U	0.19 U
BENZO(B)FLUORANTHENE	0.042 J	0.13 J	--	0.2 U	0.18 U	0.11 J	0.036 J	0.031 J	0.031 J
BENZO(G,H,I)PERYLENE	0.2 U	0.048 J	--	0.2 U	0.18 U	0.034 J	0.21 U	0.2 U	0.19 U
BENZO(K)FLUORANTHENE	0.2 U	0.047 J	--	0.2 U	0.18 U	0.034 J	0.21 U	0.2 U	0.19 U
BIS(2-CHLOROETHOXY)METHANE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
BIS(2-CHLOROETHYL)ETHER	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.029 J	0.027 J	--	0.2 U	0.18 U	0.047 J	0.21 U	0.2 U	0.19 U
BUTYL BENZYL PHTHALATE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
CAPROLACTAM	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
CARBAZOLE	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
CHRYSENE	0.03 J	0.12 J	--	0.2 U	0.18 U	0.12 J	0.042 J	0.027 J	0.024 J
DIBENZO(A,H)ANTHRACENE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
DIBENZOFURAN	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
DIETHYL PHTHALATE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
DIMETHYL PHTHALATE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
DI-N-BUTYL PHTHALATE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
DI-N-OCTYL PHTHALATE	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
FLUORANTHENE	0.036 J	0.2 J	--	0.38 U	0.36 U	0.12 J	0.042 J	0.031 J	0.024 J
FLUORENE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
HEXACHLOROBENZENE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
HEXACHLOROBUTADIENE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
HEXACHLOROCYCLOPENTADIENE	0.38 UJ	0.38 UJ	--	0.38 UJ	0.36 UJ	0.41 UJ	0.41 UJ	0.39 U	0.36 U
HEXACHLOROETHANE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
HIGH MOLECULAR WEIGHT PAHS	0.15	0.756	--	0 U	0 U	0.583	0.142	0.088	0.082
INDENO(1,2,3-CD)PYRENE	0.2 U	0.047 J	--	0.2 U	0.18 U	0.039 J	0.21 U	0.2 U	0.19 U
ISOPHORONE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
LOW MOLECULAR WEIGHT PAHS	0.067	0.435	--	0 U	0 U	0.262	0.1	0.08	0.078
NAPHTHALENE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
NITROBENZENE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
N-NITROSO-DI-N-PROPYLAMINE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
N-NITROSODIPHENYLAMINE	0.2 U	0.2 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
PENTACHLOROPHENOL	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-355	SB-355	SB-355	SB-355	SB-356	SB-356	SB-356	SB-357	SB-357
SAMPLE ID	SB355-20191113-0006	SB355-20191113-0624	SB355-20191113-2448	SB355-20191113-6084	SB356-20191113-0006	SB356-20191113-0624	SB356-20191113-2448	SB357-20191112-0006	SB357-20191112-0624
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191112	20191112
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SS	SS
TOP DEPTH	0	0.5	2	5	0	0.5	2	0	0.5
BOTTOM DEPTH	0.5	2	4	7	0.5	2	4	0.5	2
PHENANTHRENE	0.031 J	0.18 J	--	0.2 U	0.18 U	0.12 J	0.058 J	0.049 J	0.054 J
PHENOL	0.38 U	0.38 U	--	0.38 U	0.36 U	0.41 U	0.41 U	0.39 U	0.36 U
PYRENE	0.035 J	0.18 J	--	0.2 U	0.18 U	0.12 J	0.043 J	0.03 J	0.027 J
TOTAL PAHS	0.217	1.191	--	0 U	0 U	0.845	0.242	0.168	0.16
SEMIVOLATILE SELECTIVE ION MONITORING (MG/KG									
1,4-DIOXANE	0.0077 U	0.0076 U	--	0.0079 U	0.0072 U	0.0084 U	0.0081 U	0.0081 U	0.0073 U
2-METHYLNAPHTHALENE	0.017	0.034	--	0.0069	0.005	0.042	0.035	0.027	0.039
ACENAPHTHENE	0.0038 U	0.0079	--	0.0038 U	0.0036 U	0.0021 J	0.0036 J	0.0039 U	0.0036 U
ACENAPHTHYLENE	0.0051	0.022	--	0.0035 J	0.0011 J	0.021	0.0052	0.0039	0.0023 J
ANTHRACENE	0.0052	0.033	--	0.0037 J	0.002 J	0.015	0.014	0.006	0.0067
BAP EQUIVALENT-HALFND	0.028167	0.10703	--	0.01409	0.009824	0.07344	0.024393	0.022774	0.01824
BAP EQUIVALENT-POS	0.026267	0.10513	--	0.01219	0.008024	0.07139	0.022343	0.020824	0.01644
BENZO(A)ANTHRACENE	0.018	0.099	--	0.008	0.0045	0.055	0.023	0.016	0.014
BENZO(A)PYRENE	0.019	0.077	--	0.0089 J+	0.0057	0.052	0.015	0.015	0.011
BENZO(B)FLUORANTHENE	0.042	0.15	--	0.02 J+	0.015	0.11	0.041	0.034	0.033
BENZO(G,H,I)PERYLENE	0.017	0.025	--	0.0046 J+	0.0044	0.021	0.0083	0.0069	0.0074
BENZO(K)FLUORANTHENE	0.013	0.047	--	0.0064 J+	0.0043	0.027	0.01	0.0096	0.0069
CHRYSENE	0.037	0.16	--	0.016	0.011	0.12	0.063	0.038	0.041
DIBENZO(A,H)ANTHRACENE	0.0038 U	0.0038 U	--	0.0038 UJ	0.0036 U	0.0041 U	0.0041 U	0.0039 U	0.0036 U
FLUORANTHENE	0.045 J	0.26	--	0.018 J	0.013 J	0.13	0.074	0.037 J	0.029 J
FLUORENE	0.0044	0.022	--	0.0015 J	0.0016 J	0.011	0.012	0.0055	0.0063
HIGH MOLECULAR WEIGHT PAHS	0.188	0.734	--	0.086	0.0574	0.505	0.2111	0.1524	0.1476
INDENO(1,2,3-CD)PYRENE	0.011	0.026	--	0.0041 J+	0.0032 J	0.025	0.0078	0.0069	0.0063
LOW MOLECULAR WEIGHT PAHS	0.099	0.5649	--	0.0485	0.0325	0.3281	0.2038	0.1154	0.1193
NAPHTHALENE	0.0073	0.02	--	0.0038	0.0028 J	0.019	0.012	0.013	0.019
PENTACHLOROPHENOL	0.0077 UJ	0.0077 UJ	--	0.0078 UJ	0.0073 UJ	0.0083 UJ	0.0082 UJ	0.0079 UJ	0.0074 UJ
PHENANTHRENE	0.032	0.2	--	0.018	0.012	0.13	0.083	0.05	0.056
PYRENE	0.031	0.15	--	0.018	0.0093	0.095	0.043	0.026	0.028
TOTAL PAHS	0.037	0.16	--	0.016	0.011	0.12	0.063	0.038	0.041
PESTICIDES (MG/KG)									
4,4'-DDD	0.0038 U	0.00055 J	--	0.0039 U	0.0035 U	0.0042 U	0.00061 J	0.004 U	0.0036 U
4,4'-DDE	0.0038 U	0.0037 U	--	0.0039 U	0.0035 U	0.0042 U	0.0041 U	0.004 U	0.0036 U
4,4'-DDT	0.0038 U	0.0037 U	--	0.0039 U	0.0035 U	0.00058 J	0.0041 U	0.004 U	0.0036 U
ALDRIN	0.0019 U	0.0019 U	--	0.002 U	0.0018 U	0.0021 U	0.0021 U	0.002 U	0.0019 U
ALPHA-BHC	0.0019 U	0.0019 U	--	0.002 U	0.0018 U	0.0021 U	0.0021 U	0.002 U	0.0019 U
ALPHA-CHLORDANE	0.0019 U	0.00068 J	--	0.002 U	0.0018 U	0.0005 J	0.0021 U	0.002 U	0.0019 U
BETA-BHC	0.00034 J	0.0019 U	--	0.002 U	0.0018 U	0.0021 U	0.0021 U	0.002 U	0.00037 J
DELTA-BHC	0.0019 U	0.0019 U	--	0.002 U	0.0018 U	0.0021 U	0.0021 U	0.002 U	0.0019 U
DIELDRIN	0.0038 U	0.0037 U	--	0.0039 U	0.0035 U	0.0042 U	0.0041 U	0.004 U	0.0036 U
ENDOSULFAN I	0.0019 U	0.00036 J	--	0.002 U	0.0018 U	0.0021 U	0.00049 J	0.002 U	0.0019 U
ENDOSULFAN II	0.0038 U	0.0037 U	--	0.0039 U	0.0035 U	0.0042 U	0.0041 U	0.004 U	0.0036 U
ENDOSULFAN SULFATE	0.0038 U	0.0037 U	--	0.0039 U	0.0035 U	0.0042 U	0.0041 U	0.004 U	0.0036 U
ENDRIN	0.0038 U	0.0037 U	--	0.0039 U	0.0035 U	0.00093 J	0.0041 U	0.004 U	0.0036 U
ENDRIN ALDEHYDE	0.0038 U	0.00062 J	--	0.0039 U	0.0035 U	0.00066 J	0.0004 J	0.004 U	0.0036 U
ENDRIN KETONE	0.0038 U	0.0019 R	--	0.0039 U	0.0035 U	0.0022 R	0.0014 R	0.004 U	0.0036 U
GAMMA-BHC (LINDANE)	0.0019 U	0.0019 U	--	0.002 U	0.0018 U	0.0007 J	0.0004 J	0.002 U	0.0019 U
GAMMA-CHLORDANE	0.0019 U	0.00031 J	--	0.002 U	0.0018 U	0.0021 U	0.0021 U	0.002 U	0.0019 U
HEPTACHLOR	0.0019 U	0.0003 R	--	0.002 U	0.0018 U	0.0021 U	0.0021 U	0.002 U	0.0019 U
HEPTACHLOR EPOXIDE	0.0019 U	0.0002 J	--	0.002 U	0.0018 U	0.0021 U	0.0021 U	0.002 U	0.0019 U
METHOXYCHLOR	0.0018 J	0.0088 J	--	0.0012 J	0.00055 J	0.0088 J	0.0064 J	0.0023 J	0.0021 J
TOXAPHENE	0.19 U	0.19 U	--	0.2 U	0.18 U	0.21 U	0.21 U	0.2 U	0.19 U
PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	0.041 U	--	--
AROCLOR-1221	--	--	--	--	--	--	0.041 U	--	--
AROCLOR-1232	--	--	--	--	--	--	0.041 U	--	--
AROCLOR-1242	--	--	--	--	--	--	0.041 U	--	--
AROCLOR-1248	--	--	--	--	--	--	0.041 U	--	--
AROCLOR-1254	--	--	--	--	--	--	0.041 U	--	--
AROCLOR-1260	--	--	--	--	--	--	0.041 U	--	--
AROCLOR-1262	--	--	--	--	--	--	0.041 U	--	--
AROCLOR-1268	--	--	--	--	--	--	0.041 U	--	--
TOTAL AROCLOR	--	--	--	--	--	--	0 U	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	0.1845	--	--

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-355	SB-355	SB-355	SB-355	SB-356	SB-356	SB-356	SB-357	SB-357
SAMPLE ID	SB355-20191113-0006	SB355-20191113-0624	SB355-20191113-2448	SB355-20191113-6084	SB356-20191113-0006	SB356-20191113-0624	SB356-20191113-2448	SB357-20191112-0006	SB357-20191112-0624
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191112	20191112
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SS	SS
TOP DEPTH	0	0.5	2	5	0	0.5	2	0	0.5
BOTTOM DEPTH	0.5	2	4	7	0.5	2	4	0.5	2
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	0.301 U	0.301 U	--	--	0.309 U	0.309 U	--	0.281 U
AROCLOR-1221	--	0.602 U	0.602 U	--	--	0.617 U	0.617 U	--	0.562 U
AROCLOR-1232	--	0.301 U	0.301 U	--	--	0.309 U	0.309 U	--	0.281 U
AROCLOR-1242	--	0.301 U	0.301 U	--	--	0.309 U	0.309 U	--	0.281 U
AROCLOR-1248	--	0.301 U	0.301 U	--	--	0.309 U	0.309 U	--	0.281 U
AROCLOR-1254	--	0.301 U	0.301 U	--	--	0.309 U	0.309 U	--	0.281 U
AROCLOR-1260	--	0.301 U	0.301 U	--	--	0.309 U	0.309 U	--	0.281 U
AROCLOR-1262	--	0.301 U	0.301 U	--	--	0.309 U	0.309 U	--	0.281 U
AROCLOR-1268	--	0.301 U	0.301 U	--	--	0.309 U	0.309 U	--	0.281 U
TOTAL AROCLOR	--	0 U	0 U	--	--	0 U	0 U	--	0 U
TOTAL AROCLOR HALFND	--	1.505	1.505	--	--	1.5445	1.5445	--	1.405
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	0.000055 J	0.00063 J	--	0.000015 J	0.000016 J	0.00038 J	0.00001 J	0.0001 J	0.000061 J
HEPTACHLOROBIPHENYLS	0.00032 J	0.0012 J	--	0.000024 J	0.00012 J	0.0011 J	0.000017 J	0.00032 J	0.00044 J
HEXACHLOROBIPHENYLS	0.00039 J	0.0015 J	--	0.000029 J	0.00012 J	0.0013 J	0.000015 J	0.00045 J	0.0006 J
MONOCHLOROBIPHENYLS	0.0000071 J	0.0003 J	--	0.0000081 J	0.0000011 J	0.00017 J	0.0000094 J	0.000016 J	0.000014 J
NONACHLOROBIPHENYLS	0.000063 J	0.00049 J	--	0.0000065 J	0.000019 J	0.00034 J	0.00021 J	0.00016 J	0.000032 J
OCTACHLOROBIPHENYLS	0.0001 J	0.00046 J	--	0.0000075 J	0.000039 J	0.00037 J	0.000042 J	0.00018 J	0.000091 J
PCB-1	0.000002	0.000087	--	0.0000026	0.000002 U	0.000046	0.0000029	0.000004	0.0000034
PCB-10	0.000002 U	0.0000029	--	0.000002 U	0.000002 U	0.0000012 J	0.000002 U	0.000002 U	0.000002 U
PCB-100	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-101/90	0.000037	0.0002	--	0.0000041	0.000012	0.00019	0.0000042	0.000073	0.000085
PCB-103	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-104	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-105	0.00002	0.00012	--	0.0000024	0.0000044	0.00011	0.0000022	0.000036	0.000033
PCB-108/107	0.0000037 J	0.00002	--	0.000004 U	0.000004 U	0.000017	0.000004 U	0.0000055	0.0000064
PCB-109	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-11	0.000027	0.000031	--	0.0000019 J	0.0000096	0.000033	0.000002 U	0.000049	0.000012
PCB-110	0.000048	0.0003	--	0.0000055	0.000015	0.00026	0.0000056	0.000082	0.00011
PCB-111/115	0.000004 U	0.0000084	--	0.000004 U	0.000004 U	0.0000077	0.000004 U	0.0000018 J	0.0000017 J
PCB-113	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-114	0.00000091 U	0.000009	--	0.00000083 U	0.00000085 U	0.0000077	0.00000096 U	0.0000021	0.0000023
PCB-118/106	0.000044	0.00026	--	0.0000052	0.000012	0.00023	0.0000042	0.000076	0.000068
PCB-119	0.000002 U	0.0000058	--	0.000002 U	0.000002 U	0.0000046	0.000002 U	0.0000016 J	0.0000024
PCB-12	0.000002 U	0.000042	--	0.000002 U	0.000002 U	0.000015	0.000002 U	0.0000032	0.0000024
PCB-120	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-121	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-122	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000035	0.000002 U	0.0000012 J	0.000002 U
PCB-123	0.0000013 J	0.0000059	--	0.00000059 U	0.00000074 U	0.0000063	0.00000086 U	0.000002	0.0000021
PCB-124	0.0000023	0.000015	--	0.000002 U	0.000002 U	0.000012	0.000002 U	0.0000034	0.0000047
PCB-126	0.000001 U	0.0000029	--	0.00000085 U	0.000001 U	0.0000037	0.0000011 U	0.0000013 J	0.000002
PCB-127	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-128/162	0.000014	0.000054	--	0.0000012 J	0.0000036 J	0.000047	0.000004 U	0.000016	0.000022
PCB-129	0.0000038	0.000015	--	0.000002 U	0.000002 U	0.000012	0.000002 U	0.000004	0.0000071
PCB-13	0.0000026	0.000029	--	0.000002 U	0.000002 U	0.000028	0.000002 U	0.0000037	0.000004
PCB-130	0.0000071	0.000024	--	0.000002 U	0.0000015 J	0.000022	0.000002 U	0.000008	0.0000089
PCB-131/133	0.0000025 J	0.0000094	--	0.000004 U	0.000004 U	0.0000075	0.000004 U	0.0000031 J	0.0000042
PCB-132/161	0.000015	0.000088	--	0.0000016 J	0.0000069	0.000062	0.0000014 J	0.000014	0.000028
PCB-134/143	0.0000039 J	0.000016	--	0.000004 U	0.0000013 J	0.000012	0.000004 U	0.0000037 J	0.0000072
PCB-135	0.0000088	0.000035	--	0.000001 J	0.0000034	0.000031	0.000002 U	0.00001	0.000018
PCB-136	0.000007	0.000038	--	0.000002 U	0.0000026	0.000027	0.000002 U	0.0000067	0.000017
PCB-137	0.0000032	0.000017	--	0.000002 U	0.0000012 J	0.000013	0.000002 U	0.000005	0.000007
PCB-138/163/164	0.000095	0.00036	--	0.0000078	0.000031	0.00033	0.0000055 J	0.0001	0.00013
PCB-139/149	0.000061	0.00026	--	0.0000056	0.00002	0.00021	0.0000036 J	0.000063	0.0001
PCB-14	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-140	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000021	0.000002 U	0.000002 U	0.0000012 J
PCB-141	0.000018	0.000068	--	0.0000017 J	0.0000063	0.00006	0.000002 U	0.000021	0.000031
PCB-142	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-144	0.0000032	0.000014	--	0.000002 U	0.000002 U	0.000011	0.000002 U	0.0000021	0.000006
PCB-145	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-146/165	0.000012	0.000044	--	0.0000012 J	0.0000044	0.00004	0.000004 U	0.000014	0.000016
PCB-147	0.0000013 J	0.0000057	--	0.000002 U	0.000002 U	0.0000039	0.000002 U	0.0000018 J	0.0000023
PCB-148	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-15	0.000013	0.00024	--	0.0000059	0.0000038	0.00015	0.0000058	0.000023	0.000022
PCB-150	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-151	0.000018	0.00007	--	0.0000015 J	0.0000052	0.000054	0.000002 U	0.000019	0.000029
PCB-152	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-153	0.000083	0.00028	--	0.0000061	0.000028	0.00027	0.0000043	0.00012	0.00012
PCB-154	0.000002 U	0.0000036	--	0.000002 U	0.000002 U	0.0000027	0.000002 U	0.000002 U	0.0000023

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-355	SB-355	SB-355	SB-355	SB-356	SB-356	SB-356	SB-357	SB-357
SAMPLE ID	SB355-20191113-0006	SB355-20191113-0624	SB355-20191113-2448	SB355-20191113-6084	SB356-20191113-0006	SB356-20191113-0624	SB356-20191113-2448	SB357-20191112-0006	SB357-20191112-0624
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191112	20191112
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SS	SS
TOP DEPTH	0	0.5	2	5	0	0.5	2	0	0.5
BOTTOM DEPTH	0.5	2	4	7	0.5	2	4	0.5	2
PCB-155	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-156	0.0000089	0.000039	--	0.00000062 U	0.0000031	0.000034	0.00000073 U	0.000012	0.000014
PCB-157	0.0000027	0.0000081	--	0.00000064 U	0.00000071 U	0.0000083	0.00000071 U	0.0000034	0.0000039
PCB-158/160	0.000011	0.00004	--	0.00000084 J	0.0000033 J	0.000037	0.000004 U	0.000012	0.000016
PCB-159	0.0000013 J	0.0000043	--	0.000002 U	0.000002 U	0.0000025	0.000002 U	0.000002	0.0000022
PCB-16	0.0000024	0.000036	--	0.000002 U	0.000002 U	0.000023	0.000002 U	0.0000056	0.0000062
PCB-166	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-167	0.0000047	0.000017	--	0.00000065 U	0.0000016 J	0.000017	0.00000073 U	0.0000061	0.0000076
PCB-168	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-169	0.00000091 U	0.0000017 U	--	0.00000069 U	0.00000086 U	0.0000011 U	0.0000008 U	0.00000093 U	0.00000095 U
PCB-17	0.0000041	0.000034	--	0.000002 U	0.000002 U	0.000024	0.000002 U	0.0000067	0.0000064
PCB-170	0.000034	0.00013	--	0.0000027	0.000013	0.00011	0.0000016 J	0.000034	0.000051
PCB-171	0.0000095	0.000038	--	0.0000013 J	0.000004	0.00003	0.000002 U	0.0000089	0.000015
PCB-172	0.0000075	0.000027	--	0.000002 U	0.0000026	0.000025	0.000002 U	0.0000074	0.00001
PCB-173	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000037	0.000002 U	0.000002 U	0.000002 U
PCB-174	0.000038	0.00015	--	0.0000036	0.000015	0.00013	0.0000027	0.000035	0.000049
PCB-175	0.0000014 J	0.000002 U	--	0.000002 U	0.000002 U	0.0000053	0.000002 U	0.000002 U	0.0000033
PCB-176	0.0000041	0.000015	--	0.000002 U	0.0000017 J	0.000011	0.000002 U	0.0000036	0.0000062
PCB-177	0.000023	0.000084	--	0.0000018 J	0.000009	0.000066	0.000002 U	0.00002	0.000031
PCB-178	0.0000089	0.000034	--	0.000002 U	0.0000035	0.000027	0.000002 U	0.0000096	0.000011
PCB-179	0.000013	0.000058	--	0.0000011 J	0.0000055	0.000045	0.000002 U	0.000014	0.00002
PCB-18	0.0000089	0.000073	--	0.0000025	0.000003	0.000052	0.0000032	0.000015	0.000015
PCB-180	0.00009	0.00036	--	0.000007	0.000035	0.00031	0.0000063	0.000084	0.00013
PCB-181	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-182/187	0.000047	0.00019	--	0.0000041	0.000018	0.00016	0.0000041	0.000059	0.000058
PCB-183	0.00002	0.000082	--	0.0000024	0.000009	0.00006	0.000002	0.000022	0.000031
PCB-184	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-185	0.0000055	0.000019	--	0.000002 U	0.0000022	0.000014	0.000002 U	0.0000054	0.0000064
PCB-186	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-188	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-189	0.0000016 J	0.0000073	--	0.0000006 U	0.00000067 U	0.000006	0.0000009 U	0.0000023	0.0000032
PCB-19	0.000002 U	0.0000047	--	0.000002 U	0.000002 U	0.0000026	0.000002 U	0.000002 U	0.000002 U
PCB-190	0.0000083	0.000029	--	0.000002 U	0.0000033	0.000028	0.000002 U	0.0000095	0.000011
PCB-191	0.0000023	0.0000078	--	0.000002 U	0.000002 U	0.0000055	0.000002 U	0.000002	0.0000032
PCB-192	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-193	0.0000058	0.000018	--	0.000002 U	0.0000019 J	0.000016	0.000002 U	0.0000065	0.0000054
PCB-194	0.00002	0.000086	--	0.0000019 J	0.0000079	0.000072	0.0000035	0.000034	0.000019
PCB-195	0.0000077	0.000029	--	0.000002 U	0.0000032	0.000024	0.000002 U	0.00001	0.0000058
PCB-196/203	0.000028	0.00013	--	0.0000028 J	0.000012	0.0001	0.00001	0.00005	0.000027
PCB-197	0.0000012 J	0.000004	--	0.000002 U	0.000002 U	0.000003	0.000002 U	0.0000015 J	0.000002 U
PCB-198	0.0000017 J	0.0000076	--	0.000002 U	0.000002 U	0.0000076	0.000002 U	0.0000032	0.0000019 J
PCB-199	0.000028	0.00014	--	0.0000028	0.00001	0.00011	0.000019	0.000056	0.000024
PCB-2	0.0000017 J	0.000037	--	0.00000088 J	0.000002 U	0.000028	0.0000018 J	0.000004	0.000004
PCB-20/21/33	0.000013	0.00012	--	0.0000029 J	0.000003 J	0.000081	0.0000035 J	0.00002	0.000014
PCB-200	0.0000028	0.000011	--	0.000002 U	0.0000015 J	0.0000093	0.000002 U	0.0000044	0.000003
PCB-201	0.0000026	0.000014	--	0.000002 U	0.0000013 J	0.00001	0.0000018 J	0.0000051	0.0000035
PCB-202	0.0000069	0.000035	--	0.000002 U	0.0000027	0.000027	0.0000072	0.000015	0.0000047
PCB-204	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-205	0.0000014 J	0.0000061	--	0.000002 U	0.000002 U	0.0000047	0.000002 U	0.0000024	0.0000021
PCB-206	0.000041	0.00033	--	0.0000047	0.000012	0.00023	0.00014	0.00011	0.000022
PCB-207	0.0000045	0.000023	--	0.000002 U	0.0000014 J	0.000015	0.0000067	0.0000088	0.0000019 J
PCB-208	0.000017	0.00014	--	0.0000018 J	0.0000056	0.00009	0.000061	0.000045	0.0000077
PCB-209	0.000052	0.0004	--	0.0000064	0.000015	0.00027	0.00014	0.00013	0.000025
PCB-22	0.0000096	0.000071	--	0.0000018 J	0.0000021	0.00005	0.0000021	0.000016	0.00001
PCB-23	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-24	0.000002 U	0.0000046	--	0.000002 U	0.000002 U	0.0000036	0.000002 U	0.000002 U	0.000002 U
PCB-25	0.0000018 J	0.000018	--	0.000002 U	0.000002 U	0.000013	0.000002 U	0.0000028	0.0000028
PCB-26	0.0000032	0.000029	--	0.000002 U	0.000002 U	0.000021	0.000002 U	0.0000054	0.0000048
PCB-27	0.000002 U	0.0000055	--	0.000002 U	0.000002 U	0.0000033	0.000002 U	0.0000014 J	0.000002 U
PCB-28	0.000022	0.00018	--	0.0000044	0.0000049	0.00012	0.0000042	0.000033	0.000033
PCB-29	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-3	0.0000034	0.00018	--	0.0000046	0.0000011 J	0.0001	0.0000047	0.0000082	0.0000064
PCB-30	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-31	0.00002	0.00019	--	0.0000049	0.000005	0.00013	0.000005	0.000037	0.000017
PCB-32	0.0000035	0.000023	--	0.000002 U	0.000002 U	0.000016	0.000002 U	0.0000043	0.0000057
PCB-34	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-35	0.0000017 J	0.000011	--	0.000002 U	0.000002 U	0.0000082	0.000002 U	0.0000033	0.0000028
PCB-36	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-37	0.000012	0.00013	--	0.0000028	0.0000029	0.00009	0.0000028	0.000024	0.000024
PCB-38	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-355	SB-355	SB-355	SB-355	SB-356	SB-356	SB-356	SB-357	SB-357
SAMPLE ID	SB355-20191113-0006	SB355-20191113-0624	SB355-20191113-2448	SB355-20191113-6084	SB356-20191113-0006	SB356-20191113-0624	SB356-20191113-2448	SB357-20191112-0006	SB357-20191112-0624
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191112	20191112
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SS	SS
TOP DEPTH	0	0.5	2	5	0	0.5	2	0	0.5
BOTTOM DEPTH	0.5	2	4	7	0.5	2	4	0.5	2
PCB-39	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000095	0.000002 U	0.000002 U	0.000002 U
PCB-4	0.0000029	0.000029	--	0.000002 U	0.000002 U	0.000017	0.000002 U	0.0000038	0.0000029
PCB-40	0.0000023	0.000018	--	0.000002 U	0.000002 U	0.000013	0.000002 U	0.0000048	0.0000052
PCB-41/64/71/72	0.000019	0.00017	--	0.0000037 J	0.0000046 J	0.00013	0.0000039 J	0.000036	0.000036
PCB-42/59	0.0000059	0.000049	--	0.0000015 J	0.0000019 J	0.000037	0.0000016 J	0.0000091	0.000013
PCB-43/49	0.000014	0.000097	--	0.0000024 J	0.0000039 J	0.000083	0.0000025 J	0.000028	0.000021
PCB-44	0.000013	0.0001	--	0.0000028	0.0000039	0.000082	0.0000028	0.000024	0.000024
PCB-45	0.0000013 J	0.000013	--	0.000002 U	0.000002 U	0.0000091	0.000002 U	0.0000026	0.0000045
PCB-46	0.000002 U	0.0000061	--	0.000002 U	0.000002 U	0.0000038	0.000002 U	0.0000012 J	0.0000022
PCB-47	0.0000068	0.000047	--	0.0000014 J	0.000002	0.000038	0.0000018 J	0.0000094	0.0000095
PCB-48/75	0.0000026 J	0.00002	--	0.000004 U	0.00000081 J	0.000016	0.000004 U	0.0000065	0.0000052
PCB-5	0.000002 U	0.0000089	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-50	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-51	0.000002 U	0.0000037	--	0.000002 U	0.000002 U	0.0000028	0.000002 U	0.000002 U	0.000002 U
PCB-52/69	0.000018	0.00013	--	0.0000034 J	0.0000057	0.00012	0.0000039 J	0.000029	0.000036
PCB-53	0.0000013 J	0.000012	--	0.000002 U	0.000002 U	0.0000081	0.000002 U	0.0000022	0.0000044
PCB-54	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-55	0.00000096 J	0.0000052	--	0.000002 U	0.000002 U	0.000005	0.000002 U	0.000002 U	0.000002 U
PCB-56/60	0.000014	0.00018	--	0.0000035 J	0.000004	0.00012	0.0000027 J	0.000025	0.000039
PCB-57	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000011 J	0.000002 U	0.000002 U	0.000002 U
PCB-58	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-6	0.0000019 J	0.000043	--	0.0000017 J	0.000002 U	0.000025	0.000002 U	0.0000038	0.000003
PCB-61/70	0.000028	0.00031	--	0.0000059	0.0000074	0.00028	0.0000059	0.000064	0.000057
PCB-62	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-63	0.0000011 J	0.0000099	--	0.000002 U	0.000002 U	0.0000086	0.000002 U	0.0000025	0.0000021
PCB-65	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-66/76	0.00002	0.00025	--	0.0000048	0.0000059	0.00021	0.0000051	0.000042	0.000046
PCB-67	0.000001 J	0.0000086	--	0.000002 U	0.000002 U	0.0000088	0.000002 U	0.0000024	0.0000022
PCB-68	0.000002 U	0.0000019 J	--	0.000002 U	0.000002 U	0.000013	0.000002 U	0.0000015 J	0.000002 U
PCB-7	0.000002 U	0.000021	--	0.000002 U	0.000002 U	0.0000082	0.000002 U	0.000002 U	0.000002 U
PCB-73	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-74	0.0000094	0.00013	--	0.000002	0.0000024	0.00011	0.0000023	0.000021	0.000023
PCB-77	0.0000036	0.000042	--	0.0000011 J	0.00000089 U	0.000034	0.00000078 U	0.0000088	0.000009
PCB-78	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-79	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000023	0.000002 U	0.000002 U	0.000002 U
PCB-8	0.0000075	0.00017	--	0.0000051	0.0000021	0.0001	0.0000045	0.000016	0.000013
PCB-80	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000029	0.000002 U	0.000002 U	0.000002 U
PCB-81	0.00000074 U	0.0000047	--	0.0000006 U	0.00000082 U	0.0000041	0.00000068 U	0.0000012 J	0.0000016 J
PCB-82	0.0000044	0.000028	--	0.000002 U	0.000002 U	0.000023	0.000002 U	0.0000078	0.000012
PCB-83/112	0.000004 U	0.000011	--	0.000004 U	0.000004 U	0.0000078	0.000004 U	0.0000028 J	0.0000046
PCB-84/92	0.000011	0.000072	--	0.0000015 J	0.0000046	0.000054	0.000004 U	0.000021	0.000029
PCB-85/116	0.0000068	0.000039	--	0.000004 U	0.0000021 J	0.000035	0.000004 U	0.000017	0.000013
PCB-86	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-87/117/125	0.000013	0.000085	--	0.000002 J	0.0000042 J	0.000074	0.000002 J	0.000027	0.000032
PCB-88/91	0.0000042	0.000029	--	0.000004 U	0.0000018 J	0.000028	0.000004 U	0.0000083	0.000012
PCB-89	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-9	0.000002 U	0.000011	--	0.000002 U	0.000002 U	0.0000074	0.000002 U	0.000002 U	0.0000017 J
PCB-93	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-94	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-95	0.000019	0.00014	--	0.0000027	0.0000067	0.00011	0.0000028	0.000044	0.00007
PCB-96	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-97	0.00001	0.000069	--	0.000002 U	0.0000034	0.000057	0.000002 U	0.000015	0.000025
PCB-98/102	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U
PCB-99	0.000018	0.000089	--	0.0000015 J	0.0000054	0.000075	0.0000019 J	0.000033	0.000029
PENTACHLOROBIPHENYLS	0.00024 J	0.0015 J	--	0.000025 J	0.000072 J	0.0013 J	0.000023 J	0.00046 J	0.00054 J
TEQ DIOXIN-LIKE PCBs (BIRD)	1.8324E-07	2.8779E-06	--	5.524E-08	7.66E-10	2.4963E-06	2.2E-10	6.9545E-07	8.1545E-07
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	2.7074E-07	2.8788E-06	--	1.282E-07	1.1453E-07	2.4968E-06	1.0925E-07	6.9592E-07	8.1592E-07
TEQ DIOXIN-LIKE PCBs (FISH)	5.54E-10	2.208E-08	--	1.22E-10	4.5E-11	2.4895E-08	1.1E-11	8.298E-09	1.2029E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	3.263E-09	2.2122E-08	--	2.421E-09	2.82E-09	2.4922E-08	2.999E-09	8.321E-09	1.2052E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.536E-09	3.018E-07	--	1.82E-10	2.73E-10	3.8031E-07	6.6E-11	1.3316E-07	2.0336E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	6.531E-08	3.273E-07	--	5.3178E-08	6.3383E-08	3.9681E-07	6.7276E-08	1.4711E-07	2.1761E-07
TETRACHLOROBIPHENYLS	0.00016 J	0.0016 J	--	0.000033 J	0.000043 J	0.0013 J	0.000033 J	0.00032 J	0.00034 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0000428	0.0002559	--	0.0000035	0.0000091	0.0002311	0.0000022	0.0000752	0.0000787
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00144646	0.0088377	--	0.00016882	0.00046221	0.0069749	0.0005144	0.0022465	0.0022161
TOTAL PCB CONGENERS ZEROND	0.00148926	0.0090936	--	0.00017232	0.00047131	0.007206	0.0005166	0.0023217	0.0022948
TOTAL PCB CONGENERS-NOAA	0.0006541	0.003616	--	0.0000747	0.0002127	0.002965	0.0003361	0.001007	0.0009168
TOTAL PCB CONGENERS-NOAA HALFND	0.00155804	0.00914545	--	0.00029436	0.00057358	0.00725055	0.00065273	0.00238117	0.00235428
TOTAL PCB CONGENERS-NOAA X2	0.0013082	0.007232	--	0.0001494	0.0004254	0.00593	0.0006722	0.002014	0.0018336
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0013082	0.007232	--	0.0001514	0.0004254	0.00593	0.0006782	0.002014	0.0018336
TRICHLOROBIPHENYLS	0.0001 J	0.00093 J	--	0.000019 J	0.000021 J	0.00065 J	0.000021 J	0.00017 J	0.00014 J

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-355	SB-355	SB-355	SB-355	SB-356	SB-356	SB-356	SB-357	SB-357
SAMPLE ID	SB355-20191113-0006	SB355-20191113-0624	SB355-20191113-2448	SB355-20191113-6084	SB356-20191113-0006	SB356-20191113-0624	SB356-20191113-2448	SB357-20191112-0006	SB357-20191112-0624
SAMPLE DATE	20191113	20191113	20191113	20191113	20191113	20191113	20191113	20191112	20191112
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SS	SB	SB	SS	SS	SB	SS	SS
TOP DEPTH	0	0.5	2	5	0	0.5	2	0	0.5
BOTTOM DEPTH	0.5	2	4	7	0.5	2	4	0.5	2
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	1500	550	--	8500 J	4600 J	77	6300 J	1900	85
1,2,3,4,6,7,8,9-OCDF	2.9 J	1.5 J	--	0.31 U	0.31 U	0.48 J	0.31 U	0.78 J	3.3 J
1,2,3,4,6,7,8-HPCDD	15	9.3	--	51	32	14	44	20	17 Z
1,2,3,4,6,7,8-HPCDF	4.3 J	1.7 Z	--	0.26 J	0.18 U	0.76 Z	0.28 Z	1.7 J	4.3 J
1,2,3,4,7,8,9-HPCDF	0.21 Z	0.18 U	--	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.45 U
1,2,3,4,7,8-HXCDD	0.43 J	0.26 J	--	0.44 J	0.71 Z	0.18 Z	0.63 J	0.4 J	0.38 U
1,2,3,4,7,8-HXCDF	1.6 J	0.56 J	--	0.13 U	0.13 U	0.28 Z	0.13 U	0.72 J	0.64 Z
1,2,3,6,7,8-HXCDD	1.1 J	0.83 J	--	0.16 Z	0.14 U	0.87 Z	0.16 J	1.3 J	2 J
1,2,3,6,7,8-HXCDF	0.61 J	0.33 J	--	0.093 U	0.093 U	0.14 Z	0.093 U	0.33 J	0.34 Z
1,2,3,7,8,9-HXCDD	0.59 J	0.5 J	--	0.22 Z	0.15 U	0.5 J	0.15 Z	0.65 J	1.1 J
1,2,3,7,8,9-HXCDF	0.21 U	0.21 U	--	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.37 U
1,2,3,7,8-PECDD	0.31 Z	0.31 J	--	0.18 U	0.18 U	0.18 U	0.18 U	0.4 J	0.65 J
1,2,3,7,8-PECDF	0.82 J	0.45 J	--	0.17 U	0.17 U	0.19 Z	0.17 U	0.52 J	0.51 U
2,3,4,6,7,8-HXCDF	0.34 J	0.23 Z	--	0.091 U	0.091 U	0.091 U	0.091 U	0.24 Z	0.29 U
2,3,4,7,8-PECDF	0.44 J	0.39 J	--	0.16 U	0.16 U	0.16 U	0.16 U	0.4 Z	0.46 U
2,3,7,8-TCDD	0.14 U	0.14 U	--	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.3 U
2,3,7,8-TCDF	0.56 J	0.41 Z	--	0.12 U	0.076 U	0.24 Z	0.17 U	0.56 J	0.42 U
TEQ DIOXINS (BIRD)	1.94889	1.41975	--	0.9492	0.5275	0.398048	0.7249	1.866078	0.94683
TEQ DIOXINS (BIRD) HALFND	2.02939	1.50115	--	1.2848155	0.8502155	0.653998	1.0855155	1.947478	1.60708
TEQ DIOXINS (FISH)	1.29629	0.88475	--	1.1274	0.847	0.196548	0.9949	1.229578	0.84783
TEQ DIOXINS (FISH) HALFND	1.37679	0.96615	--	1.3617655	1.0826155	0.412498	1.2305155	1.310978	1.26633
TEQ DIOXINS (HUMANS/MAMMALS)	1.63557	1.02795	--	3.1446	1.771	0.397544	2.4268	1.742834	1.29749
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	1.71607	1.10935	--	3.3642965	2.0038965	0.597494	2.6489965	1.824234	1.59939
TOTAL HPCDD	25 J	16 J	--	91 J	61 J	21 J	78 J	31 J	9.6 J
TOTAL HPCDF	4.4 J	0 UJ	--	0.54 J	0 UJ	0 UJ	0 UJ	1.9 J	4.3 J
TOTAL HXCDD	23 J	11 J	--	2.8 J	8.3 J	6.6 J	5.6 J	18 J	16 J
TOTAL HXCDF	4.8 J	2.3 J	--	0 UJ	0 UJ	0.8 J	0 UJ	1.3 J	1.8 J
TOTAL PECDD	6.5 J	4.6 J	--	0 UJ	0 UJ	1.1 J	0 UJ	4.5 J	3.7 J
TOTAL PECDF	1.7 J	1.9 J	--	0 UJ	0 UJ	0 UJ	0 UJ	1.2 J	1.7 J
TOTAL TCDD	5.2 J	6.6 J	--	0 UJ	0 UJ	0 UJ	0 UJ	2.7 J	5.3 J
TOTAL TCDF	2.1 J	2.8 J	--	0 UJ	0 UJ	0.2 J	0 UJ	1.6 J	0 UJ
METALS (MG/KG)									
ALUMINUM	7860	10400	--	7090	5390	11600	7700	6660	7110
ANTIMONY	1.1 U	0.58 J	--	1.1 U	0.42 J	0.78 J	0.3 J	1.2 U	0.24 J
ARSENIC	4.5	13.2	--	1.1	5	22.9	9.6	3.4	11.1
BARIUM	31.3	94.5	--	14.9	47.5	215	77.5	38.7	98.6
BERYLLIUM	0.33 J	0.68	--	0.14 J	0.27 J	1.7	0.71	0.29 J	1
CADMIUM	0.13 J	0.22 J	--	0.56 U	0.4 J	0.49 J	0.14 J	0.21 J	0.14 J
CALCIUM	127000	7840	--	2390	189000	4230	413 J	110000	80700
CHROMIUM	8.3	13.8	--	3.5	9.7	42.1	10.4	5.9	17.6
COBALT	5.1	8.5	--	2.3	5.6	17.8	8.8	4.4	11.4
COPPER	21.1	27.7	--	3.2	51.3	51	17.9	8.3	19.9
CYANIDE	0.57 R	0.59 R	--	0.089 J	0.022 J	0.029 J	0.74 J-	1.2 J-	2.2 J-
IRON	13800	18300	--	9420	12000	27100	11500	13200	14600
LEAD	7.1	37.7	--	4.5	6.8	65.9	23	7.5	18.7
MAGNESIUM	10000	2220	--	677	12300	2630	756	8320	4760
MANGANESE	256	257	--	53.5	366	604	170	319	570
MERCURY	0.11 UJ	0.12 UJ	--	0.12 UJ	0.1 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.1 UJ
NICKEL	12.6	20.5	--	2.5	15.9	39.9	12.7	10.4	24.7
POTASSIUM	1930	2470	--	897	1480	2780	1110	1700	1790
SELENIUM	2.8 U	2.8 U	--	2.8 U	2.5 U	2.8 U	3 U	3 U	2.5 U
SILVER	0.55 U	0.56 U	--	0.56 U	0.5 U	0.081 J	0.6 U	0.6 U	0.043 J
SODIUM	557 U	582 U	--	602 U	502 U	561 U	613 U	626 U	545 U
THALLIUM	0.04 J	0.26 J	--	0.56 U	0.71 J	0.33 J	0.18 J	0.6 U	0.51 U
VANADIUM	8.1	12.3	--	4.8	11	25.3	11.2	5.7	16.5
ZINC	40.4	75.1	--	8.9	49.9	147	47.9	32.3	67.5
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	84	--	--	93	--	--	78	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	185000	--	--	55500	--	--	72400	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	83	83	--	--	81	81	--	89

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-357	SB-357	SB-358	SB-358	SB-358	SB-358	SB-359	SB-359	SB-359
SAMPLE ID	SB357-20191112-2448	SB357-20191112-4872	SB358-20191112-0006	SB358-20191112-0624	SB358-20191112-2448	SB358-20191112-6084	SB359-20191112-0006	SB359-20191112-0624	SB359-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	4	0	0.5	2	5	0	0.5	5
BOTTOM DEPTH	4	6	0.5	2	4	7	0.5	2	7
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
1,1,2,2-TETRACHLOROETHANE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 U	--
1,1,2-TRICHLOROETHANE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 U	--
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
1,1-DICHLOROETHANE	0.0069 U	--	0.0054 U	0.0064 U	--	0.0059 U	0.0056 U	0.0051 U	--
1,1-DICHLOROETHENE	0.0069 U	--	0.0054 U	0.0064 U	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
1,2,3-TRICHLOROBENZENE	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
1,2,4-TRICHLOROBENZENE	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
1,2-DIBROMO-3-CHLOROPROPANE	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 U	--
1,2-DIBROMOETHANE	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
1,2-DICHLOROBENZENE	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
1,2-DICHLOROETHANE	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
1,2-DICHLOROPROPANE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 U	0.0051 UJ	--
1,3-DICHLOROBENZENE	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
1,4-DICHLOROBENZENE	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
2-BUTANONE	0.014 U	--	0.0067 J	0.0074 J	--	0.012 U	0.011 U	0.01 U	--
2-HEXANONE	0.014 UJ	--	0.011 U	0.013 UJ	--	0.012 U	0.011 U	0.01 U	--
4-METHYL-2-PENTANONE	0.014 UJ	--	0.011 U	0.013 UJ	--	0.012 U	0.011 U	0.01 U	--
ACETONE	0.017	--	0.018	0.018	--	0.011 J	0.011 U	0.01 U	--
BENZENE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 U	0.0051 U	--
BROMOCHLOROMETHANE	0.0069 U	--	0.0054 U	0.0064 U	--	0.0059 U	0.0056 U	0.0051 U	--
BROMODICHLOROMETHANE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 U	0.0051 UJ	--
BROMOFORM	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 U	--
BROMOMETHANE	0.0069 U	--	0.0054 U	0.0064 U	--	0.0059 U	0.0056 U	0.0051 U	--
CARBON DISULFIDE	0.0069 U	--	0.0054 U	0.0064 U	--	0.0059 U	0.0056 U	0.0051 U	--
CARBON TETRACHLORIDE	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
CHLOROBENZENE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
CHLORODIBROMOMETHANE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 U	0.0051 U	--
CHLOROETHANE	0.0069 U	--	0.0054 U	0.0064 U	--	0.0059 U	0.0056 U	0.0051 U	--
CHLOROFORM	0.0069 U	--	0.0054 U	0.0064 U	--	0.0059 U	0.0056 U	0.0051 U	--
CHLOROMETHANE	0.0069 U	--	0.0054 U	0.0064 U	--	0.0059 U	0.0056 U	0.0051 U	--
CIS-1,2-DICHLOROETHENE	0.0069 U	--	0.0054 U	0.0064 U	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
CIS-1,3-DICHLOROPROPENE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 U	--
CYCLOHEXANE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 U	0.0051 UJ	--
DICHLORODIFLUOROMETHANE	0.0069 U	--	0.0054 U	0.0064 U	--	0.0059 U	0.0056 U	0.0051 U	--
ETHYLBENZENE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 U	0.0051 U	--
ISOPROPYLBENZENE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 U	0.0051 U	--
M+P-XYLENES	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 U	0.0051 U	--
METHYL ACETATE	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
METHYL CYCLOHEXANE	0.0069 UJ	--	0.0021 J	0.0064 UJ	--	0.0059 U	0.0056 U	0.0051 UJ	--
METHYL TERT-BUTYL ETHER	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
METHYLENE CHLORIDE	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
O-XYLENE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 U	0.0051 U	--
STYRENE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 U	0.0051 U	--
TETRACHLOROETHENE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 U	0.0051 U	--
TOLUENE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 U	0.0051 U	--
TRANS-1,2-DICHLOROETHENE	0.0069 U	--	0.0054 U	0.0064 U	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
TRANS-1,3-DICHLOROPROPENE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 U	--
TRICHLOROETHENE	0.0069 UJ	--	0.0054 U	0.0064 UJ	--	0.0059 U	0.0056 U	0.0051 U	--
TRICHLOROFLUOROMETHANE	0.0069 UJ	--	0.0054 UJ	0.0064 UJ	--	0.0059 U	0.0056 UJ	0.0051 UJ	--
VINYL CHLORIDE	0.0069 U	--	0.0054 U	0.0064 U	--	0.0059 U	0.0056 U	0.0051 U	--

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-357	SB-357	SB-358	SB-358	SB-358	SB-358	SB-359	SB-359	SB-359
SAMPLE ID	SB357-20191112-2448	SB357-20191112-4872	SB358-20191112-0006	SB358-20191112-0624	SB358-20191112-2448	SB358-20191112-6084	SB359-20191112-0006	SB359-20191112-0624	SB359-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	4	0	0.5	2	5	0	0.5	5
BOTTOM DEPTH	4	6	0.5	2	4	7	0.5	2	7
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.026 J	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
1,2,4,5-TETRACHLOROBENZENE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
1,4-DIOXANE	0.089 U	--	0.084 U	0.084 U	--	0.082 U	0.077 U	0.08 U	--
2,2'-OXYBIS(1-CHLOROPROPANE)	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
2,3,4,6-TETRACHLOROPHENOL	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
2,4,5-TRICHLOROPHENOL	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
2,4,6-TRICHLOROPHENOL	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
2,4-DICHLOROPHENOL	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
2,4-DIMETHYLPHENOL	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
2,4-DINITROPHENOL	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
2,4-DINITROTOLUENE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
2,6-DINITROTOLUENE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
2-CHLORONAPHTHALENE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
2-CHLOROPHENOL	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
2-METHYLNAPHTHALENE	0.08 J	--	0.21 U	0.05 J	--	0.21 U	0.19 U	0.021 J	--
2-METHYLPHENOL	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
2-NITROANILINE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
2-NITROPHENOL	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
3&4-METHYLPHENOL	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
3,3'-DICHLOROBENZIDINE	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
3-NITROANILINE	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
4,6-DINITRO-2-METHYLPHENOL	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
4-BROMOPHENYL PHENYL ETHER	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
4-CHLORO-3-METHYLPHENOL	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
4-CHLOROANILINE	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
4-CHLOROPHENYL PHENYL ETHER	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
4-NITROANILINE	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
4-NITROPHENOL	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
ACENAPHTHENE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
ACENAPHTHYLENE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
ACETOPHENONE	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
ANTHRACENE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
ATRAZINE	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
BAP EQUIVALENT-HALFND	0.174242	--	0.235484	0.149925	--	0.21 U	0.213375	0.22364	--
BAP EQUIVALENT-POS	0.046592	--	0.003434	0.033375	--	0.21 U	0.003425	0.00264	--
BENZALDEHYDE	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
BENZO(A)ANTHRACENE	0.05 J	--	0.21 U	0.036 J	--	0.21 U	0.19 U	0.2 U	--
BENZO(A)PYRENE	0.034 J	--	0.21 U	0.025 J	--	0.21 U	0.19 U	0.2 U	--
BENZO(B)FLUORANTHENE	0.075 J	--	0.034 J	0.047 J	--	0.21 U	0.034 J	0.026 J	--
BENZO(G,H,I)PERYLENE	0.028 J	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
BENZO(K)FLUORANTHENE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
BIS(2-CHLOROETHOXY)METHANE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
BIS(2-CHLOROETHYL)ETHER	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	0.071 J	--	0.21 U	0.025 J	--	0.21 U	0.095 J	0.2 U	--
BUTYL BENZYL PHTHALATE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
CAPROLACTAM	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
CARBAZOLE	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
CHRYSENE	0.092 J	--	0.034 J	0.075 J	--	0.21 U	0.025 J	0.04 J	--
DIBENZO(A,H)ANTHRACENE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
DIBENZOFURAN	0.031 J	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
DIETHYL PHTHALATE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
DIMETHYL PHTHALATE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
DI-N-BUTYL PHTHALATE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
DI-N-OCTYL PHTHALATE	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
FLUORANTHENE	0.095 J	--	0.031 J	0.069 J	--	0.4 U	0.032 J	0.39 U	--
FLUORENE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
HEXACHLOROBENZENE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
HEXACHLOROBUTADIENE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
HEXACHLOROCYCLOPENTADIENE	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
HEXACHLOROETHANE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
HIGH MOLECULAR WEIGHT PAHS	0.372	--	0.096	0.243	--	0 U	0.088	0.066	--
INDENO(1,2,3-CD)PYRENE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
ISOPHORONE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
LOW MOLECULAR WEIGHT PAHS	0.339	--	0.067	0.228	--	0.028	0.063	0.051	--
NAPHTHALENE	0.044 J	--	0.21 U	0.029 J	--	0.21 U	0.19 U	0.2 U	--
NITROBENZENE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
N-NITROSO-DI-N-PROPYLAMINE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
N-NITROSODIPHENYLAMINE	0.23 U	--	0.21 U	0.21 U	--	0.21 U	0.19 U	0.2 U	--
PENTACHLOROPHENOL	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-357	SB-357	SB-358	SB-358	SB-358	SB-358	SB-359	SB-359	SB-359
SAMPLE ID	SB357-20191112-2448	SB357-20191112-4872	SB358-20191112-0006	SB358-20191112-0624	SB358-20191112-2448	SB358-20191112-6084	SB359-20191112-0006	SB359-20191112-0624	SB359-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	4	0	0.5	2	5	0	0.5	5
BOTTOM DEPTH	4	6	0.5	2	4	7	0.5	2	7
PHENANTHRENE	0.2 J	--	0.036 J	0.13 J	--	0.028 J	0.031 J	0.051 J	--
PHENOL	0.44 U	--	0.41 U	0.41 U	--	0.4 U	0.38 U	0.39 U	--
PYRENE	0.093 J	--	0.028 J	0.06 J	--	0.21 U	0.029 J	0.2 U	--
TOTAL PAHS	0.711	--	0.163	0.471	--	0.028	0.151	0.117	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/KG									
1,4-DIOXANE	0.0089 U	--	0.0086 U	0.0084 U	--	0.0081 U	0.0076 U	0.0081 U	--
2-METHYLNAPHTHALENE	0.13	--	0.022	0.092	--	0.018	0.015	0.04	--
ACENAPHTHENE	0.0037 J	--	0.0041 U	0.0041 U	--	0.004 U	0.0038 U	0.0039 U	--
ACENAPHTHYLENE	0.01	--	0.0032 J	0.0059	--	0.0016 J	0.0036 J	0.0036 J	--
ANTHRACENE	0.021	--	0.0049	0.017	--	0.003 J	0.0047	0.0058	--
BAP EQUIVALENT-HALFND	0.0495	--	0.020593	0.04254	--	0.011345	0.019566	0.015459	--
BAP EQUIVALENT-POS	0.0473	--	0.018543	0.04049	--	0.009345	0.017666	0.013509	--
BENZO(A)ANTHRACENE	0.057	--	0.016	0.035	--	0.0057	0.014 J-	0.011	--
BENZO(A)PYRENE	0.031	--	0.013	0.03	--	0.0065	0.012	0.0082	--
BENZO(B)FLUORANTHENE	0.088	--	0.032	0.056	--	0.019	0.033	0.034	--
BENZO(G,H,I)PERYLENE	0.018	--	0.0067	0.01	--	0.0038 J	0.0093	0.0086	--
BENZO(K)FLUORANTHENE	0.025	--	0.01	0.018	--	0.0042	0.0092	0.0067	--
CHRYSENE	0.15	--	0.033	0.11 J+	--	0.013	0.034 J-	0.052	--
DIBENZO(A,H)ANTHRACENE	0.0044 U	--	0.0041 U	0.0041 U	--	0.004 U	0.0038 U	0.0039 U	--
FLUORANTHENE	0.15	--	0.035 J	0.12 J+	--	0.017 J	0.033 J	0.032	--
FLUORENE	0.017	--	0.0045	0.012	--	0.0031 J	0.0038	0.0039 U	--
HIGH MOLECULAR WEIGHT PAHS	0.471	--	0.1438	0.334	--	0.0694	0.1439	0.1494	--
INDENO(1,2,3-CD)PYRENE	0.014	--	0.0061	0.011	--	0.0032 J	0.0084	0.0069	--
LOW MOLECULAR WEIGHT PAHS	0.5457	--	0.0966	0.4079	--	0.0622	0.0795	0.1424	--
NAPHTHALENE	0.064	--	0.011	0.043	--	0.0065	0.0064	0.024	--
PENTACHLOROPHENOL	0.0089 UJ	--	0.0084 UJ	0.0084 UJ	--	0.0082 UJ	0.0077 U	0.008 U	--
PHENANTHRENE	0.28	--	0.038	0.21	--	0.031	0.028	0.077 J	--
PYRENE	0.088	--	0.027	0.064	--	0.014	0.024 J-	0.022	--
TOTAL PAHS	0.15	--	0.033	0.11	--	0.013	0.034	0.052	--
PESTICIDES (MG/KG)									
4,4'-DDD	0.0012 J	--	0.0042 U	0.0042 U	--	0.004 U	0.0039 U	0.004 U	--
4,4'-DDE	0.0044 U	--	0.0042 U	0.0042 U	--	0.004 U	0.0039 U	0.004 U	--
4,4'-DDT	0.0011 J	--	0.0042 U	0.00033 J	--	0.004 U	0.0039 U	0.004 U	--
ALDRIN	0.0023 U	--	0.0021 U	0.0022 U	--	0.0021 U	0.002 U	0.0021 U	--
ALPHA-BHC	0.0023 U	--	0.0021 U	0.0022 U	--	0.0021 U	0.002 U	0.0021 U	--
ALPHA-CHLORDANE	0.00073 J	--	0.0021 U	0.00045 J	--	0.0021 U	0.002 U	0.0021 U	--
BETA-BHC	0.00039 J	--	0.00038 J	0.0022 U	--	0.0021 U	0.002 U	0.0021 U	--
DELTA-BHC	0.0023 U	--	0.0021 U	0.0022 U	--	0.0021 U	0.002 U	0.0021 U	--
DIELDRIN	0.0044 U	--	0.0042 U	0.0042 U	--	0.004 U	0.0039 U	0.004 U	--
ENDOSULFAN I	0.0023 U	--	0.0021 U	0.0022 U	--	0.0021 U	0.002 U	0.0021 U	--
ENDOSULFAN II	0.0044 U	--	0.0042 U	0.0042 U	--	0.004 U	0.0039 U	0.004 U	--
ENDOSULFAN SULFATE	0.0044 U	--	0.0042 U	0.0042 U	--	0.004 U	0.0039 U	0.004 U	--
ENDRIN	0.00046 J	--	0.0042 U	0.00035 J	--	0.004 U	0.0039 U	0.004 U	--
ENDRIN ALDEHYDE	0.0011 J	--	0.0042 U	0.0042 U	--	0.004 U	0.0039 U	0.004 U	--
ENDRIN KETONE	0.0028 J	--	0.0042 U	0.0011 J	--	0.004 U	0.0039 U	0.004 U	--
GAMMA-BHC (LINDANE)	0.0011 J	--	0.0021 U	0.00062 J	--	0.0021 U	0.002 U	0.00023 J	--
GAMMA-CHLORDANE	0.00037 J	--	0.0021 U	0.0022 U	--	0.0021 U	0.002 U	0.0021 U	--
HEPTACHLOR	0.00062 J	--	0.0021 U	0.0022 U	--	0.0021 U	0.002 U	0.0021 U	--
HEPTACHLOR EPOXIDE	0.0023 U	--	0.0021 U	0.0022 U	--	0.0021 U	0.002 U	0.0021 U	--
METHOXYCHLOR	0.011 J	--	0.0017 J	0.0045 J	--	0.00078 J	0.02 U	0.021 U	--
TOXAPHENE	0.23 U	--	0.21 U	0.22 U	--	0.21 U	0.2 U	0.21 U	--
PCBS (MG/KG)									
AROCLOR-1016	0.044 U	--	--	--	--	--	--	--	--
AROCLOR-1221	0.044 U	--	--	--	--	--	--	--	--
AROCLOR-1232	0.044 U	--	--	--	--	--	--	--	--
AROCLOR-1242	0.0064 J	--	--	--	--	--	--	--	--
AROCLOR-1248	0.044 U	--	--	--	--	--	--	--	--
AROCLOR-1254	0.0074 J	--	--	--	--	--	--	--	--
AROCLOR-1260	0.044 U	--	--	--	--	--	--	--	--
AROCLOR-1262	0.044 U	--	--	--	--	--	--	--	--
AROCLOR-1268	0.044 U	--	--	--	--	--	--	--	--
TOTAL AROCLOR	0.0138	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	0.1678	--	--	--	--	--	--	--	--

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-357	SB-357	SB-358	SB-358	SB-358	SB-358	SB-359	SB-359	SB-359
SAMPLE ID	SB357-20191112-2448	SB357-20191112-4872	SB358-20191112-0006	SB358-20191112-0624	SB358-20191112-2448	SB358-20191112-6084	SB359-20191112-0006	SB359-20191112-0624	SB359-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	4	0	0.5	2	5	0	0.5	5
BOTTOM DEPTH	4	6	0.5	2	4	7	0.5	2	7
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	0.287 U	--	0.321 U	0.325 U	--	--	0.301 U	0.309 U
AROCLOR-1221	--	0.575 U	--	0.641 U	0.649 U	--	--	0.602 U	0.617 U
AROCLOR-1232	--	0.287 U	--	0.321 U	0.325 U	--	--	0.301 U	0.309 U
AROCLOR-1242	--	0.287 U	--	0.321 U	0.325 U	--	--	0.301 U	0.309 U
AROCLOR-1248	--	0.287 U	--	0.321 U	0.325 U	--	--	0.301 U	0.309 U
AROCLOR-1254	--	0.287 U	--	0.321 U	0.325 U	--	--	0.301 U	0.309 U
AROCLOR-1260	--	0.287 U	--	0.321 U	0.325 U	--	--	0.301 U	0.309 U
AROCLOR-1262	--	0.287 U	--	0.321 U	0.325 U	--	--	0.301 U	0.309 U
AROCLOR-1268	--	0.287 U	--	0.321 U	0.325 U	--	--	0.301 U	0.309 U
TOTAL AROCLOR	--	0 U	--	0 U	0 U	--	--	0 U	0 U
TOTAL AROCLOR HALFND	--	1.4355	--	1.6045	1.6245	--	--	1.505	1.5445
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	0.00061 J	--	0.000087 J	0.0001 J	--	0.000092 J	0.00006 J	0.000013 J	--
HEPTACHLOROBIPHENYLS	0.0015 J	--	0.00023 J	0.00032 J	--	0.000038 J	0.00029 J	0.000077 J	--
HEXACHLOROBIPHENYLS	0.0017 J	--	0.00022 J	0.0004 J	--	0.000061 J	0.00029 J	0.0001 J	--
MONOCHLOROBIPHENYLS	0.0003 J	--	0.000013 J	0.000062 J	--	0.000047 J	0.0000054 J	0.000011 J	--
NONACHLOROBIPHENYLS	0.00026 J	--	0.00022 J	0.00007 J	--	0.00003 J	0.000071 J	0.000029 J	--
OCTACHLOROBIPHENYLS	0.00049 J	--	0.00019 J	0.00012 J	--	0.000021 J	0.00011 J	0.000035 J	--
PCB-1	0.000097	--	0.0000029	0.000015	--	0.000022	0.0000012 J	0.0000027	--
PCB-10	0.0000032	--	0.000002 U	0.000002 U	--	0.0000011 J	0.000002 U	0.000002 U	--
PCB-100	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-101/90	0.00028	--	0.000031	0.00007	--	0.000013	0.000028	0.000016	--
PCB-103	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-104	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-105	0.00012	--	0.000015	0.000025	--	0.0000067	0.000011	0.0000084	--
PCB-108/107	0.000021	--	0.0000028 J	0.0000049	--	0.000004 U	0.0000025 J	0.0000018 J	--
PCB-109	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-11	0.000025	--	0.000053	0.000015	--	0.0000054	0.000048	0.0000065	--
PCB-110	0.00031	--	0.000034	0.000069	--	0.000014	0.000029	0.00002	--
PCB-111/115	0.0000071	--	0.000004 U	0.0000018 J	--	0.000004 U	0.000004 U	0.000004 U	--
PCB-113	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-114	0.00001	--	0.0000011 U	0.0000018 J	--	0.00000083 U	0.00000086 U	0.00000083 U	--
PCB-118/106	0.00028	--	0.000034	0.000057	--	0.000014	0.000026	0.000018	--
PCB-119	0.0000057	--	0.000002 U	0.0000012 J	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-12	0.000037	--	0.0000019 J	0.0000036	--	0.0000027	0.000002 U	0.000002 U	--
PCB-120	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-121	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-122	0.0000042	--	0.000002 U	0.0000011 J	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-123	0.0000074	--	0.0000011 U	0.0000014 J	--	0.00000071 U	0.00000074 U	0.0000005 U	--
PCB-124	0.000013	--	0.0000016 J	0.0000033	--	0.000002 U	0.0000017 J	0.000002 U	--
PCB-126	0.0000055	--	0.0000013 U	0.0000014 J	--	0.0000011 U	0.00000095 U	0.00000067 U	--
PCB-127	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-128/162	0.000047	--	0.0000078	0.000013	--	0.0000027 J	0.0000083	0.000004	--
PCB-129	0.000015	--	0.0000024	0.0000037	--	0.000002 U	0.0000024	0.000002 U	--
PCB-13	0.000024	--	0.0000021	0.0000075	--	0.0000039	0.000002 U	0.000002 U	--
PCB-130	0.000021	--	0.0000032	0.0000055	--	0.0000014 J	0.0000043	0.000002	--
PCB-131/133	0.00001	--	0.000004 U	0.0000029 J	--	0.000004 U	0.0000019 J	0.000004 U	--
PCB-132/161	0.000081	--	0.0000079	0.00002	--	0.000003 J	0.000011	0.0000043	--
PCB-134/143	0.000018	--	0.000004 U	0.0000045	--	0.000004 U	0.0000025 J	0.000004 U	--
PCB-135	0.000039	--	0.0000054	0.00001	--	0.0000018 J	0.0000066	0.000002	--
PCB-136	0.000052	--	0.0000032	0.000011	--	0.0000017 J	0.0000054	0.0000022	--
PCB-137	0.000017	--	0.0000025	0.0000032	--	0.000002 U	0.0000016 J	0.0000015 J	--
PCB-138/163/164	0.00038	--	0.000056	0.000089	--	0.000014	0.000069	0.000027	--
PCB-139/149	0.00027	--	0.00003	0.000066	--	0.0000097	0.000047	0.000016	--
PCB-14	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-140	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-141	0.000081	--	0.0000087	0.000019	--	0.0000028	0.000015	0.000005	--
PCB-142	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-144	0.00002	--	0.0000015 J	0.0000038	--	0.000002 U	0.0000026	0.000002 U	--
PCB-145	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-146/165	0.000049	--	0.0000081	0.000011	--	0.0000021 J	0.00001	0.0000035 J	--
PCB-147	0.0000045	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-148	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-15	0.0002	--	0.0000014	0.000035	--	0.00002	0.0000076	0.0000043	--
PCB-150	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-151	0.000091	--	0.0000097	0.000021	--	0.0000032	0.000015	0.0000044	--
PCB-152	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-153	0.00035	--	0.000054	0.000086	--	0.000014	0.000064	0.000022	--
PCB-154	0.0000027	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-357	SB-357	SB-358	SB-358	SB-358	SB-358	SB-359	SB-359	SB-359
SAMPLE ID	SB357-20191112-2448	SB357-20191112-4872	SB358-20191112-0006	SB358-20191112-0624	SB358-20191112-2448	SB358-20191112-6084	SB359-20191112-0006	SB359-20191112-0624	SB359-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	4	0	0.5	2	5	0	0.5	5
BOTTOM DEPTH	4	6	0.5	2	4	7	0.5	2	7
PCB-155	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-156	0.000042	--	0.0000053	0.0000092	--	0.000002	0.0000059	0.0000031	--
PCB-157	0.0000094	--	0.0000017 J	0.0000024	--	0.00000071 U	0.0000014 J	0.000001 J	--
PCB-158/160	0.000044	--	0.0000057	0.0000099	--	0.0000019 J	0.000007	0.0000029 J	--
PCB-159	0.0000041	--	0.000002 U	0.000002 U	--	0.000002 U	0.0000011 J	0.000002 U	--
PCB-16	0.000043	--	0.0000027	0.0000071	--	0.0000055	0.0000015 J	0.000002 U	--
PCB-166	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-167	0.000019	--	0.0000027	0.0000052	--	0.0000011 J	0.0000032	0.0000018 J	--
PCB-168	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-169	0.0000026	--	0.00000088 U	0.00000077 U	--	0.00000075 U	0.00000083 U	0.00000045 U	--
PCB-17	0.000056	--	0.0000054	0.0000089	--	0.0000079	0.0000025	0.000002 U	--
PCB-170	0.00014	--	0.000017	0.000032	--	0.0000046	0.000031	0.0000081	--
PCB-171	0.000042	--	0.000006	0.00001	--	0.0000018 J	0.0000083	0.0000022	--
PCB-172	0.000034	--	0.0000045	0.0000086	--	0.000002 U	0.0000065	0.0000024	--
PCB-173	0.0000045	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-174	0.00018	--	0.000021	0.000036	--	0.0000057	0.000034	0.0000094	--
PCB-175	0.000008	--	0.000002 U	0.0000025	--	0.000002 U	0.0000016 J	0.000002 U	--
PCB-176	0.000018	--	0.0000021	0.0000047	--	0.000002 U	0.0000029	0.000002 U	--
PCB-177	0.000093	--	0.000014	0.000021	--	0.0000033	0.000019	0.0000049	--
PCB-178	0.000034	--	0.000008	0.0000088	--	0.000002 U	0.0000072	0.0000023	--
PCB-179	0.000067	--	0.00001	0.000015	--	0.0000024	0.000011	0.0000032	--
PCB-18	0.00013	--	0.000012	0.000019	--	0.000019	0.000005	0.0000025	--
PCB-180	0.00044	--	0.000071	0.000092	--	0.0000099	0.000085	0.000023	--
PCB-181	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-182/187	0.0002	--	0.000045	0.000046	--	0.0000073	0.000042	0.000012	--
PCB-183	0.0001	--	0.000015	0.00002	--	0.0000032	0.000017	0.0000055	--
PCB-184	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-185	0.00002	--	0.000004	0.0000047	--	0.000002 U	0.0000046	0.000002 U	--
PCB-186	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-188	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-189	0.0000089	--	0.00000076 U	0.0000023	--	0.00000051 U	0.0000015 J	0.0000007 U	--
PCB-19	0.0000095	--	0.000002 U	0.0000028	--	0.0000019 J	0.000002 U	0.000002 U	--
PCB-190	0.000038	--	0.0000053	0.0000078	--	0.000002 U	0.0000074	0.0000029	--
PCB-191	0.0000086	--	0.0000015 J	0.0000025	--	0.000002 U	0.0000017 J	0.000002 U	--
PCB-192	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-193	0.000019	--	0.0000039	0.000005	--	0.000002 U	0.0000047	0.0000013 J	--
PCB-194	0.0001	--	0.000033	0.000025	--	0.0000041	0.000022	0.0000064	--
PCB-195	0.000036	--	0.0000087	0.0000075	--	0.0000013 J	0.0000079	0.000002	--
PCB-196/203	0.00014	--	0.000051	0.000034	--	0.0000062	0.000029	0.0000093	--
PCB-197	0.0000043	--	0.000002 U	0.000002 U	--	0.000002 U	0.0000012 J	0.000002 U	--
PCB-198	0.0000072	--	0.0000041	0.0000025	--	0.000002 U	0.0000018 J	0.000002 U	--
PCB-199	0.00013	--	0.00006	0.000031	--	0.0000076	0.00003	0.000011	--
PCB-2	0.000044	--	0.0000048	0.000015	--	0.0000049	0.0000017 J	0.0000034	--
PCB-20/21/33	0.00016	--	0.000015	0.000022	--	0.000017	0.0000067	0.000003 J	--
PCB-200	0.000015	--	0.0000041	0.0000036	--	0.000002 U	0.0000028	0.0000011 J	--
PCB-201	0.000015	--	0.0000043	0.0000046	--	0.000002 U	0.000003	0.0000016 J	--
PCB-202	0.000031	--	0.000018	0.0000096	--	0.0000017 J	0.0000082	0.0000034	--
PCB-204	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-205	0.0000072	--	0.0000022	0.0000015 J	--	0.000002 U	0.0000013 J	0.000002 U	--
PCB-206	0.00018	--	0.00015	0.000047	--	0.00002	0.000048	0.000019	--
PCB-207	0.000017	--	0.000009	0.0000048	--	0.0000015 J	0.000004	0.0000016 J	--
PCB-208	0.000064	--	0.000061	0.000018	--	0.0000082	0.000019	0.0000085	--
PCB-209	0.00021	--	0.00016	0.000058	--	0.000025	0.000046	0.000024	--
PCB-22	0.000091	--	0.0000085	0.000013	--	0.000009	0.0000056	0.0000015 J	--
PCB-23	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-24	0.0000073	--	0.000002 U	0.0000018 J	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-25	0.000023	--	0.0000013 J	0.0000038	--	0.0000024	0.0000013 J	0.000002 U	--
PCB-26	0.000042	--	0.0000038	0.0000063	--	0.0000044	0.0000021	0.000002 U	--
PCB-27	0.0000082	--	0.000002 U	0.0000017 J	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-28	0.00019	--	0.000025	0.000032	--	0.000022	0.000012	0.0000039	--
PCB-29	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-3	0.00016	--	0.0000057	0.000032	--	0.00002	0.0000025	0.0000049	--
PCB-30	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-31	0.00026	--	0.000027	0.00004	--	0.000019	0.000016	0.0000047	--
PCB-32	0.000048	--	0.0000047	0.0000082	--	0.0000069	0.0000021	0.000002 U	--
PCB-34	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-35	0.000012	--	0.0000026	0.0000035	--	0.000002 U	0.0000014 J	0.000002 U	--
PCB-36	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-37	0.00012	--	0.000012	0.000023	--	0.00001	0.0000079	0.0000037	--
PCB-38	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-357	SB-357	SB-358	SB-358	SB-358	SB-358	SB-359	SB-359	SB-359
SAMPLE ID	SB357-20191112-2448	SB357-20191112-4872	SB358-20191112-0006	SB358-20191112-0624	SB358-20191112-2448	SB358-20191112-6084	SB359-20191112-0006	SB359-20191112-0624	SB359-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	4	0	0.5	2	5	0	0.5	5
BOTTOM DEPTH	4	6	0.5	2	4	7	0.5	2	7
PCB-39	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-4	0.000043	--	0.0000023	0.0000058	--	0.00001	0.000002 U	0.000002 U	--
PCB-40	0.000027	--	0.0000035	0.0000055	--	0.0000025	0.0000017 J	0.000002 U	--
PCB-41/64/71/72	0.00017	--	0.000024	0.000032	--	0.000013	0.000013	0.0000061 J	--
PCB-42/59	0.000065	--	0.0000074	0.000011	--	0.0000054	0.0000041	0.0000021 J	--
PCB-43/49	0.00015	--	0.000021	0.000026	--	0.000012	0.00001	0.0000049	--
PCB-44	0.00017	--	0.000017	0.000029	--	0.000014	0.0000093	0.0000043	--
PCB-45	0.000023	--	0.000002	0.000004	--	0.0000028	0.0000014 J	0.000002 U	--
PCB-46	0.0000095	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-47	0.000061	--	0.0000095	0.000011	--	0.0000049	0.0000046	0.0000025	--
PCB-48/75	0.000035	--	0.0000037 J	0.0000058	--	0.0000038 J	0.0000021 J	0.00000091 J	--
PCB-5	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-50	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-51	0.0000076	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-52/69	0.00022	--	0.000021	0.000045	--	0.000014	0.000014	0.0000055	--
PCB-53	0.000022	--	0.0000018 J	0.0000035	--	0.0000024	0.000002 U	0.000002 U	--
PCB-54	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-55	0.0000077	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-56/60	0.0002	--	0.000014	0.000032	--	0.000012	0.0000091	0.000005	--
PCB-57	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-58	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-6	0.000046	--	0.0000022	0.0000059	--	0.0000088	0.000002 U	0.000002 U	--
PCB-61/70	0.00041	--	0.00004	0.000026	--	0.000022	0.00002	0.000014	--
PCB-62	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-63	0.000013	--	0.0000016 J	0.000002	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-65	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-66/76	0.00028	--	0.000029	0.000048	--	0.000017	0.000016	0.0000085	--
PCB-67	0.000016	--	0.0000019 J	0.0000024	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-68	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-7	0.000015	--	0.000002 U	0.0000015 J	--	0.0000022	0.000002 U	0.000002 U	--
PCB-73	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-74	0.00017	--	0.000016	0.000026	--	0.0000098	0.0000081	0.0000047	--
PCB-77	0.000043	--	0.0000036	0.0000081	--	0.0000025	0.0000031	0.0000022	--
PCB-78	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-79	0.0000029	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-8	0.0002	--	0.000011	0.000027	--	0.000035	0.0000047	0.0000025	--
PCB-80	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-81	0.0000061	--	0.00000066 U	0.0000012 J	--	0.0000007 U	0.00000075 U	0.00000056 U	--
PCB-82	0.000036	--	0.0000031	0.0000088	--	0.0000027	0.0000028	0.0000018 J	--
PCB-83/112	0.000012	--	0.000004 U	0.0000031 J	--	0.000004 U	0.000004 U	0.000004 U	--
PCB-84/92	0.000096	--	0.0000087	0.000023	--	0.0000048	0.0000079	0.0000042	--
PCB-85/116	0.000045	--	0.0000071	0.000011	--	0.0000033 J	0.0000049	0.0000036 J	--
PCB-86	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-87/117/125	0.00011	--	0.000012	0.000025	--	0.000006	0.0000087	0.0000059 J	--
PCB-88/91	0.000037	--	0.0000037 J	0.0000077	--	0.0000022 J	0.0000029 J	0.0000025 J	--
PCB-89	0.0000033	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-9	0.000017	--	0.000002 U	0.0000024	--	0.0000032	0.000002 U	0.000002 U	--
PCB-93	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-94	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-95	0.00022	--	0.000015	0.000048	--	0.0000098	0.000015	0.0000069	--
PCB-96	0.000002 U	--	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--
PCB-97	0.000088	--	0.0000082	0.00002	--	0.0000044	0.0000065	0.0000046	--
PCB-98/102	0.000004 U	--	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--
PCB-99	0.0001	--	0.000018	0.000026	--	0.0000065	0.000011	0.0000059	--
PENTACHLOROBIPHENYLS	0.0018 J	--	0.00019 J	0.00041 J	--	0.000087 J	0.00016 J	0.0001 J	--
TEQ DIOXIN-LIKE PCBs (BIRD)	3.3311E-06	--	1.8223E-07	6.6893E-07	--	1.2588E-07	1.5688E-07	1.1127E-07	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	3.3311E-06	--	2.8073E-07	6.6931E-07	--	2.1634E-07	2.4234E-07	1.7304E-07	--
TEQ DIOXIN-LIKE PCBs (FISH)	3.6063E-08	--	4.82E-10	8.646E-09	--	2.98E-10	4.24E-10	2.91E-10	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	3.6063E-08	--	3.924E-09	8.665E-09	--	3.246E-09	3.009E-09	2.121E-09	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	6.4063E-07	--	1.101E-09	1.4259E-07	--	5.44E-10	1E-09	6.49E-10	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	6.4063E-07	--	7.9443E-08	1.5414E-07	--	6.6938E-08	6.1085E-08	4.1012E-08	--
TETRACHLOROBIPHENYLS	0.0021 J	--	0.00022 J	0.00032 J	--	0.00014 J	0.00012 J	0.000061 J	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0002739	--	0.0000283	0.000058	--	0.0000123	0.0000261	0.0000165	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.0098383	--	0.0016123	0.0019921	--	0.0006526	0.0011729	0.00045521	--
TOTAL PCB CONGENERS ZEROND	0.0101122	--	0.0016406	0.0020501	--	0.0006649	0.001199	0.00047171	--
TOTAL PCB CONGENERS-NOAA	0.003853	--	0.0007645	0.0008225	--	0.0002535	0.0005272	0.0002107	--
TOTAL PCB CONGENERS-NOAA HALFND	0.0101602	--	0.0017185	0.00210949	--	0.00075856	0.00127607	0.00057157	--
TOTAL PCB CONGENERS-NOAA X2	0.007706	--	0.001529	0.001645	--	0.000507	0.0010544	0.0004214	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.007706	--	0.001529	0.001645	--	0.000507	0.0010544	0.0004214	--
TRICHLOROBIPHENYLS	0.0012 J	--	0.00012 J	0.00019 J	--	0.00013 J	0.000064 J	0.000019 J	--

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-357	SB-357	SB-358	SB-358	SB-358	SB-358	SB-359	SB-359	SB-359
SAMPLE ID	SB357-20191112-2448	SB357-20191112-4872	SB358-20191112-0006	SB358-20191112-0624	SB358-20191112-2448	SB358-20191112-6084	SB359-20191112-0006	SB359-20191112-0624	SB359-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SB	SB	SS	SS	SB	SB	SS	SS	SB
TOP DEPTH	2	4	0	0.5	2	5	0	0.5	5
BOTTOM DEPTH	4	6	0.5	2	4	7	0.5	2	7
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	8100 J	--	240	7000 J	--	5800 J	180	230	--
1,2,3,4,6,7,8,9-OCDF	0.45 U	--	0.31 U	0.31 U	--	0.43 U	4 J	2.1 J	--
1,2,3,4,6,7,8-HPCDD	56	--	5.5	45	--	36	7.6	7.4	--
1,2,3,4,6,7,8-HPCDF	0.24 Z	--	0.32 Z	0.24 Z	--	0.2 Z	2.4 J	2.8 J	--
1,2,3,4,7,8,9-HPCDF	0.18 U	--	0.18 U	0.18 U	--	0.18 U	0.2 U	0.2 U	--
1,2,3,4,7,8-HXCDD	1.3 J	--	0.14 U	0.49 J	--	0.41 J	0.23 U	0.23 U	--
1,2,3,4,7,8-HXCDF	0.13 J	--	0.13 U	0.13 U	--	0.13 U	0.34 J	0.64 J	--
1,2,3,6,7,8-HXCDD	0.2 Z	--	0.16 Z	0.14 U	--	0.14 U	0.51 J	0.85 J	--
1,2,3,6,7,8-HXCDF	0.093 U	--	0.093 U	0.093 U	--	0.093 U	0.31 J	0.58 J	--
1,2,3,7,8,9-HXCDD	0.39 Z	--	0.28 Z	0.23 Z	--	0.22 Z	0.5 J	0.56 J	--
1,2,3,7,8,9-HXCDF	0.21 U	--	0.21 U	0.21 U	--	0.21 U	0.21 U	0.21 U	--
1,2,3,7,8-PECDD	0.18 U	--	0.18 U	0.18 U	--	0.18 U	0.16 U	0.16 U	--
1,2,3,7,8-PECDF	0.17 U	--	0.17 U	0.17 U	--	0.17 U	0.25 U	0.45 J	--
2,3,4,6,7,8-HXCDF	0.091 U	--	0.091 U	0.091 U	--	0.091 U	0.29 J	0.5 J	--
2,3,4,7,8-PECDF	0.16 U	--	0.16 U	0.16 U	--	0.16 U	0.15 U	0.54 J	--
2,3,7,8-TCDD	0.14 U	--	0.14 U	0.14 U	--	0.14 U	0.12 U	0.12 U	--
2,3,7,8-TCDF	0.17 U	--	0.12 U	0.12 U	--	0.12 U	0.1 U	0.36 J	--
TEQ DIOXINS (BIRD)	0.9874	--	0.0623	0.7949	--	0.6605	0.1991	1.24011	--
TEQ DIOXINS (BIRD) HALFND	1.3415225	--	0.4014155	1.1312155	--	0.9968215	0.49385	1.39736	--
TEQ DIOXINS (FISH)	1.5373	--	0.0371	0.9947	--	0.8252	0.1541	0.55521	--
TEQ DIOXINS (FISH) HALFND	1.7664225	--	0.3064655	1.2297655	--	1.0602715	0.40935	0.76421	--
TEQ DIOXINS (HUMANS/MAMMALS)	3.1944	--	0.1742	2.6244	--	2.165	0.3502	0.69613	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	3.4101175	--	0.4008965	2.8510965	--	2.3917145	0.54445	0.85913	--
TOTAL HPCDD	100 J	--	10 J	76 J	--	62 J	15 J	14 J	--
TOTAL HPCDF	0 UJ	--	0 UJ	0 UJ	--	0 UJ	4.7 J	3.9 J	--
TOTAL HXCDD	17 J	--	0.83 J	2.5 J	--	2.2 J	5.7 J	14 J	--
TOTAL HXCDF	0.13 J	--	0 UJ	0.095 J	--	0 UJ	3.2 J	4.5 J	--
TOTAL PECDD	0 UJ	--	0 UJ	0 UJ	--	0 UJ	1.8 J	7.9 J	--
TOTAL PECDF	0 UJ	--	0 UJ	0 UJ	--	0 UJ	1.2 J	5.5 J	--
TOTAL TCDD	0 UJ	--	0 UJ	0 UJ	--	0 UJ	1.2 J	7 J	--
TOTAL TCDF	0 UJ	--	0 UJ	0 UJ	--	0 UJ	2 J	7.8 J	--
METALS (MG/KG)									
ALUMINUM	9710	--	6840	9900	--	6880	7530	8180	--
ANTIMONY	0.9 J	--	0.25 J	0.31 J	--	1.2 U	1.1 U	1.2 U	--
ARSENIC	17.2	--	4.7	10.5	--	6.5	5.6	5.2	--
BARIUM	158	--	70.9	118	--	83.9	53.7	66.2	--
BERYLLIUM	1.1	--	0.59 J	0.91	--	1.1	0.39 J	0.53 J	--
CADMIUM	0.24 J	--	0.16 J	0.17 J	--	0.11 J	0.23 J	0.094 J	--
CALCIUM	2370	--	16300	2180	--	879	153000	2330	--
CHROMIUM	20.3	--	9.2	14.6	--	17.1	8.8	8.2	--
COBALT	11	--	8.7	9.9	--	17.6	7.5	8.4	--
COPPER	38.1	--	14.3	26.1	--	15.8	14.1	13.2	--
CYANIDE	0.57 R	--	0.1 J	0.49 J	--	0.58 J	0.59 R	0.59 R	--
IRON	17400	--	15900	18900	--	56600	12500	15000	--
LEAD	36.4	--	14	24.8	--	18	12.1	46.3	--
MAGNESIUM	2780	--	2060	1810	--	962	9040	1160	--
MANGANESE	342	--	719	361	--	447	415	319	--
MERCURY	0.11 UJ	--	0.12 UJ	0.12 UJ	--	0.13 UJ	0.12 U	0.033 J	--
NICKEL	23.3	--	17.9	20.5	--	19.1	16.4	12.3	--
POTASSIUM	2300	--	1310	2280	--	1250	1870	1380	--
SELENIUM	2.8 U	--	3.2 U	3 U	--	3.1 U	2.9 U	2.9 U	--
SILVER	0.049 J	--	0.65 U	0.59 U	--	0.62 U	0.57 U	0.59 U	--
SODIUM	552 U	--	627 U	636 U	--	609 U	588 U	586 U	--
THALLIUM	0.57 U	--	0.65 U	0.59 U	--	0.62 U	0.57 U	0.59 U	--
VANADIUM	19	--	8.9	13.7	--	17.5	8.9	9.3	--
ZINC	85.1	--	48.6	60.9	--	62.5	51.4	46.5	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	87	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	65300	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	87	--	78	77	--	--	83	81

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-359	SB-360	SB-360	SB-360	SB-360	SB-360	SB-361
SAMPLE ID	SB359-20191112-7296	SB360-20191112-0006	SB360-20191112-0624	SB360-20191112-2448	SB360-20191112-2448-D	SB360-20191112-6084	SB361-20191112-0006
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE					SB360-20191112-2448		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SB	SS	SS	SB	SB	SB	SS
TOP DEPTH	6	0	0.5	2	2	5	0
BOTTOM DEPTH	8	0.5	2	4	4	7	0.5
VOLATILES (MG/KG)							
1,1,1-TRICHLOROETHANE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
1,1,2,2-TETRACHLOROETHANE	0.0051 U	0.0054 U	0.0055 UJ	0.0048 U	0.0047 UJ	--	0.005 U
1,1,2-TRICHLOROETHANE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
1,1-DICHLOROETHANE	0.0051 U	0.0054 U	0.0055 U	0.0048 U	0.0047 U	--	0.005 U
1,1-DICHLOROETHENE	0.0051 U	0.0054 U	0.0055 U	0.0048 U	0.0047 U	--	0.005 U
1,2,3-TRICHLOROBENZENE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
1,2,4-TRICHLOROBENZENE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
1,2-DIBROMOETHANE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
1,2-DICHLOROBENZENE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
1,2-DICHLOROETHANE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
1,2-DICHLOROPROPANE	0.0051 U	0.0054 U	0.0055 UJ	0.0048 U	0.0047 UJ	--	0.005 U
1,3-DICHLOROBENZENE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
1,4-DICHLOROBENZENE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
2-BUTANONE	0.01 U	0.0057 J	0.011 U	0.0096 U	0.0094 U	--	0.01 U
2-HEXANONE	0.01 U	0.011 U	0.011 UJ	0.0096 U	0.0094 UJ	--	0.01 U
4-METHYL-2-PENTANONE	0.01 U	0.011 U	0.011 UJ	0.0096 U	0.0094 UJ	--	0.01 U
ACETONE	0.0074 J	0.012	0.0094 J	0.0063 J	0.0065 J	--	0.01 U
BENZENE	0.0051 U	0.0054 U	0.0055 UJ	0.0048 U	0.0047 UJ	--	0.005 U
BROMOCHLOROMETHANE	0.0051 U	0.0054 U	0.0055 U	0.0048 U	0.0047 U	--	0.005 U
BROMODICHLOROMETHANE	0.0051 U	0.0054 U	0.0055 UJ	0.0048 U	0.0047 UJ	--	0.005 U
BROMOFORM	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
BROMOMETHANE	0.0051 U	0.0054 U	0.0055 U	0.0048 U	0.0047 U	--	0.005 U
CARBON DISULFIDE	0.0051 U	0.0054 U	0.0055 U	0.0048 U	0.0047 U	--	0.005 U
CARBON TETRACHLORIDE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
CHLOROBENZENE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
CHLORODIBROMOMETHANE	0.0051 U	0.0054 U	0.0055 UJ	0.0048 U	0.0047 UJ	--	0.005 U
CHLOROETHANE	0.0051 U	0.0054 U	0.0055 U	0.0048 U	0.0047 U	--	0.005 U
CHLOROFORM	0.0051 U	0.0054 U	0.0055 U	0.0048 U	0.0047 U	--	0.005 U
CHLOROMETHANE	0.0051 U	0.0054 U	0.0055 U	0.0048 U	0.0047 U	--	0.005 U
CIS-1,2-DICHLOROETHENE	0.0051 U	0.0054 U	0.0055 U	0.0048 U	0.0047 U	--	0.005 U
CIS-1,3-DICHLOROPROPENE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 U
CYCLOHEXANE	0.0051 U	0.0054 U	0.0055 UJ	0.0048 U	0.0047 UJ	--	0.005 U
DICHLORODIFLUOROMETHANE	0.0051 U	0.0054 U	0.0055 U	0.0048 U	0.0047 U	--	0.005 U
ETHYLBENZENE	0.0051 U	0.0054 U	0.0055 UJ	0.0048 U	0.0047 UJ	--	0.005 U
ISOPROPYLBENZENE	0.0051 U	0.0054 U	0.0055 UJ	0.0048 U	0.0047 UJ	--	0.005 U
M+P-XYLENES	0.0051 U	0.0054 U	0.0055 UJ	0.0048 U	0.0047 UJ	--	0.005 U
METHYL ACETATE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
METHYL CYCLOHEXANE	0.0051 U	0.0054 U	0.0055 UJ	0.004 J	0.0023 J	--	0.005 U
METHYL TERT-BUTYL ETHER	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
METHYLENE CHLORIDE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
O-XYLENE	0.0051 U	0.0054 U	0.0055 UJ	0.0048 U	0.0047 UJ	--	0.005 U
STYRENE	0.0051 U	0.0054 U	0.0055 UJ	0.0048 U	0.0047 UJ	--	0.005 U
TETRACHLOROETHENE	0.0051 U	0.0054 U	0.0055 UJ	0.0048 U	0.0047 UJ	--	0.005 U
TOLUENE	0.0051 U	0.0054 U	0.0055 UJ	0.0048 U	0.0047 UJ	--	0.005 U
TRANS-1,2-DICHLOROETHENE	0.0051 U	0.0054 U	0.0055 U	0.0048 U	0.0047 U	--	0.005 U
TRANS-1,3-DICHLOROPROPENE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 U
TRICHLOROETHENE	0.0051 U	0.0054 U	0.0055 UJ	0.0048 U	0.0047 UJ	--	0.005 U
TRICHLOROFLUOROMETHANE	0.0051 U	0.0054 UJ	0.0055 UJ	0.0048 UJ	0.0047 UJ	--	0.005 UJ
VINYL CHLORIDE	0.0051 U	0.0054 U	0.0055 U	0.0048 U	0.0047 U	--	0.005 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-359	SB-360	SB-360	SB-360	SB-360	SB-360	SB-361
SAMPLE ID	SB359-20191112-7296	SB360-20191112-0006	SB360-20191112-0624	SB360-20191112-2448	SB360-20191112-2448-D	SB360-20191112-6084	SB361-20191112-0006
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE					SB360-20191112-2448		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SB	SS	SS	SB	SB	SB	SS
TOP DEPTH	6	0	0.5	2	2	5	0
BOTTOM DEPTH	8	0.5	2	4	4	7	0.5
SEMIVOLATILES (MG/KG)							
1,1-BIPHENYL	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
1,2,4,5-TETRACHLOROBENZENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
1,4-DIOXANE	0.079 U	0.076 U	0.075 U	0.081 U	0.078 U	--	0.075 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
2,3,4,6-TETRACHLOROPHENOL	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
2,4,5-TRICHLOROPHENOL	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
2,4,6-TRICHLOROPHENOL	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
2,4-DICHLOROPHENOL	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
2,4-DIMETHYLPHENOL	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
2,4-DINITROPHENOL	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
2,4-DINITROTOLUENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
2,6-DINITROTOLUENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
2-CHLORONAPHTHALENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
2-CHLOROPHENOL	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
2-METHYLNAPHTHALENE	0.2 U	0.19 U	0.034 J	0.053 J	0.045 J	--	0.19 U
2-METHYLPHENOL	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
2-NITROANILINE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
2-NITROPHENOL	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
3&4-METHYLPHENOL	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
3,3'-DICHLOROBENZIDINE	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
3-NITROANILINE	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
4,6-DINITRO-2-METHYLPHENOL	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
4-BROMOPHENYL PHENYL ETHER	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
4-CHLORO-3-METHYLPHENOL	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
4-CHLOROANILINE	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
4-CHLOROPHENYL PHENYL ETHER	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
4-NITROANILINE	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
4-NITROPHENOL	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
ACENAPHTHENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
ACENAPHTHYLENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
ACETOPHENONE	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
ANTHRACENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
ATRAZINE	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
BAP EQUIVALENT-HALFND	0.2 U	0.211945	0.212887	0.23488	0.231031	--	0.19 U
BAP EQUIVALENT-POS	0.2 U	0.0019	0.002937	0.00283	0.000031	--	0.19 U
BENZALDEHYDE	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
BENZO(A)ANTHRACENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
BENZO(A)PYRENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
BENZO(B)FLUORANTHENE	0.2 U	0.019 J	0.029 J	0.028 J	0.2 U	--	0.19 U
BENZO(G,H,I)PERYLENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
BENZO(K)FLUORANTHENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
BIS(2-CHLOROETHOXY)METHANE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
BIS(2-CHLOROETHYL)ETHER	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
BUTYL BENZYL PHTHALATE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
CAPROLACTAM	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
CARBAZOLE	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
CHRYSENE	0.2 U	0.19 U	0.037 J	0.03 J	0.031 J	--	0.19 U
DIBENZO(A,H)ANTHRACENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
DIBENZOFURAN	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
DIETHYL PHTHALATE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
DIMETHYL PHTHALATE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
DI-N-BUTYL PHTHALATE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
DI-N-OCTYL PHTHALATE	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
FLUORANTHENE	0.39 U	0.37 U	0.028 J	0.029 J	0.021 J	--	0.37 U
FLUORENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
HEXACHLOROBENZENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
HEXACHLOROBUTADIENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
HEXACHLOROCYCLOPENTADIENE	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
HEXACHLOROETHANE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
HIGH MOLECULAR WEIGHT PAHS	0 U	0.019	0.091	0.088	0.053	--	0 U
INDENO(1,2,3-CD)PYRENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
ISOPHORONE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
LOW MOLECULAR WEIGHT PAHS	0 U	0 U	0.108	0.093	0.063	--	0.024
NAPHTHALENE	0.2 U	0.19 U	0.019 J	0.21 U	0.2 U	--	0.19 U
NITROBENZENE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
N-NITROSO-DI-N-PROPYLAMINE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
N-NITROSODIPHENYLAMINE	0.2 U	0.19 U	0.19 U	0.21 U	0.2 U	--	0.19 U
PENTACHLOROPHENOL	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-359	SB-360	SB-360	SB-360	SB-360	SB-360	SB-361
SAMPLE ID	SB359-20191112-7296	SB360-20191112-0006	SB360-20191112-0624	SB360-20191112-2448	SB360-20191112-2448-D	SB360-20191112-6084	SB361-20191112-0006
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE					SB360-20191112-2448		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SB	SS	SS	SB	SB	SB	SS
TOP DEPTH	6	0	0.5	2	2	5	0
BOTTOM DEPTH	8	0.5	2	4	4	7	0.5
PHENANTHRENE	0.2 U	0.19 U	0.061 J	0.064 J	0.042 J	--	0.024 J
PHENOL	0.39 U	0.37 U	0.37 U	0.4 U	0.39 U	--	0.37 U
PYRENE	0.2 U	0.19 U	0.025 J	0.03 J	0.022 J	--	0.19 U
TOTAL PAHS	0 U	0.019	0.199	0.181	0.116	--	0.024
SEMIVOLATILE SELECTIVE ION MONITORING (MG/KG							
1,4-DIOXANE	0.0081 U	0.0076 U	0.0073 U	0.0082 U	0.0079 U	--	0.0074 U
2-METHYLNAPHTHALENE	0.0047	0.013	0.049	0.093	0.06	--	0.021
ACENAPHTHENE	0.0039 U	0.0037 U	0.0041	0.0062	0.005	--	0.0037 U
ACENAPHTHYLENE	0.0039 U	0.0028 J	0.004	0.0041	0.0024 J	--	0.0022 J
ANTHRACENE	0.0039 U	0.0037	0.0063	0.012	0.01	--	0.0044
BAP EQUIVALENT-HALFND	0.004606	0.016544	0.01933	0.02073	0.012907	--	0.016346
BAP EQUIVALENT-POS	0.000492	0.014694	0.01753	0.01873	0.010957	--	0.014496
BENZO(A)ANTHRACENE	0.00049 J	0.011 J+	0.017	0.02	0.013	--	0.012
BENZO(A)PYRENE	0.0039 U	0.01 J+	0.012	0.013	0.0074	--	0.01
BENZO(B)FLUORANTHENE	0.0044	0.028 J+	0.031	0.03	0.018	--	0.026
BENZO(G,H,I)PERYLENE	0.0039 U	0.0072 J+	0.0072	0.009	0.0063	--	0.0087
BENZO(K)FLUORANTHENE	0.0039 U	0.0091 J+	0.0081	0.0073	0.005	--	0.0065
CHRYSENE	0.0035 J	0.023 J+	0.049	0.057	0.037	--	0.031
DIBENZO(A,H)ANTHRACENE	0.0039 U	0.0037 U	0.0036 U	0.004 U	0.0039 U	--	0.0037 U
FLUORANTHENE	0.0019 J	0.026 J	0.029 J	0.045 J	0.034 J	--	0.024 J
FLUORENE	0.001 J	0.0037 U	0.0079	0.015	0.013	--	0.0037 U
HIGH MOLECULAR WEIGHT PAHS	0.01129	0.1121	0.1553	0.1753	0.1144	--	0.1192
INDENO(1,2,3-CD)PYRENE	0.0039 U	0.0068 J+	0.006	0.006	0.0037 J	--	0.006
LOW MOLECULAR WEIGHT PAHS	0.0169	0.0625	0.1683	0.2143	0.1384	--	0.0736
NAPHTHALENE	0.0039 U	0.007	0.029	0.032	0.021	--	0.011
PENTACHLOROPHENOL	0.0079 UJ	0.0076 U	0.0074 U	0.0081 U	0.0078 U	--	0.0075 U
PHENANTHRENE	0.014	0.023	0.088	0.1	0.053	--	0.032
PYRENE	0.0029 J	0.017 J+	0.025	0.033	0.024	--	0.019
TOTAL PAHS	0.0035	0.023	0.049	0.057	0.037	--	0.031
PESTICIDES (MG/KG)							
4,4'-DDD	0.004 U	0.0038 U	0.00044 J	0.004 U	0.004 U	--	0.004 UJ
4,4'-DDE	0.004 U	0.0038 U	0.0041 U	0.004 U	0.004 U	--	0.004 U
4,4'-DDT	0.004 U	0.0038 U	0.0041 U	0.004 U	0.004 U	--	0.004 U
ALDRIN	0.002 U	0.0019 U	0.0021 U	0.0021 U	0.0021 U	--	0.0021 U
ALPHA-BHC	0.002 U	0.0019 U	0.0021 U	0.0021 U	0.0021 U	--	0.0021 U
ALPHA-CHLORDANE	0.002 U	0.0019 U	0.0021 U	0.0021 U	0.0021 U	--	0.0021 U
BETA-BHC	0.002 U	0.0019 U	0.0021 U	0.0021 U	0.0021 U	--	0.0021 U
DELTA-BHC	0.002 U	0.0019 U	0.0021 U	0.0021 U	0.0021 U	--	0.0021 U
DIELDRIN	0.004 U	0.0038 U	0.0041 U	0.004 U	0.004 U	--	0.004 U
ENDOSULFAN I	0.002 U	0.0019 U	0.0021 U	0.0021 U	0.0021 U	--	0.0021 U
ENDOSULFAN II	0.004 U	0.0038 U	0.0041 U	0.004 U	0.004 U	--	0.004 U
ENDOSULFAN SULFATE	0.004 U	0.0038 U	0.0041 U	0.004 U	0.004 U	--	0.004 U
ENDRIN	0.004 U	0.0038 U	0.0041 U	0.004 U	0.004 U	--	0.004 U
ENDRIN ALDEHYDE	0.004 U	0.0038 U	0.0041 U	0.004 U	0.004 U	--	0.004 U
ENDRIN KETONE	0.004 U	0.0038 U	0.0041 U	0.004 U	0.004 U	--	0.004 U
GAMMA-BHC (LINDANE)	0.002 U	0.00021 R	0.00046 J	0.0021 U	0.00028 J	--	0.00034 J
GAMMA-CHLORDANE	0.002 U	0.0019 U	0.0021 U	0.0021 U	0.0021 U	--	0.0021 U
HEPTACHLOR	0.002 U	0.0019 U	0.0021 U	0.0021 U	0.0021 U	--	0.0021 U
HEPTACHLOR EPOXIDE	0.002 U	0.0019 U	0.0021 U	0.0021 U	0.0021 U	--	0.0021 U
METHOXYCHLOR	0.02 U	0.019 U	0.021 U	0.021 U	0.021 U	--	0.021 U
TOXAPHENE	0.2 U	0.19 U	0.21 U	0.21 U	0.21 U	--	0.21 U
PCBS (MG/KG)							
AROCLOR-1016	0.04 U	--	--	--	--	--	--
AROCLOR-1221	0.04 U	--	--	--	--	--	--
AROCLOR-1232	0.04 U	--	--	--	--	--	--
AROCLOR-1242	0.04 U	--	--	--	--	--	--
AROCLOR-1248	0.04 U	--	--	--	--	--	--
AROCLOR-1254	0.04 U	--	--	--	--	--	--
AROCLOR-1260	0.04 U	--	--	--	--	--	--
AROCLOR-1262	0.04 U	--	--	--	--	--	--
AROCLOR-1268	0.04 U	--	--	--	--	--	--
TOTAL AROCLOR	0 U	--	--	--	--	--	--
TOTAL AROCLOR HALFND	0.18	--	--	--	--	--	--

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-359	SB-360	SB-360	SB-360	SB-360	SB-360	SB-361
SAMPLE ID	SB359-20191112-7296	SB360-20191112-0006	SB360-20191112-0624	SB360-20191112-2448	SB360-20191112-2448-D	SB360-20191112-6084	SB361-20191112-0006
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE					SB360-20191112-2448		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SB	SS	SS	SB	SB	SB	SS
TOP DEPTH	6	0	0.5	2	2	5	0
BOTTOM DEPTH	8	0.5	2	4	4	7	0.5
MOBILE LAB PESTICIDES/PCBS (MG/KG)							
AROCLOR-1016	--	--	0.309 U	--	--	0.321 U	--
AROCLOR-1221	--	--	0.617 U	--	--	0.641 U	--
AROCLOR-1232	--	--	0.309 U	--	--	0.321 U	--
AROCLOR-1242	--	--	0.309 U	--	--	0.321 U	--
AROCLOR-1248	--	--	0.309 U	--	--	0.321 U	--
AROCLOR-1254	--	--	0.309 U	--	--	0.321 U	--
AROCLOR-1260	--	--	0.309 U	--	--	0.321 U	--
AROCLOR-1262	--	--	0.309 U	--	--	0.321 U	--
AROCLOR-1268	--	--	0.309 U	--	--	0.321 U	--
TOTAL AROCLOR	--	--	0 U	--	--	0 U	--
TOTAL AROCLOR HALFND	--	--	1.5445	--	--	1.6045	--
PCB CONGENERS (MG/KG)							
DICHLOROBIPHENYLS	0 UJ	0.000024 J	0.0001 J	0.000024 J	0.000019 J	--	0.000031 J
HEPTACHLOROBIPHENYLS	0 UJ	0.000073 J	0.00031 J	0.000049 J	0.000079 J	--	0.000099 J
HEXACHLOROBIPHENYLS	0 UJ	0.000071 J	0.00038 J	0.00006 J	0.000094 J	--	0.00014 J
MONOCHLOROBIPHENYLS	0 UJ	0.0000017 J	0.000056 J	0.000017 J	0.000022 J	--	0.0000046 J
NONACHLOROBIPHENYLS	0 UJ	0.00004 J	0.000094 J	0.000011 J	0.000016 J	--	0.00002 J
OCTACHLOROBIPHENYLS	0 UJ	0.00004 J	0.00012 J	0.000018 J	0.000028 J	--	0.00003 J
PCB-1	0.000002 U	0.000002 U	0.000014	0.0000057	0.0000069	--	0.000002 U
PCB-10	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-100	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-101/90	0.000004 U	0.0000078	0.000065	0.0000098	0.000016	--	0.000027
PCB-103	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-104	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-105	0.00000081 U	0.0000036	0.000029	0.0000049	0.0000069	--	0.0000075
PCB-108/107	0.000004 U	0.00000092 J	0.0000049	0.000004 U	0.0000012 J	--	0.0000022 J
PCB-109	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-11	0.000002 U	0.000019	0.000016	0.0000029	0.0000037	--	0.000025
PCB-110	0.000002 U	0.0000094	0.000078	0.000012	0.000018	--	0.000028
PCB-111/115	0.000004 U	0.000004 U	0.0000018 J	0.000004 U	0.000004 U	--	0.000004 U
PCB-113	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-114	0.00000083 U	0.00000082 U	0.0000021	0.00000083 U	0.00000083 U	--	0.00000087 U
PCB-118/106	0.00000078 U	0.000008	0.000066	0.0000097	0.000015	--	0.000019
PCB-119	0.000002 U	0.000002 U	0.0000012 J	0.000002 U	0.000002 U	--	0.000002 U
PCB-12	0.000002 U	0.000002 U	0.000007	0.0000011 J	0.0000015 J	--	0.000002 U
PCB-120	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-121	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-122	0.000002 U	0.000002 U	0.0000013 J	0.000002 U	0.000002 U	--	0.000002 U
PCB-123	0.00000078 U	0.00000061 U	0.0000021	0.00000076 U	0.0000005 U	--	0.00000088 U
PCB-124	0.000002 U	0.000002 U	0.0000033	0.000002 U	0.000002 U	--	0.000002 U
PCB-126	0.0000011 U	0.00000078 U	0.0000014 J	0.00000085 U	0.00000067 U	--	0.0000012 U
PCB-127	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-128/162	0.000004 U	0.0000026 J	0.000013	0.0000022 J	0.0000032 J	--	0.0000055
PCB-129	0.000002 U	0.000002 U	0.0000032	0.0000011 J	0.0000012 J	--	0.000002 U
PCB-13	0.000002 U	0.000002 U	0.000005	0.0000011 J	0.0000022	--	0.000002 U
PCB-130	0.000002 U	0.0000014 J	0.0000058	0.000002 U	0.0000014 J	--	0.0000025
PCB-131/133	0.000004 U	0.000004 U	0.0000029 J	0.000004 U	0.000004 U	--	0.000004 U
PCB-132/161	0.000004 U	0.0000025 J	0.000019	0.0000036 J	0.0000053	--	0.0000073
PCB-134/143	0.000004 U	0.000004 U	0.0000043	0.000004 U	0.0000012 J	--	0.000004 U
PCB-135	0.000002 U	0.000002	0.0000085	0.000002 U	0.0000024	--	0.000003
PCB-136	0.000002 U	0.000002 U	0.0000088	0.000002 U	0.0000032	--	0.0000038
PCB-137	0.000002 U	0.000002 U	0.0000037	0.000002 U	0.000001 J	--	0.000002
PCB-138/163/164	0.000006 U	0.000018	0.00009	0.000015	0.000022	--	0.000033
PCB-139/149	0.000004 U	0.000012	0.000061	0.000011	0.000015	--	0.000024
PCB-14	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-140	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-141	0.000002 U	0.0000032	0.000017	0.0000036	0.0000047	--	0.0000066
PCB-142	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-144	0.000002 U	0.00000086 J	0.0000033	0.000002 U	0.000002 U	--	0.000002 U
PCB-145	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-146/165	0.000004 U	0.0000027 J	0.000012	0.0000019 J	0.0000032 J	--	0.0000046
PCB-147	0.000002 U	0.000002 U	0.0000011 J	0.000002 U	0.000002 U	--	0.000002 U
PCB-148	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-15	0.000002 U	0.0000031	0.000036	0.0000073	0.0000095	--	0.000003
PCB-150	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-151	0.000002 U	0.0000039	0.00002	0.0000034	0.0000053	--	0.0000067
PCB-152	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-153	0.000002 U	0.000018	0.00008	0.000012	0.000019	--	0.000031
PCB-154	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-359	SB-360	SB-360	SB-360	SB-360	SB-360	SB-361
SAMPLE ID	SB359-20191112-7296	SB360-20191112-0006	SB360-20191112-0624	SB360-20191112-2448	SB360-20191112-2448-D	SB360-20191112-6084	SB361-20191112-0006
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE					SB360-20191112-2448		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SB	SS	SS	SB	SB	SB	SS
TOP DEPTH	6	0	0.5	2	2	5	0
BOTTOM DEPTH	8	0.5	2	4	4	7	0.5
PCB-155	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-156	0.00000094 U	0.0000016 J	0.000009	0.0000022	0.0000025	--	0.0000031
PCB-157	0.00000087 U	0.00000046 U	0.0000024	0.000001 J	0.00000048 U	--	0.000001 U
PCB-158/160	0.000004 U	0.000002 J	0.0000099	0.0000017 J	0.0000025 J	--	0.0000043
PCB-159	0.000002 U	0.000002 U	0.0000012 J	0.000002 U	0.000002 U	--	0.000002 U
PCB-16	0.000002 U	0.000002 U	0.0000058	0.0000024	0.0000027	--	0.000002 U
PCB-166	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-167	0.00000095 U	0.00000046 U	0.0000047	0.0000013 J	0.0000012 J	--	0.0000021
PCB-168	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-169	0.0000011 U	0.00000053 U	0.00000063 U	0.00000072 U	0.00000047 U	--	0.0000012 U
PCB-17	0.000002 U	0.000002 U	0.0000049	0.0000024	0.0000028	--	0.000002 U
PCB-170	0.000002 U	0.0000071	0.000032	0.0000056	0.0000091	--	0.000012
PCB-171	0.000002 U	0.0000025	0.000009	0.000002 U	0.0000024	--	0.0000027
PCB-172	0.000002 U	0.0000018 J	0.0000077	0.0000025	0.000002	--	0.000002 U
PCB-173	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-174	0.000002 U	0.0000084	0.000037	0.000007	0.0000092	--	0.000012
PCB-175	0.000002 U	0.000002 U	0.0000017 J	0.000002 U	0.000002 U	--	0.000002 U
PCB-176	0.000002 U	0.000002 U	0.0000038	0.000002 U	0.0000011 J	--	0.000002 U
PCB-177	0.000002 U	0.0000046	0.00002	0.0000033	0.0000052	--	0.000008
PCB-178	0.000002 U	0.0000029	0.0000079	0.000002 U	0.000002	--	0.0000033
PCB-179	0.000002 U	0.0000035	0.000012	0.0000032	0.0000032	--	0.0000049
PCB-18	0.000002 U	0.000002	0.000015	0.0000051	0.0000063	--	0.0000024
PCB-180	0.000002 U	0.00002	0.000093	0.000014	0.000023	--	0.000029
PCB-181	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-182/187	0.000004 U	0.000013	0.000049	0.000006	0.000011	--	0.000015
PCB-183	0.000002 U	0.0000055	0.000021	0.000004	0.0000057	--	0.0000073
PCB-184	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-185	0.000002 U	0.000002 U	0.0000047	0.0000016 J	0.0000014 J	--	0.000002 U
PCB-186	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-188	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-189	0.00000089 U	0.00000055 U	0.0000018 J	0.00000082 U	0.00000043 U	--	0.00000091 U
PCB-19	0.000002 U	0.000002 U	0.0000013 J	0.000002 U	0.000002 U	--	0.000002 U
PCB-190	0.000002 U	0.0000021	0.0000073	0.0000016 J	0.0000019 J	--	0.0000027
PCB-191	0.000002 U	0.000002 U	0.0000016 J	0.000002 U	0.000002 U	--	0.000002 U
PCB-192	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-193	0.000002 U	0.0000014 J	0.0000041	0.000002 U	0.0000016 J	--	0.0000021
PCB-194	0.000002 U	0.0000072	0.000023	0.0000038	0.0000058	--	0.0000065
PCB-195	0.000002 U	0.0000027	0.0000072	0.0000016 J	0.0000022	--	0.0000036
PCB-196/203	0.000004 U	0.000013	0.000037	0.0000047	0.0000074	--	0.0000092
PCB-197	0.000002 U	0.000002 U	0.0000011 J	0.000002 U	0.000002 U	--	0.000002 U
PCB-198	0.000002 U	0.000002 U	0.0000016 J	0.000002 U	0.000002 U	--	0.000002 U
PCB-199	0.000002 U	0.000012	0.000035	0.0000052	0.0000076	--	0.0000082
PCB-2	0.000002 U	0.000002 U	0.000013	0.0000032	0.0000046	--	0.0000024
PCB-20/21/33	0.000006 U	0.0000023 J	0.000022	0.0000062	0.0000095	--	0.0000031 J
PCB-200	0.000002 U	0.000002 U	0.0000032	0.000002 U	0.0000011 J	--	0.000002 U
PCB-201	0.000002 U	0.0000014 J	0.0000043	0.000002 U	0.0000011 J	--	0.000002 U
PCB-202	0.000002 U	0.0000037	0.00001	0.0000018 J	0.0000023	--	0.0000021
PCB-204	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-205	0.000002 U	0.000002 U	0.0000016 J	0.0000012 J	0.000002 U	--	0.000002 U
PCB-206	0.000002 U	0.000027	0.000063	0.0000079	0.000011	--	0.000013
PCB-207	0.000002 U	0.0000021	0.0000064	0.000002 U	0.00000096 J	--	0.0000016 J
PCB-208	0.000002 U	0.000011	0.000025	0.0000029	0.0000041	--	0.0000058
PCB-209	0.000002 U	0.00003	0.000077	0.0000092	0.000013	--	0.000016
PCB-22	0.000002 U	0.0000015 J	0.000013	0.0000038	0.0000054	--	0.0000024
PCB-23	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-24	0.000002 U	0.000002 U	0.0000012 J	0.000002 U	0.000002 U	--	0.000002 U
PCB-25	0.000002 U	0.000002 U	0.0000041	0.0000015 J	0.0000017 J	--	0.000002 U
PCB-26	0.000002 U	0.000002 U	0.0000062	0.0000024	0.0000025	--	0.000002 U
PCB-27	0.000002 U	0.000002 U	0.000001 J	0.000002 U	0.000002 U	--	0.000002 U
PCB-28	0.000002 U	0.0000034	0.000033	0.0000081	0.000012	--	0.0000045
PCB-29	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-3	0.000002 U	0.0000017 J	0.000029	0.000008	0.00001	--	0.0000022
PCB-30	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-31	0.000002 U	0.0000036	0.000037	0.00001	0.000014	--	0.000005
PCB-32	0.000002 U	0.000002 U	0.000006	0.0000016 J	0.0000024	--	0.000002 U
PCB-34	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-35	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-36	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-37	0.000002 U	0.0000021	0.000023	0.0000052	0.0000065	--	0.0000027
PCB-38	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-359	SB-360	SB-360	SB-360	SB-360	SB-360	SB-361
SAMPLE ID	SB359-20191112-7296	SB360-20191112-0006	SB360-20191112-0624	SB360-20191112-2448	SB360-20191112-2448-D	SB360-20191112-6084	SB361-20191112-0006
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE					SB360-20191112-2448		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SB	SS	SS	SB	SB	SB	SS
TOP DEPTH	6	0	0.5	2	2	5	0
BOTTOM DEPTH	8	0.5	2	4	4	7	0.5
PCB-39	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-4	0.000002 U	0.000002 U	0.0000041	0.0000022	0.000002	--	0.000002 U
PCB-40	0.000002 U	0.000002 U	0.0000039	0.000002 U	0.000002 U	--	0.000002 U
PCB-41/64/71/72	0.000008 U	0.0000036 J	0.000032	0.0000068 J	0.000009	--	0.0000062 J
PCB-42/59	0.000004 U	0.0000013 J	0.0000096	0.0000031 J	0.0000034 J	--	0.0000021 J
PCB-43/49	0.000004 U	0.0000031 J	0.000025	0.000006	0.000008	--	0.0000055
PCB-44	0.000002 U	0.0000031	0.000023	0.0000073	0.0000083	--	0.0000076
PCB-45	0.000002 U	0.000002 U	0.0000031	0.0000015 J	0.0000015 J	--	0.000002 U
PCB-46	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-47	0.000002 U	0.0000017 J	0.000011	0.0000034	0.0000032	--	0.0000023
PCB-48/75	0.000004 U	0.00000077 J	0.0000048	0.0000014 J	0.0000019 J	--	0.0000011 J
PCB-5	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-50	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-51	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-52/69	0.000004 U	0.0000041	0.000036	0.000008	0.000011	--	0.000013
PCB-53	0.000002 U	0.000002 U	0.0000028	0.000002 U	0.000002 U	--	0.000002 U
PCB-54	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-55	0.000002 U	0.000002 U	0.0000014 J	0.000002 U	0.000002 U	--	0.000002 U
PCB-56/60	0.000004 U	0.000003 J	0.000036	0.0000064	0.000009	--	0.0000042
PCB-57	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-58	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-6	0.000002 U	0.000002 U	0.000006	0.0000021	0.000002 U	--	0.000002 U
PCB-61/70	0.000004 U	0.0000058	0.000076	0.000013	0.000022	--	0.000015
PCB-62	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-63	0.000002 U	0.000002 U	0.0000023	0.000002 U	0.000002 U	--	0.000002 U
PCB-65	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-66/76	0.000004 U	0.0000043	0.00005	0.00001	0.000016	--	0.0000072
PCB-67	0.000002 U	0.000002 U	0.0000017 J	0.000002 U	0.000001 J	--	0.000002 U
PCB-68	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-7	0.000002 U	0.000002 U	0.000002	0.000002 U	0.000002 U	--	0.000002 U
PCB-73	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-74	0.000002 U	0.0000022	0.000027	0.0000057	0.0000088	--	0.000004
PCB-77	0.0000011 U	0.00000099 J	0.0000096	0.0000021	0.0000023	--	0.0000014 J
PCB-78	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-79	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-8	0.000002 U	0.0000018 J	0.000024	0.000007	0.000002 U	--	0.0000026
PCB-80	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-81	0.00000097 U	0.00000051 U	0.0000011 J	0.00000086 U	0.00000062 U	--	0.00000073 U
PCB-82	0.000002 U	0.000002 U	0.0000076	0.000002	0.0000025	--	0.0000029
PCB-83/112	0.000004 U	0.000004 U	0.0000025 J	0.000004 U	0.000004 U	--	0.000004 U
PCB-84/92	0.000004 U	0.0000023 J	0.000019	0.0000037 J	0.0000056	--	0.0000098
PCB-85/116	0.000004 U	0.000002 J	0.000012	0.0000025 J	0.0000034 J	--	0.000004
PCB-86	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-87/117/125	0.000006 U	0.0000025 J	0.000025	0.0000041 J	0.0000063	--	0.0000098
PCB-88/91	0.000004 U	0.000004 U	0.0000088	0.000004 U	0.0000028 J	--	0.0000026 J
PCB-89	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-9	0.000002 U	0.000002 U	0.0000019 J	0.000002 U	0.000002 U	--	0.000002 U
PCB-93	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-94	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-95	0.000002 U	0.0000044	0.000042	0.0000093	0.000014	--	0.000016
PCB-96	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-97	0.000002 U	0.0000023	0.000019	0.0000033	0.0000047	--	0.0000087
PCB-98/102	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U
PCB-99	0.000002 U	0.0000048	0.000025	0.0000036	0.0000054	--	0.000012
PENTACHLOROBIPHENYLS	0 UJ	0.000048 J	0.00042 J	0.000065 J	0.0001 J	--	0.00015 J
TEQ DIOXIN-LIKE PCBs (BIRD)	0.00000081 U	5.002E-08	7.3434E-07	1.0582E-07	1.1595E-07	--	7.1081E-08
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	0.00000081 U	1.1486E-07	7.3465E-07	1.9173E-07	1.8076E-07	--	1.6828E-07
TEQ DIOXIN-LIKE PCBs (FISH)	0.00000081 U	1.25E-10	8.764E-09	2.56E-10	2.82E-10	--	2.02E-10
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	0.00000081 U	2.221E-09	8.779E-09	2.619E-09	2.128E-09	--	3.422E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	0.00000081 U	2.55E-10	1.4282E-07	4.92E-10	5.48E-10	--	5.21E-10
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	0.00000081 U	4.7322E-08	1.5227E-07	5.3956E-08	4.1223E-08	--	7.8684E-08
TETRACHLOROBIPHENYLS	0 UJ	0.000034 J	0.00036 J	0.000075 J	0.00011 J	--	0.00007 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0 U	0.00000619	0.0000632	0.0000115	0.0000129	--	0.0000141
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0 U	0.00036995	0.0020314	0.0003645	0.00053016	--	0.0005648
TOTAL PCB CONGENERS ZEROND	0 U	0.00037614	0.0020946	0.000376	0.00054306	--	0.0005789
TOTAL PCB CONGENERS-NOAA	0 U	0.0001765	0.0008452	0.0001434	0.000205	--	0.0002489
TOTAL PCB CONGENERS-NOAA HALFND	0.00020156	0.0004835	0.00215092	0.00047742	0.00062906	--	0.0006843
TOTAL PCB CONGENERS-NOAA X2	0 U	0.000353	0.0016904	0.0002868	0.00041	--	0.0004978
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.00004759	0.000353	0.0016904	0.0002868	0.000412	--	0.0004978
TRICHLOROBIPHENYLS	0 UJ	0.000015 J	0.00017 J	0.000049 J	0.000066 J	--	0.00002 J

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-359	SB-360	SB-360	SB-360	SB-360	SB-360	SB-361
SAMPLE ID	SB359-20191112-7296	SB360-20191112-0006	SB360-20191112-0624	SB360-20191112-2448	SB360-20191112-2448-D	SB360-20191112-6084	SB361-20191112-0006
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE					SB360-20191112-2448		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SB	SS	SS	SB	SB	SB	SS
TOP DEPTH	6	0	0.5	2	2	5	0
BOTTOM DEPTH	8	0.5	2	4	4	7	0.5
DIOXINS/FURANS (NG/KG)							
1,2,3,4,6,7,8,9-OCDD	240	200	700	220	140	--	570
1,2,3,4,6,7,8,9-OCDF	11	3.5 J	8.7 J	2 J	1.3 J	--	5.2 J
1,2,3,4,6,7,8-HPCDD	16	9.3	180	6.8	4.7 J	--	13
1,2,3,4,6,7,8-HPCDF	11	1.9 J	6.9	1.5 J	0.97 J	--	2.8 J
1,2,3,4,7,8,9-HPCDF	0.52 Z	0.23 U	0.93 J	0.38 J	0.2 U	--	0.24 J
1,2,3,4,7,8-HXCDD	0.84 J	0.29 U	7.8	0.45 J	0.23 U	--	0.32 J
1,2,3,4,7,8-HXCDF	1.1 J	0.17 U	2.9 J	0.66 J	0.36 J	--	0.42 J
1,2,3,6,7,8-HXCDD	1.7 J	0.48 J	33	0.99 J	0.54 J	--	0.63 J
1,2,3,6,7,8-HXCDF	0.65 J	0.3 U	1.7 J	0.53 J	0.3 U	--	0.36 J
1,2,3,7,8,9-HXCDD	1.6 J	0.5 J	16	0.65 J	0.39 J	--	0.57 J
1,2,3,7,8,9-HXCDF	0.47 J	0.34 U	0.37 U	0.43 J	0.24 U	--	0.23 U
1,2,3,7,8-PECDD	1.1 J	0.26 U	3.4 J	0.27 U	0.17 U	--	0.25 J
1,2,3,7,8-PECDF	0.87 J	0.25 U	2.3 J	0.6 J	0.25 U	--	0.3 J
2,3,4,6,7,8-HXCDF	0.79 J	0.27 U	1.2 J	0.42 J	0.23 U	--	0.44 J
2,3,4,7,8-PECDF	0.54 J	0.18 U	2.4 J	0.49 J	0.22 U	--	0.47 J
2,3,7,8-TCDD	0.14 U	0.15 U	0.39 J	0.14 U	0.13 U	--	0.067 U
2,3,7,8-TCDF	1.1	0.13 U	2.1	0.34 J	0.23 J	--	0.35 J
TEQ DIOXINS (BIRD)	3.5033	0.10345	11.74917	1.2392	0.33893	--	1.40222
TEQ DIOXINS (BIRD) HALFND	3.5733	0.53835	11.76767	1.4442	0.65668	--	1.44722
TEQ DIOXINS (FISH)	2.3788	0.05845	10.50917	0.7852	0.08533	--	0.91242
TEQ DIOXINS (FISH) HALFND	2.4488	0.4456	10.52767	0.9902	0.39358	--	0.95742
TEQ DIOXINS (HUMANS/MAMMALS)	2.4636	0.27105	13.13991	0.7654	0.25109	--	1.04196
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	2.5336	0.58295	13.15841	0.9704	0.48884	--	1.08696
TOTAL HPCDD	37 J	19 J	640 J	13 J	8.7 J	--	25 J
TOTAL HPCDF	21 J	3.7 J	12 J	2.5 J	1.6 J	--	6 J
TOTAL HXCDD	27 J	6.3 J	970 J	14 J	7.4 J	--	10 J
TOTAL HXCDF	12 J	1.5 J	17 J	3.4 J	0.84 J	--	4.1 J
TOTAL PECDD	19 J	3.3 J	600 J	8.8 J	3.9 J	--	5.2 J
TOTAL PECDF	7.8 J	1.2 J	31 J	4.8 J	0.83 J	--	5.6 J
TOTAL TCDD	20 J	2.3 J	230 J	8.8 J	2.8 J	--	4.3 J
TOTAL TCDF	6.8 J	2.3 J	54 J	7.2 J	3.2 J	--	8.4 J
METALS (MG/KG)							
ALUMINUM	9960	5690	13400	12400	12300	--	6270
ANTIMONY	1.2 U	1.1 U	1.2 U	1.3 UJ	1.2 U	--	1.2 U
ARSENIC	6.8	6.9	9	6.7 J	9.8	--	4.7
BARIUM	58.1	66.3	123	101 J	141	--	27.6
BERYLLIUM	0.9	0.53 J	0.99	0.64	0.99	--	0.22 J
CADMIUM	0.073 J	0.16 J	0.15 J	0.082 J	0.11 J	--	0.41 J
CALCIUM	666	114000	1470	1190	1070	--	132000
CHROMIUM	17.4	9.1	14.3	9.9 J	15.7	--	5.4
COBALT	8.2	14.5	12.9	9.2 J	15.7	--	5.6
COPPER	15.9	16.6	34.8	29.1 J	41	--	7.8
CYANIDE	0.12 J	0.57 R	0.63 R	0.65 R	0.59 R	--	0.57 R
IRON	16500	11600	17200	34400	22800	--	12700
LEAD	16.7	15.9	22.6	15.5 J	21.9	--	6.8
MAGNESIUM	1160	15700	1850	4040 J	4530	--	6500
MANGANESE	234	653	422	443 J	355	--	192
MERCURY	0.12 UJ	0.11 U	0.041 J	0.041 J	0.033 J	--	0.021 J
NICKEL	11.4	15.7	25.1	18.3 J	31.6	--	9.2
POTASSIUM	1470	1580	2640	2600	2240	--	1430
SELENIUM	3 U	2.8 U	3 U	3.2 U	2.9 U	--	2.9 U
SILVER	0.6 U	0.55 U	0.59 U	0.63 U	0.058 J	--	0.58 U
SODIUM	597 U	572 U	612 U	650 U	599 U	--	596 U
THALLIUM	0.6 U	0.55 U	0.59 U	0.63 U	0.59 U	--	0.58 U
VANADIUM	19.1	9	14.3	10	14.8	--	5.7
ZINC	45.7	44.1	71.8	50.8 J	91.5	--	31.7
MISCELLANEOUS (%)							
TOTAL SOLIDS	--	--	80	--	--	--	--
MISCELLANEOUS (MG/KG)							
TOTAL ORGANIC CARBON	--	--	76100	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)							
PERCENT SOLIDS	--	--	81	--	--	78	--

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-361	SB-361	SB-361	SB-362	SB-362	SB-362	SB-362
SAMPLE ID	SB361-20191112-0624	SB361-20191112-2448	SB361-20191112-4872	SB362-20191112-0006	SB362-20191112-0624	SB362-20191112-2448	SB362-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	0.5	2	4	0	0.5	2	5
BOTTOM DEPTH	2	4	6	0.5	2	4	7
VOLATILES (MG/KG)							
1,1,1-TRICHLOROETHANE	0.0056 UJ	--	0.0044 UJ	0.0047 UJ	0.0053 U	--	0.0053 U
1,1,2,2-TETRACHLOROETHANE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
1,1,2-TRICHLOROETHANE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0056 UJ	--	0.0044 UJ	0.0047 UJ	0.0053 U	--	0.0053 U
1,1-DICHLOROETHANE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
1,1-DICHLOROETHENE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
1,2,3-TRICHLOROBENZENE	0.0056 UJ	--	0.0044 UJ	0.0047 UJ	0.0053 UJ	--	0.0053 U
1,2,4-TRICHLOROBENZENE	0.0056 UJ	--	0.0044 UJ	0.0047 UJ	0.0053 UJ	--	0.0053 U
1,2-DIBROMO-3-CHLOROPROPANE	0.0056 UJ	--	0.0044 U	0.0047 UJ	0.0053 UJ	--	0.0053 U
1,2-DIBROMOETHANE	0.0056 UJ	--	0.0044 UJ	0.0047 UJ	0.0053 U	--	0.0053 U
1,2-DICHLOROBENZENE	0.0056 UJ	--	0.0044 UJ	0.0047 UJ	0.0053 UJ	--	0.0053 U
1,2-DICHLOROETHANE	0.0056 UJ	--	0.0044 UJ	0.0047 UJ	0.0053 U	--	0.0053 U
1,2-DICHLOROPROPANE	0.0056 U	--	0.0044 UJ	0.0047 U	0.0053 U	--	0.0053 U
1,3-DICHLOROBENZENE	0.0056 UJ	--	0.0044 UJ	0.0047 UJ	0.0053 UJ	--	0.0053 U
1,4-DICHLOROBENZENE	0.0056 UJ	--	0.0044 UJ	0.0047 UJ	0.0053 UJ	--	0.0053 U
2-BUTANONE	0.011 U	--	0.0087 U	0.0093 U	0.011 U	--	0.011 U
2-HEXANONE	0.011 U	--	0.0087 U	0.0093 U	0.0053 U	--	0.011 U
4-METHYL-2-PENTANONE	0.011 U	--	0.0087 U	0.0093 U	0.011 U	--	0.011 U
ACETONE	0.011 U	--	0.0087 U	0.0093 U	0.011 U	--	0.0089 J
BENZENE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
BROMOCHLOROMETHANE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
BROMODICHLOROMETHANE	0.0056 U	--	0.0044 UJ	0.0047 U	0.0053 U	--	0.0053 U
BROMOFORM	0.0056 UJ	--	0.0044 U	0.0047 UJ	0.0053 UJ	--	0.0053 U
BROMOMETHANE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
CARBON DISULFIDE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
CARBON TETRACHLORIDE	0.0056 UJ	--	0.0044 UJ	0.0047 UJ	0.0053 U	--	0.0053 U
CHLOROBENZENE	0.0056 U	--	0.0044 UJ	0.0047 U	0.0053 UJ	--	0.0053 U
CHLORODIBROMOMETHANE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
CHLOROETHANE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
CHLOROFORM	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
CHLOROMETHANE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
CIS-1,2-DICHLOROETHENE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
CIS-1,3-DICHLOROPROPENE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
CYCLOHEXANE	0.0056 U	--	0.0044 UJ	0.0047 U	0.0053 U	--	0.0053 U
DICHLORODIFLUOROMETHANE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
ETHYLBENZENE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
ISOPROPYLBENZENE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
M+P-XYLENES	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
METHYL ACETATE	0.0056 UJ	--	0.0044 UJ	0.0047 UJ	0.0053 U	--	0.0053 U
METHYL CYCLOHEXANE	0.0056 U	--	0.0044 UJ	0.0039 J	0.0053 U	--	0.0053 U
METHYL TERT-BUTYL ETHER	0.0056 UJ	--	0.0044 UJ	0.0047 UJ	0.0053 U	--	0.0053 U
METHYLENE CHLORIDE	0.0056 UJ	--	0.0044 UJ	0.0047 UJ	0.0053 U	--	0.0053 U
O-XYLENE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
STYRENE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
TETRACHLOROETHENE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
TOLUENE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
TRANS-1,2-DICHLOROETHENE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
TRANS-1,3-DICHLOROPROPENE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
TRICHLOROETHENE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U
TRICHLOROFLUOROMETHANE	0.0056 UJ	--	0.0044 UJ	0.0047 UJ	0.0053 U	--	0.0053 U
VINYL CHLORIDE	0.0056 U	--	0.0044 U	0.0047 U	0.0053 U	--	0.0053 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-361	SB-361	SB-361	SB-362	SB-362	SB-362	SB-362
SAMPLE ID	SB361-20191112-0624	SB361-20191112-2448	SB361-20191112-4872	SB362-20191112-0006	SB362-20191112-0624	SB362-20191112-2448	SB362-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	0.5	2	4	0	0.5	2	5
BOTTOM DEPTH	2	4	6	0.5	2	4	7
SEMIVOLATILES (MG/KG)							
1,1-BIPHENYL	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
1,2,4,5-TETRACHLOROBENZENE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
1,4-DIOXANE	0.078 U	--	0.079 U	0.073 U	0.076 U	--	0.081 UJ
2,2'-OXYBIS(1-CHLOROPROPANE)	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
2,3,4,6-TETRACHLOROPHENOL	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
2,4,5-TRICHLOROPHENOL	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
2,4,6-TRICHLOROPHENOL	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
2,4-DICHLOROPHENOL	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
2,4-DIMETHYLPHENOL	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
2,4-DINITROPHENOL	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
2,4-DINITROTOLUENE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
2,6-DINITROTOLUENE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
2-CHLORONAPHTHALENE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
2-CHLOROPHENOL	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
2-METHYLNAPHTHALENE	0.037 J	--	0.2 U	0.19 U	0.046 J	--	0.21 U
2-METHYLPHENOL	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
2-NITROANILINE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
2-NITROPHENOL	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
3&4-METHYLPHENOL	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
3,3'-DICHLOROBENZIDINE	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
3-NITROANILINE	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
4,6-DINITRO-2-METHYLPHENOL	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
4-BROMOPHENYL PHENYL ETHER	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
4-CHLORO-3-METHYLPHENOL	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
4-CHLOROANILINE	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
4-CHLOROPHENYL PHENYL ETHER	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
4-NITROANILINE	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
4-NITROPHENOL	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
ACENAPHTHENE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
ACENAPHTHYLENE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
ACETOPHENONE	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
ANTHRACENE	0.2 U	--	0.2 U	0.19 U	0.02 J	--	0.21 U
ATRAZINE	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
BAP EQUIVALENT-HALFND	0.22313	--	0.2 U	0.212786	0.18753	--	0.234476
BAP EQUIVALENT-POS	0.00213	--	0.2 U	0.002836	0.09253	--	0.002426
BENZALDEHYDE	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
BENZO(A)ANTHRACENE	0.2 U	--	0.2 U	0.19 U	0.068 J	--	0.21 U
BENZO(A)PYRENE	0.2 U	--	0.2 U	0.19 U	0.07 J	--	0.21 U
BENZO(B)FLUORANTHENE	0.021 J	--	0.2 U	0.028 J	0.11 J	--	0.024 J
BENZO(G,H,I)PERYLENE	0.2 U	--	0.2 U	0.19 U	0.041 J	--	0.21 U
BENZO(K)FLUORANTHENE	0.2 U	--	0.2 U	0.19 U	0.039 J	--	0.21 U
BIS(2-CHLOROETHOXY)METHANE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
BIS(2-CHLOROETHYL)ETHER	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 U	--	0.2 U	0.029 J	0.019 J	--	0.21 U
BUTYL BENZYL PHTHALATE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
CAPROLACTAM	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
CARBAZOLE	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
CHRYSENE	0.03 J	--	0.2 U	0.036 J	0.14 J	--	0.026 J
DIBENZO(A,H)ANTHRACENE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
DIBENZOFURAN	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
DIETHYL PHTHALATE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
DIMETHYL PHTHALATE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
DI-N-BUTYL PHTHALATE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
DI-N-OCTYL PHTHALATE	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
FLUORANTHENE	0.021 J	--	0.39 U	0.025 J	0.15 J	--	0.026 J
FLUORENE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
HEXACHLOROBENZENE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
HEXACHLOROBUTADIENE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
HEXACHLOROCYCLOPENTADIENE	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
HEXACHLOROETHANE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
HIGH MOLECULAR WEIGHT PAHS	0.072	--	0 U	0.088	0.65	--	0.075
INDENO(1,2,3-CD)PYRENE	0.2 U	--	0.2 U	0.19 U	0.042 J	--	0.21 U
ISOPHORONE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
LOW MOLECULAR WEIGHT PAHS	0.125	--	0 U	0.065	0.354	--	0.062
NAPHTHALENE	0.029 J	--	0.2 U	0.19 U	0.024 J	--	0.21 U
NITROBENZENE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
N-NITROSO-DI-N-PROPYLAMINE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
N-NITROSODIPHENYLAMINE	0.2 U	--	0.2 U	0.19 U	0.19 U	--	0.21 U
PENTACHLOROPHENOL	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-361	SB-361	SB-361	SB-362	SB-362	SB-362	SB-362
SAMPLE ID	SB361-20191112-0624	SB361-20191112-2448	SB361-20191112-4872	SB362-20191112-0006	SB362-20191112-0624	SB362-20191112-2448	SB362-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	0.5	2	4	0	0.5	2	5
BOTTOM DEPTH	2	4	6	0.5	2	4	7
PHENANTHRENE	0.075 J	--	0.2 U	0.04 J	0.16 J	--	0.036 J
PHENOL	0.38 U	--	0.39 U	0.36 U	0.38 U	--	0.4 U
PYRENE	0.021 J	--	0.2 U	0.024 J	0.14 J	--	0.025 J
TOTAL PAHS	0.197	--	0 U	0.153	1.004	--	0.137
SEMIVOLATILE SELECTIVE ION MONITORING (MG/KG							
1,4-DIOXANE	0.0077 U	--	0.0081 U	0.0073 U	0.0074 U	--	0.0081 U
2-METHYLNAPHTHALENE	0.059	--	0.0084	0.025	0.079	--	0.02
ACENAPHTHENE	0.0039	--	0.0039 U	0.0036 U	0.0038	--	0.004 U
ACENAPHTHYLENE	0.0028 J	--	0.0012 J	0.0042	0.025	--	0.0038 J
ANTHRACENE	0.0061	--	0.002 J	0.006	0.023	--	0.0055
BAP EQUIVALENT-HALFND	0.015296	--	0.005914	0.022789	0.11362	--	0.017812
BAP EQUIVALENT-POS	0.013396	--	0.003964	0.020989	0.11172	--	0.015812
BENZO(A)ANTHRACENE	0.014	--	0.0038 J	0.014	0.099	--	0.015
BENZO(A)PYRENE	0.0084	--	0.0025 J	0.014	0.082	--	0.011
BENZO(B)FLUORANTHENE	0.03	--	0.0087	0.046	0.16	--	0.027
BENZO(G,H,I)PERYLENE	0.008	--	0.0029 J	0.011	0.027	--	0.0049
BENZO(K)FLUORANTHENE	0.0059	--	0.0019 J	0.011	0.054	--	0.0078
CHRYSENE	0.057	--	0.015	0.039	0.18	--	0.034
DIBENZO(A,H)ANTHRACENE	0.0038 U	--	0.0039 U	0.0036 U	0.0038 U	--	0.004 U
FLUORANTHENE	0.028 J	--	0.008 J	0.032 J	0.23	--	0.045 J
FLUORENE	0.0041	--	0.0039 U	0.0067	0.014	--	0.0049
HIGH MOLECULAR WEIGHT PAHS	0.1551	--	0.046	0.1714	0.783	--	0.1307
INDENO(1,2,3-CD)PYRENE	0.0048	--	0.0018 J	0.0084	0.031	--	0.005
LOW MOLECULAR WEIGHT PAHS	0.1879	--	0.0318	0.1049	0.5798	--	0.1144
NAPHTHALENE	0.05	--	0.0046	0.011	0.044	--	0.0082
PENTACHLOROPHENOL	0.0078 U	--	0.0079 U	0.0073 UJ	0.0076 UJ	--	0.0081 UJ
PHENANTHRENE	0.093	--	0.016	0.045	0.24	--	0.047
PYRENE	0.027	--	0.0094	0.028	0.15	--	0.026
TOTAL PAHS	0.057	--	0.015	0.039	0.18	--	0.034
PESTICIDES (MG/KG)							
4,4'-DDD	0.0037 U	--	0.004 U	0.0036 U	0.00031 J	--	0.0039 U
4,4'-DDE	0.0037 U	--	0.004 U	0.0036 U	0.0037 U	--	0.0039 U
4,4'-DDT	0.0037 U	--	0.004 U	0.0036 U	0.00038 J	--	0.0039 U
ALDRIN	0.0019 U	--	0.002 U	0.0019 U	0.0019 U	--	0.002 U
ALPHA-BHC	0.0019 U	--	0.002 U	0.0019 U	0.0019 U	--	0.002 U
ALPHA-CHLORDANE	0.0019 U	--	0.002 U	0.0019 U	0.0019 U	--	0.002 U
BETA-BHC	0.0019 U	--	0.002 U	0.0019 U	0.0019 U	--	0.002 U
DELTA-BHC	0.0019 U	--	0.002 U	0.0019 U	0.0019 U	--	0.002 U
DIELDRIN	0.0037 U	--	0.004 U	0.0036 U	0.0037 U	--	0.0039 U
ENDOSULFAN I	0.0019 U	--	0.002 U	0.0019 U	0.00041 J	--	0.002 U
ENDOSULFAN II	0.0037 U	--	0.004 U	0.0036 U	0.0037 U	--	0.0039 U
ENDOSULFAN SULFATE	0.0037 U	--	0.004 U	0.0036 U	0.0037 U	--	0.0039 U
ENDRIN	0.0037 U	--	0.004 U	0.0036 U	0.00037 J	--	0.0039 U
ENDRIN ALDEHYDE	0.0037 U	--	0.004 U	0.0036 U	0.00036 J	--	0.0039 U
ENDRIN KETONE	0.0037 U	--	0.004 U	0.0036 U	0.00094 J	--	0.0039 U
GAMMA-BHC (LINDANE)	0.0019 U	--	0.002 U	0.0019 U	0.0019 U	--	0.002 U
GAMMA-CHLORDANE	0.0019 U	--	0.002 U	0.0019 U	0.0019 U	--	0.002 U
HEPTACHLOR	0.0019 U	--	0.002 U	0.0019 U	0.0019 U	--	0.002 U
HEPTACHLOR EPOXIDE	0.0019 U	--	0.002 U	0.0019 U	0.0019 U	--	0.002 U
METHOXYCHLOR	0.019 U	--	0.021 U	0.0016 J	0.0024 J	--	0.0008 J
TOXAPHENE	0.19 U	--	0.2 U	0.19 U	0.19 U	--	0.2 U
PCBS (MG/KG)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-361	SB-361	SB-361	SB-362	SB-362	SB-362	SB-362
SAMPLE ID	SB361-20191112-0624	SB361-20191112-2448	SB361-20191112-4872	SB362-20191112-0006	SB362-20191112-0624	SB362-20191112-2448	SB362-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	0.5	2	4	0	0.5	2	5
BOTTOM DEPTH	2	4	6	0.5	2	4	7
MOBILE LAB PESTICIDES/PCBS (MG/KG)							
AROCLOR-1016	0.287 U	0.305 U	--	--	0.321 U	0.298 U	--
AROCLOR-1221	0.575 U	0.61 U	--	--	0.641 U	0.595 U	--
AROCLOR-1232	0.287 U	0.305 U	--	--	0.321 U	0.298 U	--
AROCLOR-1242	0.287 U	0.305 U	--	--	0.321 U	0.298 U	--
AROCLOR-1248	0.287 U	0.305 U	--	--	0.321 U	0.298 U	--
AROCLOR-1254	0.287 U	0.305 U	--	--	0.321 U	0.298 U	--
AROCLOR-1260	0.287 U	0.305 U	--	--	0.321 U	0.298 U	--
AROCLOR-1262	0.287 U	0.305 U	--	--	0.321 U	0.298 U	--
AROCLOR-1268	0.287 U	0.305 U	--	--	0.321 U	0.298 U	--
TOTAL AROCLOR	0 U	0 U	--	--	0 U	0 U	--
TOTAL AROCLOR HALFND	1.4355	1.525	--	--	1.6045	1.4895	--
PCB CONGENERS (MG/KG)							
DICHLOROBIPHENYLS	0.00011 J	--	0.000078 J	0.0000058 J	0.00029 J	--	0.000016 J
HEPTACHLOROBIPHENYLS	0.00019 J	--	0.00008 J	0.000039 J	0.00081 J	--	0.000046 J
HEXACHLOROBIPHENYLS	0.00029 J	--	0.00012 J	0.00004 J	0.001 J	--	0.00006 J
MONOCHLOROBIPHENYLS	0.000059 J	--	0.000042 J	0.0000054 J	0.00014 J	--	0.0000082 J
NONACHLOROBIPHENYLS	0.000029 J	--	0.000011 J	0.000013 J	0.00029 J	--	0.000029 J
OCTACHLOROBIPHENYLS	0.000061 J	--	0.000022 J	0.000013 J	0.00036 J	--	0.000025 J
PCB-1	0.000016	--	0.000013	0.000002 U	0.000039	--	0.0000024
PCB-10	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-100	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-101/90	0.00005	--	0.000026	0.0000063	0.00017	--	0.000012
PCB-103	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-104	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-105	0.000024	--	0.000013	0.0000039	0.00009	--	0.0000051
PCB-108/107	0.0000042	--	0.0000022 J	0.000004 U	0.000016	--	0.000004 U
PCB-109	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-11	0.000011	--	0.0000023	0.0000058	0.000019	--	0.0000016 J
PCB-110	0.00006	--	0.00003	0.0000083	0.00027	--	0.000015
PCB-111/115	0.0000019 J	--	0.000004 U	0.000004 U	0.000006	--	0.000004 U
PCB-113	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-114	0.0000021	--	0.0000011 J	0.000001 U	0.000006	--	0.00000083 U
PCB-118/106	0.000048	--	0.000023	0.0000065	0.00019	--	0.000011
PCB-119	0.0000011 J	--	0.000002 U	0.000002 U	0.0000045	--	0.000002 U
PCB-12	0.0000074	--	0.0000048	0.000002 U	0.0000081	--	0.00000091 J
PCB-120	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-121	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-122	0.0000012 J	--	0.000002 U	0.000002 U	0.0000036	--	0.000002 U
PCB-123	0.0000016 J	--	0.0000005 U	0.00000099 U	0.000005	--	0.00000063 U
PCB-124	0.0000028	--	0.0000012 J	0.000002 U	0.0000099	--	0.000002 U
PCB-126	0.0000012 J	--	0.00000067 U	0.0000012 U	0.0000031	--	0.00000075 U
PCB-127	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-128/162	0.0000093	--	0.000004	0.0000023 J	0.000044	--	0.0000027 J
PCB-129	0.0000025	--	0.0000016 J	0.000002 U	0.000012	--	0.000002 U
PCB-13	0.0000054	--	0.0000038	0.000002 U	0.000026	--	0.0000012 J
PCB-130	0.0000046	--	0.0000018 J	0.000002 U	0.000015	--	0.0000013 J
PCB-131/133	0.000002 J	--	0.000001 J	0.000004 U	0.0000064	--	0.000004 U
PCB-132/161	0.000015	--	0.0000063	0.0000017 J	0.00005	--	0.0000035 J
PCB-134/143	0.0000032 J	--	0.0000016 J	0.000004 U	0.0000096	--	0.000004 U
PCB-135	0.0000069	--	0.0000031	0.0000014 J	0.000026	--	0.0000017 J
PCB-136	0.0000064	--	0.0000026	0.000002 U	0.00002	--	0.0000016 J
PCB-137	0.0000027	--	0.0000012 J	0.000002 U	0.000016	--	0.00000094 J
PCB-138/163/164	0.000066	--	0.000028	0.0000097	0.00026	--	0.000015
PCB-139/149	0.000048	--	0.00002	0.0000054	0.00014	--	0.00001
PCB-14	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-140	0.000002 U	--	0.000002 U	0.000002 U	0.0000015 J	--	0.000002 U
PCB-141	0.000013	--	0.0000055	0.000002	0.000046	--	0.0000028
PCB-142	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-144	0.0000029	--	0.0000011 J	0.000002 U	0.0000066	--	0.000002 U
PCB-145	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-146/165	0.000009	--	0.0000037 J	0.0000016 J	0.00003	--	0.0000022 J
PCB-147	0.00000089 J	--	0.000002 U	0.000002 U	0.0000041	--	0.000002 U
PCB-148	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-15	0.000044	--	0.000031	0.000002 U	0.00011	--	0.0000054
PCB-150	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-151	0.000014	--	0.0000056	0.0000021	0.000034	--	0.0000023
PCB-152	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-153	0.000059	--	0.000024	0.0000091	0.00022	--	0.000012
PCB-154	0.000002 U	--	0.000002 U	0.000002 U	0.0000024	--	0.000002 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-361	SB-361	SB-361	SB-362	SB-362	SB-362	SB-362
SAMPLE ID	SB361-20191112-0624	SB361-20191112-2448	SB361-20191112-4872	SB362-20191112-0006	SB362-20191112-0624	SB362-20191112-2448	SB362-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	0.5	2	4	0	0.5	2	5
BOTTOM DEPTH	2	4	6	0.5	2	4	7
PCB-155	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-156	0.0000063	--	0.0000028	0.0000017 J	0.00003	--	0.0000019 J
PCB-157	0.0000017 J	--	0.00000073 J	0.00000085 U	0.0000071	--	0.00000055 U
PCB-158/160	0.0000081	--	0.0000035 J	0.0000025 J	0.000029	--	0.0000023 J
PCB-159	0.00000075 J	--	0.000002 U	0.000002 U	0.0000024	--	0.000002 U
PCB-16	0.0000063	--	0.000004	0.000002 U	0.00002	--	0.000002 U
PCB-166	0.000002 U	--	0.000002 U	0.000002 U	0.0000012 J	--	0.000002 U
PCB-167	0.0000033	--	0.0000014 J	0.0000011 U	0.000014	--	0.00000058 U
PCB-168	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-169	0.00000046 U	--	0.00000057 U	0.0000009 U	0.00000097 U	--	0.00000054 U
PCB-17	0.0000078	--	0.000005	0.000002 U	0.00002	--	0.000002 U
PCB-170	0.000019	--	0.0000082	0.0000045	0.00009	--	0.0000045
PCB-171	0.0000058	--	0.0000027	0.0000025	0.000024	--	0.0000018 J
PCB-172	0.0000044	--	0.000002	0.000002 U	0.00002	--	0.000002 U
PCB-173	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-174	0.000023	--	0.0000096	0.0000038	0.000084	--	0.0000052
PCB-175	0.0000011 J	--	0.000002 U	0.000002 U	0.0000044	--	0.000002 U
PCB-176	0.0000022	--	0.0000013 J	0.000002 U	0.0000083	--	0.000002 U
PCB-177	0.000013	--	0.0000055	0.0000039	0.00005	--	0.0000033
PCB-178	0.000005	--	0.0000023	0.000002 U	0.00002	--	0.000002 U
PCB-179	0.0000085	--	0.0000037	0.0000017 J	0.000033	--	0.0000025
PCB-18	0.000017	--	0.000011	0.000002 U	0.000045	--	0.0000035
PCB-180	0.000053	--	0.000023	0.000011	0.00026	--	0.000014
PCB-181	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-182/187	0.000029	--	0.000012	0.0000065	0.00012	--	0.0000089
PCB-183	0.000013	--	0.0000058	0.000003	0.000049	--	0.0000041
PCB-184	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-185	0.0000027	--	0.0000011 J	0.000002 U	0.0000099	--	0.000002 U
PCB-186	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-188	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-189	0.0000013 J	--	0.00000046 U	0.000001 U	0.0000057	--	0.00000064 U
PCB-19	0.00000097 J	--	0.000002 U	0.000002 U	0.0000032	--	0.000002 U
PCB-190	0.0000046	--	0.0000021	0.0000021	0.000019	--	0.0000013 J
PCB-191	0.0000012 J	--	0.000002 U	0.000002 U	0.0000047	--	0.000002 U
PCB-192	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-193	0.0000031	--	0.000001 J	0.000002 U	0.000012	--	0.000002 U
PCB-194	0.000013	--	0.0000052	0.0000034	0.000071	--	0.0000049
PCB-195	0.0000048	--	0.0000019 J	0.000002 U	0.00002	--	0.0000014 J
PCB-196/203	0.000017	--	0.0000069	0.0000052	0.00011	--	0.0000087
PCB-197	0.00000064 J	--	0.000002 U	0.000002 U	0.0000031	--	0.000002 U
PCB-198	0.000001 J	--	0.000002 U	0.000002 U	0.0000065	--	0.000002 U
PCB-199	0.000015	--	0.0000067	0.0000044	0.000099	--	0.000008
PCB-2	0.00001	--	0.0000052	0.0000022	0.00002	--	0.0000014 J
PCB-20/21/33	0.000024	--	0.000016	0.0000021 J	0.000054	--	0.0000041 J
PCB-200	0.0000019 J	--	0.000002 U	0.000002 U	0.0000095	--	0.000002 U
PCB-201	0.0000018 J	--	0.000002 U	0.000002 U	0.0000099	--	0.000002 U
PCB-202	0.0000043	--	0.0000016 J	0.000002 U	0.000025	--	0.0000021
PCB-204	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-205	0.0000011 J	--	0.000002 U	0.000002 U	0.0000041	--	0.000002 U
PCB-206	0.00002	--	0.0000075	0.0000082	0.0002	--	0.000019
PCB-207	0.0000021	--	0.00000084 J	0.0000015 J	0.000016	--	0.0000019 J
PCB-208	0.0000068	--	0.0000029	0.000003	0.000074	--	0.0000079
PCB-209	0.000021	--	0.0000083	0.000012	0.00026	--	0.000033
PCB-22	0.000014	--	0.0000094	0.0000014 J	0.000032	--	0.0000028
PCB-23	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-24	0.0000012 J	--	0.000002 U	0.000002 U	0.0000025	--	0.000002 U
PCB-25	0.0000034	--	0.0000025	0.000002 U	0.0000067	--	0.000002 U
PCB-26	0.0000063	--	0.0000041	0.000002 U	0.000012	--	0.0000015 J
PCB-27	0.00000091 J	--	0.000002 U	0.000002 U	0.0000023	--	0.000002 U
PCB-28	0.000032	--	0.000021	0.0000034	0.000067	--	0.0000047
PCB-29	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-3	0.000033	--	0.000024	0.0000032	0.00008	--	0.0000044
PCB-30	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-31	0.000042	--	0.000028	0.0000027	0.000078	--	0.0000059
PCB-32	0.0000068	--	0.0000038	0.000002 U	0.000016	--	0.000002 U
PCB-34	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-35	0.0000024	--	0.0000014 J	0.0000019 J	0.0000061	--	0.000002 U
PCB-36	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-37	0.000024	--	0.000015	0.000003	0.000072	--	0.0000057
PCB-38	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-361	SB-361	SB-361	SB-362	SB-362	SB-362	SB-362
SAMPLE ID	SB361-20191112-0624	SB361-20191112-2448	SB361-20191112-4872	SB362-20191112-0006	SB362-20191112-0624	SB362-20191112-2448	SB362-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	0.5	2	4	0	0.5	2	5
BOTTOM DEPTH	2	4	6	0.5	2	4	7
PCB-39	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-4	0.000005	--	0.0000037	0.000002 U	0.000016	--	0.0000011 J
PCB-40	0.0000053	--	0.000003	0.000002 U	0.000013	--	0.000002 U
PCB-41/64/71/72	0.000039	--	0.000022	0.0000027 J	0.00011	--	0.0000066 J
PCB-42/59	0.000014	--	0.000008	0.000004 U	0.000032	--	0.0000021 J
PCB-43/49	0.000033	--	0.000019	0.0000027 J	0.000067	--	0.0000042
PCB-44	0.000033	--	0.000018	0.0000026	0.000067	--	0.0000055
PCB-45	0.0000035	--	0.0000024	0.000002 U	0.0000077	--	0.000002 U
PCB-46	0.0000011 J	--	0.000002 U	0.000002 U	0.0000028	--	0.000002 U
PCB-47	0.000015	--	0.0000073	0.000002 U	0.000031	--	0.0000028
PCB-48/75	0.0000063	--	0.0000043	0.000004 U	0.000014	--	0.0000014 J
PCB-5	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-50	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-51	0.000002 U	--	0.000002 U	0.000002 U	0.0000021	--	0.000002 U
PCB-52/69	0.00004	--	0.000021	0.0000026 J	0.00011	--	0.0000066
PCB-53	0.0000029	--	0.0000018 J	0.000002 U	0.0000066	--	0.000002 U
PCB-54	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-55	0.0000017 J	--	0.000002 U	0.000002 U	0.0000038	--	0.000002 U
PCB-56/60	0.00004	--	0.000024	0.0000025 J	0.00011	--	0.0000055
PCB-57	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-58	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-6	0.0000075	--	0.0000056	0.000002 U	0.000018	--	0.0000011 J
PCB-61/70	0.000078	--	0.000042	0.0000052	0.00023	--	0.000012
PCB-62	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-63	0.0000024	--	0.0000014 J	0.000002 U	0.0000075	--	0.000002 U
PCB-65	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-66/76	0.000056	--	0.000031	0.0000039 J	0.00016	--	0.0000085
PCB-67	0.0000025	--	0.0000012 J	0.000002 U	0.0000059	--	0.000002 U
PCB-68	0.000002 U	--	0.000002 U	0.000002 U	0.0000016 J	--	0.000002 U
PCB-7	0.0000023	--	0.0000021	0.000002 U	0.0000036	--	0.000002 U
PCB-73	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-74	0.000029	--	0.000016	0.0000019 J	0.000077	--	0.0000044
PCB-77	0.0000096	--	0.0000055	0.0000015 J	0.000028	--	0.0000016 J
PCB-78	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-79	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-8	0.00003	--	0.000023	0.000002 U	0.000085	--	0.0000051
PCB-80	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-81	0.0000012 J	--	0.00000044 U	0.00000091 U	0.0000036	--	0.00000063 U
PCB-82	0.0000078	--	0.0000042	0.000002 U	0.000024	--	0.0000019 J
PCB-83/112	0.0000027 J	--	0.0000015 J	0.000004 U	0.0000086	--	0.000004 U
PCB-84/92	0.000016	--	0.0000087	0.0000021 J	0.000039	--	0.0000043
PCB-85/116	0.00001	--	0.0000063	0.000004 U	0.000038	--	0.0000022 J
PCB-86	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-87/117/125	0.000022	--	0.00001	0.0000031 J	0.00007	--	0.0000046 J
PCB-88/91	0.0000067	--	0.0000031 J	0.000004 U	0.000022	--	0.0000016 J
PCB-89	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-9	0.0000018 J	--	0.0000014 J	0.000002 U	0.0000091	--	0.000002 U
PCB-93	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-94	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-95	0.000029	--	0.000014	0.0000031	0.000093	--	0.000008
PCB-96	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U
PCB-97	0.000017	--	0.0000086	0.000002 U	0.000056	--	0.0000035
PCB-98/102	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U
PCB-99	0.000022	--	0.000011	0.0000028	0.000067	--	0.0000053
PENTACHLOROBIPHENYLS	0.00033 J	--	0.00016 J	0.000036 J	0.0012 J	--	0.000075 J
TEQ DIOXIN-LIKE PCBs (BIRD)	7.2347E-07	--	2.7678E-07	7.556E-08	2.0836E-06	--	8.07E-08
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	7.237E-07	--	3.3257E-07	1.8162E-07	2.084E-06	--	1.5005E-07
TEQ DIOXIN-LIKE PCBs (FISH)	7.759E-09	--	6.44E-10	1.77E-10	2.0888E-08	--	1.94E-10
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	7.77E-09	--	2.445E-09	3.436E-09	2.0912E-08	--	2.245E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.2253E-07	--	1.12E-09	3.18E-10	3.1861E-07	--	3.7E-10
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	1.2943E-07	--	4.3249E-08	7.4026E-08	3.3316E-07	--	4.611E-08
TETRACHLOROBIPHENYLS	0.00041 J	--	0.00023 J	0.000026 J	0.0011 J	--	0.000061 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0000523	--	0.00002453	0.0000071	0.0001925	--	0.0000086
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00164086	--	0.00085004	0.0001965	0.0057098	--	0.00037265
TOTAL PCB CONGENERS ZEROND	0.00169316	--	0.00087457	0.0002036	0.0059023	--	0.00038125
TOTAL PCB CONGENERS-NOAA	0.0006111	--	0.0003039	0.0000925	0.002458	--	0.0001725
TOTAL PCB CONGENERS-NOAA HALFND	0.00174739	--	0.00094789	0.00033158	0.00595179	--	0.00048383
TOTAL PCB CONGENERS-NOAA X2	0.0012222	--	0.0006078	0.000185	0.004916	--	0.000345
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0012222	--	0.0006078	0.000191	0.004916	--	0.000345
TRICHLOROBIPHENYLS	0.00019 J	--	0.00012 J	0.000015 J	0.00044 J	--	0.000028 J

TABLE 9

SOIL ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-361	SB-361	SB-361	SB-362	SB-362	SB-362	SB-362
SAMPLE ID	SB361-20191112-0624	SB361-20191112-2448	SB361-20191112-4872	SB362-20191112-0006	SB362-20191112-0624	SB362-20191112-2448	SB362-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	SS	SB	SB	SS	SS	SB	SB
TOP DEPTH	0.5	2	4	0	0.5	2	5
BOTTOM DEPTH	2	4	6	0.5	2	4	7
DIOXINS/FURANS (NG/KG)							
1,2,3,4,6,7,8,9-OCDD	3500	--	1900	160	38	--	4300 J
1,2,3,4,6,7,8,9-OCDF	2.7 J	--	1.6 J	5 Z	1.2 Z	--	1.9 J
1,2,3,4,6,7,8-HPCDD	49	--	24	8.1	12	--	35
1,2,3,4,6,7,8-HPCDF	3.8 J	--	1.5 J	3.8 J	1.8 J	--	1.5 J
1,2,3,4,7,8,9-HPCDF	0.39 J	--	0.2 U	0.29 Z	0.18 U	--	0.93 Z
1,2,3,4,7,8-HXCDD	1.3 J	--	0.44 J	0.17 U	0.3 Z	--	1.6 J
1,2,3,4,7,8-HXCDF	1.3 J	--	0.52 J	0.46 J	0.77 J	--	1 Z
1,2,3,6,7,8-HXCDD	3.4 J	--	0.87 J	0.41 Z	1.1 J	--	1.3 J
1,2,3,6,7,8-HXCDF	0.91 J	--	0.3 J	0.42 Z	0.36 J	--	0.95 Z
1,2,3,7,8,9-HXCDD	2.5 J	--	0.82 J	0.47 Z	0.67 Z	--	1.4 J
1,2,3,7,8,9-HXCDF	0.35 J	--	0.21 U	0.21 U	0.21 U	--	0.94 J
1,2,3,7,8-PECDD	1.2 J	--	0.38 J	0.19 U	0.48 J	--	1.2 J
1,2,3,7,8-PECDF	0.98 J	--	0.37 J	0.48 Z	0.53 J	--	0.96 Z
2,3,4,6,7,8-HXCDF	0.87 J	--	0.28 J	0.36 Z	0.23 J	--	0.97 J
2,3,4,7,8-PECDF	1.1 J	--	0.38 J	0.45 Z	0.3 Z	--	1.1 Z
2,3,7,8-TCDD	0.33 J	--	0.13 U	0.17 U	0.14 U	--	0.35 Z
2,3,7,8-TCDF	0.67 J	--	0.3 J	0.41 Z	0.67 J	--	0.13 U
TEQ DIOXINS (BIRD)	4.53117	--	1.54886	1.1486	1.76592	--	3.85449
TEQ DIOXINS (BIRD) HALFND	4.53117	--	1.62536	1.34335	1.84732	--	3.91949
TEQ DIOXINS (FISH)	3.65567	--	1.17956	0.4678	1.02762	--	3.85049
TEQ DIOXINS (FISH) HALFND	3.65567	--	1.25606	0.7008	1.10902	--	3.85374
TEQ DIOXINS (HUMANS/MAMMALS)	4.60211	--	1.68358	0.5738	1.14566	--	4.38967
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	4.60211	--	1.76008	0.7728	1.22706	--	4.39617
TOTAL HPCDD	85 J	--	46 J	16 J	17 J	--	66 J
TOTAL HPCDF	5.5 J	--	2.1 J	7.1 J	1.8 J	--	1.5 J
TOTAL HXCDD	74 J	--	13 J	3.5 J	20 J	--	9.4 J
TOTAL HXCDF	7.2 J	--	2.4 J	3 J	1.8 J	--	1.9 J
TOTAL PECDD	41 J	--	7.3 J	0.6 J	8.4 J	--	1.2 J
TOTAL PECDF	10 J	--	3.3 J	2.1 J	2.1 J	--	0 UJ
TOTAL TCDD	42 J	--	6.3 J	1.7 J	6.4 J	--	0 UJ
TOTAL TCDF	15 J	--	5.9 J	1.1 J	4.7 J	--	0 UJ
METALS (MG/KG)							
ALUMINUM	9620	--	9550	8160	13100	--	8730
ANTIMONY	1.2 U	--	1.1 U	0.22 J	0.59 J	--	1.2 U
ARSENIC	8.5	--	3.6	5.3	17.7	--	3.4
BARIUM	74.2	--	26.2	59.7	169	--	64.3
BERYLLIUM	0.51 J	--	0.24 J	0.54 J	1.5	--	0.55 J
CADMIUM	0.081 J	--	0.57 U	0.2 J	0.36 J	--	0.6 U
CALCIUM	943	--	1200	43700	4160	--	423 J
CHROMIUM	9.3	--	5.8	10.2	20.2	--	10
COBALT	7.9	--	5.8	8	15.4	--	5.3
COPPER	16.1	--	6.4	15.8	40.7	--	8.7
CYANIDE	0.56 R	--	0.58 R	0.029 J	0.64 R	--	0.035 J
IRON	19600	--	31900	17600	30800	--	13300
LEAD	16.8	--	8.1	13.4	46.3	--	11.1
MAGNESIUM	1120	--	1020	5760	2470	--	851
MANGANESE	256	--	258	385	561	--	192
MERCURY	0.019 J	--	0.032 J	0.12 UJ	0.13 UJ	--	0.12 UJ
NICKEL	9.5	--	4.5	16.6	34.9	--	8.8
POTASSIUM	1640	--	1630	1980	3140	--	1120
SELENIUM	2.9 U	--	2.9 U	2.7 U	3.2 U	--	3 U
SILVER	0.58 U	--	0.57 U	0.55 U	0.057 J	--	0.6 U
SODIUM	581 U	--	555 U	575 U	693 U	--	616 U
THALLIUM	0.58 U	--	0.57 U	0.55 U	0.64 U	--	0.6 U
VANADIUM	11.8	--	7.2	10.2	20	--	12.9
ZINC	27.2	--	13.6	59.2	121	--	29.1
MISCELLANEOUS (%)							
TOTAL SOLIDS	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)							
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)							
PERCENT SOLIDS	87	82	--	--	78	84	--

TABLE 10

SURFACE WATER ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD335	SW/SD335	SW/SD336	SW/SD336	SW/SD342	SW/SD342	SW/SD343	SW/SD343	SW/SD344	SW/SD344	SW/SD345
SAMPLE ID	SW335-20191209	SW335-20191209-F	SW336-20191209	SW336-20191209-F	SW342-20191209	SW342-20191209-F	SW343-20191209	SW343-20191209-F	SW344-20191210	SW344-20191210-F	SW345-20191209
SAMPLE DATE	20191209	20191209	20191209	20191209	20191209	20191209	20191209	20191209	20191210	20191210	20191209
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Creek	Rocklick Creek	Rocklick Creek	Rocklick Creek	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
VOLATILES (UG/L)											
1,1,1-TRICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,1,2,2-TETRACHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,1,2-TRICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	--	0.85 J	--	5 U	--	5 U	--	5 U	--	5 U
1,1-DICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,1-DICHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,2,3-TRICHLOROBENZENE	5 U	--	1.4 J	--	5 U	--	5 U	--	5 U	--	5 U
1,2,4-TRICHLOROBENZENE	5 U	--	1.1 J	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DIBROMO-3-CHLOROPROPANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DIBROMOETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROBENZENE	5 U	--	0.83 J	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROPROPANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,3-DICHLOROBENZENE	5 U	--	0.65 J	--	5 U	--	5 U	--	5 U	--	5 U
1,4-DICHLOROBENZENE	5 U	--	0.82 J	--	5 U	--	5 U	--	5 U	--	5 U
2-BUTANONE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
2-HEXANONE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
4-METHYL-2-PENTANONE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
ACETONE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
BENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BROMOCHLOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BROMODICHLOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BROMOFORM	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BROMOMETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CARBON DISULFIDE	5 U	--	0.62 J	--	5 U	--	5 U	--	5 UJ	--	5 U
CARBON TETRACHLORIDE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CHLORODIBROMOMETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROFORM	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CIS-1,2-DICHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CIS-1,3-DICHLOROPROPENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CYCLOHEXANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
DICHLORODIFLUOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
ETHYLBENZENE	5 UJ	--	5 UJ	--	5 UJ	--	5 UJ	--	5 U	--	5 UJ
ISOPROPYLBENZENE	5 UJ	--	5 UJ	--	5 UJ	--	5 UJ	--	5 U	--	5 UJ
M+P-XYLENES	5 UJ	--	5 UJ	--	5 UJ	--	5 UJ	--	5 U	--	5 UJ
METHYL ACETATE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
METHYL CYCLOHEXANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
METHYL TERT-BUTYL ETHER	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
METHYLENE CHLORIDE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
O-XYLENE	5 UJ	--	5 UJ	--	5 UJ	--	5 UJ	--	5 U	--	5 UJ
STYRENE	5 UJ	--	5 UJ	--	5 UJ	--	5 UJ	--	5 U	--	5 UJ
TETRACHLOROETHENE	5 UJ	--	5 UJ	--	5 UJ	--	5 UJ	--	5 U	--	5 UJ
TOLUENE	5 UJ	--	5 UJ	--	5 UJ	--	5 UJ	--	5 U	--	5 UJ
TRANS-1,2-DICHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
TRANS-1,3-DICHLOROPROPENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
TRICHLOROETHENE	5 UJ	--	5 UJ	--	5 UJ	--	5 UJ	--	5 U	--	5 UJ
TRICHLOROFLUOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
VINYL CHLORIDE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
SEMIVOLATILES (UG/L)											
1,1-BIPHENYL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,2,4,5-TETRACHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,4-DIOXANE	2 U	--	2 U	--	2 U	--	2 U	--	2 U	--	2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
2,3,4,6-TETRACHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2,4,5-TRICHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2,4,6-TRICHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2,4-DICHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2,4-DIMETHYLPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2,4-DINITROPHENOL	10 R	--	10 R	--	10 R	--	10 R	--	10 U	--	10 R
2,4-DINITROTOLUENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2,6-DINITROTOLUENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2-CHLORONAPHTHALENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2-CHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2-METHYLNAPHTHALENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2-METHYLPHENOL	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
2-NITROANILINE	5 R	--	5 R	--	5 R	--	5 R	--	5 U	--	5 R
2-NITROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
3&4-METHYLPHENOL	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
3,3'-DICHLOROBENZIDINE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
3-NITROANILINE	10 R	--	10 R	--	10 R	--	10 R	--	10 U	--	10 R
4,6-DINITRO-2-METHYLPHENOL	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
4-BROMOPHENYL PHENYL ETHER	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
4-CHLORO-3-METHYLPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
4-CHLOROANILINE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
4-CHLOROPHENYL PHENYL ETHER	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
4-NITROANILINE	10 R	--	10 R	--	10 R	--	10 R	--	10 U	--	10 R
4-NITROPHENOL	10 R	--	10 R	--	10 R	--	10 R	--	10 U	--	10 R
ACENAPHTHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
ACENAPHTHYLENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
ACETOPHENONE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U

TABLE 10

SURFACE WATER ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD335	SW/SD335	SW/SD336	SW/SD336	SW/SD342	SW/SD342	SW/SD343	SW/SD343	SW/SD344	SW/SD344	SW/SD345
SAMPLE ID	SW335-20191209	SW335-20191209-F	SW336-20191209	SW336-20191209-F	SW342-20191209	SW342-20191209-F	SW343-20191209	SW343-20191209-F	SW344-20191210	SW344-20191210-F	SW345-20191209
SAMPLE DATE	20191209	20191209	20191209	20191209	20191209	20191209	20191209	20191209	20191210	20191210	20191209
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Creek	Rocklick Creek	Rocklick Creek	Rocklick Creek	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
ANTHRACENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
ATRAZINE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
BAP EQUIVALENT-HALFND	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BAP EQUIVALENT-POS	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BENZALDEHYDE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
BENZO(A)ANTHRACENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BENZO(A)PYRENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BENZO(B)FLUORANTHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BENZO(G,H,I)PERYLENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BENZO(K)FLUORANTHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BIS(2-CHLOROETHOXY)METHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BIS(2-CHLOROETHYL)ETHER	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BUTYL BENZYL PHTHALATE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CAPROLACTAM	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
CARBAZOLE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
CHRYSENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
DIBENZO(A,H)ANTHRACENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
DIBENZOFURAN	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
DIETHYL PHTHALATE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
DIMETHYL PHTHALATE	1.4 J	--	2.1 J	--	5 U	--	1.5 J	--	2.5 J	--	2 J
DI-N-BUTYL PHTHALATE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
DI-N-OCTYL PHTHALATE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
FLUORANTHENE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
FLUORENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROBUTADIENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROCYCLOPENTADIENE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
HEXACHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0 U	--	0 U	--	0 U	--	0 U
INDENO(1,2,3-CD)PYRENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
ISOPHORONE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0 U	--	0 U	--	0 U	--	0 U
NAPHTHALENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
NITROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
N-NITROSO-DI-N-PROPYLAMINE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
N-NITROSODIPHENYLAMINE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
PENTACHLOROPHENOL	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
PHENANTHRENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
PHENOL	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
PYRENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
TOTAL PAHS	0 U	--	0 U	--	0 U	--	0 U	--	0 U	--	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L											
2-METHYLNAPHTHALENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ACENAPHTHENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ACENAPHTHYLENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ANTHRACENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BAP EQUIVALENT-HALFND	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BAP EQUIVALENT-POS	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(A)ANTHRACENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(A)PYRENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(B)FLUORANTHENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(G,H,I)PERYLENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(K)FLUORANTHENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
CHRYSENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
DIBENZO(A,H)ANTHRACENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
FLUORANTHENE	0.1 U	--	0.02 J	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
FLUORENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0.02	--	0 U	--	0 U	--	0 U	--	0 U
INDENO(1,2,3-CD)PYRENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
LOW MOLECULAR WEIGHT PAHS	0 U	--	0.04	--	0 U	--	0 U	--	0 U	--	0 U
NAPHTHALENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
PENTACHLOROPHENOL	0.2 U	--	0.2 U	--	0.2 U	--	0.2 U	--	0.2 U	--	0.2 U
PHENANTHRENE	0.1 U	--	0.02 J	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
PYRENE	0.1 U	--	0.02 J	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
TOTAL PAHS	0.1	--	0.1	--	0.1	--	0.1	--	0.1	--	0.1
PESTICIDES (UG/L)											
4,4'-DDD	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
4,4'-DDE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
4,4'-DDT	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ALDRIN	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ALPHA-BHC	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ALPHA-CHLORDANE	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
BETA-BHC	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
DELTA-BHC	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
DIELDRIN	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDOSULFAN I	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ENDOSULFAN II	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDOSULFAN SULFATE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN ALDEHYDE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN KETONE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
GAMMA-BHC (LINDANE)	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
GAMMA-CHLORDANE	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U

TABLE 10

SURFACE WATER ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD335	SW/SD335	SW/SD336	SW/SD336	SW/SD342	SW/SD342	SW/SD343	SW/SD343	SW/SD344	SW/SD344	SW/SD345
SAMPLE ID	SW335-20191209	SW335-20191209-F	SW336-20191209	SW336-20191209-F	SW342-20191209	SW342-20191209-F	SW343-20191209	SW343-20191209-F	SW344-20191210	SW344-20191210-F	SW345-20191209
SAMPLE DATE	20191209	20191209	20191209	20191209	20191209	20191209	20191209	20191209	20191210	20191210	20191209
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Creek	Rocklick Creek	Rocklick Creek	Rocklick Creek	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
HEPTACHLOR	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
HEPTACHLOR EPOXIDE	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
METHOXYCHLOR	0.5 U	--	0.5 U	--	0.5 U	--	0.5 U	--	0.5 U	--	0.5 U
TOXAPHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
PCBS (UG/L)											
AROCLOR-1016	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1221	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1232	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1242	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1248	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1254	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1260	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1262	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1268	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
TOTAL AROCLOR	0 U	--	0 U	--	0 U	--	0 U	--	0 U	--	0 U
TOTAL AROCLOR HALFND	4.5	--	4.5	--	4.5	--	4.5	--	4.5	--	4.5
PCB CONGENERS (UG/L)											
DICHLOROBIPHENYLS	0 UJ	--	0.00062 J	--	0.000029 J	--	0.000014 J	--	--	--	0.00022 J
HEPTACHLOROBIPHENYLS	0 UJ	--	0 UJ	--	0.00013 J	--	0 UJ	--	--	--	0 UJ
HEXACHLOROBIPHENYLS	0.000066 J	--	0.00014 J	--	0.00015 J	--	0.000028 J	--	--	--	0 UJ
MONOCHLOROBIPHENYLS	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ	--	--	--	0 UJ
NONACHLOROBIPHENYLS	0.000012 J	--	0 UJ	--	0.000027 J	--	0 UJ	--	--	--	0 UJ
OCTACHLOROBIPHENYLS	0 UJ	--	0 UJ	--	0.000035 J	--	0 UJ	--	--	--	0 UJ
PCB-1	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-10	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-100	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-101/90	0.000025 J	--	0.000071	--	0.000021 J	--	0.000042 U	--	--	--	0.000021 J
PCB-103	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-104	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-105	0.000011 U	--	0.000023	--	0.0000081 J	--	0.0000061 U	--	0.000148 U	--	0.0000067 U
PCB-108/107	0.000041 U	--	0.000041 U	--	0.00004 U	--	0.000042 U	--	--	--	0.000041 U
PCB-109	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-11	0.000021 U	--	0.00062	--	0.000029	--	0.000014 J	--	--	--	0.00019
PCB-110	0.000026	--	0.000055	--	0.000017 J	--	0.000021 U	--	--	--	0.000017 J
PCB-111/115	0.000041 U	--	0.000041 U	--	0.00004 U	--	0.000042 U	--	--	--	0.000041 U
PCB-113	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-114	0.0000095 U	--	0.00001 U	--	0.0000084 U	--	0.0000088 U	--	0.0000987 U	--	0.0000086 U
PCB-118	--	--	--	--	--	--	--	--	0.0000121 Z	--	--
PCB-118/106	0.000018 J	--	0.00005	--	0.000016 J	--	0.0000073 U	--	--	--	0.000011 J
PCB-119	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-12	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-120	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-121	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-122	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-123	0.0000068 U	--	0.0000077 U	--	0.0000046 U	--	0.0000048 U	--	0.0000987 U	--	0.0000063 U
PCB-124	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-126	0.000016 U	--	0.000017 U	--	0.0000061 U	--	0.0000064 U	--	0.0000987 U	--	0.0000069 U
PCB-127	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-128/162	0.000041 U	--	0.000041 U	--	0.00004 U	--	0.000042 U	--	--	--	0.000041 U
PCB-128/166	--	--	--	--	--	--	--	--	0.000197 U	--	--
PCB-129	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-129/138/163	--	--	--	--	--	--	--	--	0.000296 U	--	--
PCB-13	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-130	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-131/133	0.000041 U	--	0.000041 U	--	0.00004 U	--	0.000042 U	--	--	--	0.000041 U
PCB-132/161	0.000041 U	--	0.000041 U	--	0.0000097 J	--	0.000042 U	--	--	--	0.000041 U
PCB-134/143	0.000041 U	--	0.000041 U	--	0.00004 U	--	0.000042 U	--	--	--	0.000041 U
PCB-135	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-136	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-137	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-138/163/164	0.000024 J	--	0.000055 J	--	0.000038 J	--	0.00001 J	--	--	--	0.000061 U
PCB-139/149	0.00002 J	--	0.000033 J	--	0.000034 J	--	0.0000094 J	--	--	--	0.000041 U
PCB-14	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-140	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-141	0.000021 U	--	0.000021 U	--	0.000012 J	--	0.000021 U	--	--	--	0.00002 U
PCB-142	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-144	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-145	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-146/165	0.000041 U	--	0.000041 U	--	0.000008 J	--	0.000042 U	--	--	--	0.000041 U
PCB-147	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-148	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-15	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.000012 J
PCB-150	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-151	0.000021 U	--	0.000021 U	--	0.0000098 J	--	0.000021 U	--	--	--	0.00002 U
PCB-152	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-153	0.000022	--	0.000052	--	0.000038	--	0.0000084 J	--	--	--	0.00002 U
PCB-153/168	--	--	--	--	--	--	--	--	0.000197 U	--	--
PCB-154	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-155	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-156	0.000014 U	--	0.0000089 U	--	0.0000049 U	--	0.0000051 U	--	0.000197 U	--	0.000005 U
PCB-157	0.000012 U	--	0.0000088 U	--	0.0000045 U	--	0.0000047 U	--	--	--	0.0000046 U
PCB-158/160	0.000041 U	--	0.000041 U	--	0.00004 U	--	0.000042 U	--	--	--	0.000041 U
PCB-159	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-16	0.000021 U	--	0.0000088 J	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U

TABLE 10

SURFACE WATER ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD335	SW/SD335	SW/SD336	SW/SD336	SW/SD342	SW/SD342	SW/SD343	SW/SD343	SW/SD344	SW/SD344	SW/SD345
SAMPLE ID	SW335-20191209	SW335-20191209-F	SW336-20191209	SW336-20191209-F	SW342-20191209	SW342-20191209-F	SW343-20191209	SW343-20191209-F	SW344-20191210	SW344-20191210-F	SW345-20191209
SAMPLE DATE	20191209	20191209	20191209	20191209	20191209	20191209	20191209	20191209	20191210	20191210	20191209
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Creek	Rocklick Creek	Rocklick Creek	Rocklick Creek	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
PCB-166	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-167	0.000014 U	--	0.0000096 U	--	0.0000042 U	--	0.0000038 U	--	0.0000987 U	--	0.0000045 U
PCB-168	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-169	0.000016 U	--	0.000011 U	--	0.0000034 U	--	0.0000036 U	--	0.0000987 U	--	0.0000035 U
PCB-17	0.000021 U	--	0.000014 J	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-170	0.000021 U	--	0.000021 U	--	0.000019 J	--	0.000021 U	--	0.0000987 U	--	0.00002 U
PCB-171	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-172	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-173	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-174	0.000021 U	--	0.000021 U	--	0.000017 J	--	0.000021 U	--	--	--	0.00002 U
PCB-175	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-176	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-177	0.000021 U	--	0.000021 U	--	0.000015 J	--	0.000021 U	--	--	--	0.00002 U
PCB-178	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-179	0.000021 U	--	0.000021 U	--	0.0000089 J	--	0.000021 U	--	--	--	0.00002 U
PCB-18	0.000021 U	--	0.000023	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-18/30	--	--	--	--	--	--	--	--	0.000197 U	--	--
PCB-180	0.000021 U	--	0.000021 U	--	0.000034	--	0.000021 U	--	--	--	0.00002 U
PCB-180/193	--	--	--	--	--	--	--	--	0.000197 U	--	--
PCB-181	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-182/187	0.000041 U	--	0.000041 U	--	0.000019 J	--	0.000042 U	--	--	--	0.000041 U
PCB-183	0.000021 U	--	0.000021 U	--	0.000019 J	--	0.000021 U	--	--	--	0.00002 U
PCB-184	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-185	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-186	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-187	--	--	--	--	--	--	--	--	0.0000987 U	--	--
PCB-188	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-189	0.00001 U	--	0.0000078 U	--	0.0000053 U	--	0.0000056 U	--	0.0000987 U	--	0.0000054 U
PCB-19	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-190	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-191	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-192	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-193	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-194	0.000021 U	--	0.000021 U	--	0.00001 J	--	0.000021 U	--	--	--	0.00002 U
PCB-195	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	0.0000987 U	--	0.00002 U
PCB-196/203	0.000041 U	--	0.000041 U	--	0.000014 J	--	0.000042 U	--	--	--	0.000041 U
PCB-197	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-198	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-199	0.000021 U	--	0.000021 U	--	0.000011 J	--	0.000021 U	--	--	--	0.00002 U
PCB-2	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-20/21/33	0.000062 U	--	0.000032 J	--	0.00006 U	--	0.000063 U	--	--	--	0.000012 J
PCB-20/28	--	--	--	--	--	--	--	--	0.000197 U	--	--
PCB-200	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-201	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-202	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-204	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-205	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-206	0.000012 J	--	0.000021 U	--	0.000019 J	--	0.000021 U	--	0.00000521 J	--	0.00002 U
PCB-207	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-208	0.000021 U	--	0.000021 U	--	0.0000084 J	--	0.000021 U	--	--	--	0.00002 U
PCB-209	0.000023	--	0.000022	--	0.000028	--	0.000021 U	--	0.0000105 J	--	0.00002 U
PCB-22	0.000021 U	--	0.000021	--	0.00002 U	--	0.000021 U	--	--	--	0.0000091 J
PCB-23	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-24	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-25	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-26	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-27	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-28	0.000021 U	--	0.000074	--	0.00002 U	--	0.000021 U	--	--	--	0.000019 J
PCB-29	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-3	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-30	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-31	0.000021 U	--	0.000047	--	0.00002 U	--	0.000021 U	--	--	--	0.000016 J
PCB-32	0.000021 U	--	0.0000094 J	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-34	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-35	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-36	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-37	0.000021 U	--	0.000018 J	--	0.00002 U	--	0.000021 U	--	--	--	0.0000079 J
PCB-38	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-39	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-4	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-40	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-41/64/71/72	0.000083 U	--	0.000028 J	--	0.00008 U	--	0.000084 U	--	--	--	0.000011 J
PCB-42/59	0.000041 U	--	0.000012 J	--	0.00004 U	--	0.000042 U	--	--	--	0.000041 U
PCB-43/49	0.000041 U	--	0.000029 J	--	0.00004 U	--	0.000042 U	--	--	--	0.000011 J
PCB-44	0.000021 U	--	0.000033	--	0.00002 U	--	0.000021 U	--	--	--	0.000013 J
PCB-44/47/65	--	--	--	--	--	--	--	--	0.000296 U	--	--
PCB-45	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-46	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-47	0.000021 U	--	0.000024	--	0.00002 U	--	0.000021 U	--	--	--	0.000012 J
PCB-48/75	0.000041 U	--	0.000041 U	--	0.00004 U	--	0.000042 U	--	--	--	0.000041 U
PCB-5	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-50	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-51	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-52	--	--	--	--	--	--	--	--	0.000197 U	--	--

TABLE 10

SURFACE WATER ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD335	SW/SD335	SW/SD336	SW/SD336	SW/SD342	SW/SD342	SW/SD343	SW/SD343	SW/SD344	SW/SD344	SW/SD345
SAMPLE ID	SW335-20191209	SW335-20191209-F	SW336-20191209	SW336-20191209-F	SW342-20191209	SW342-20191209-F	SW343-20191209	SW343-20191209-F	SW344-20191210	SW344-20191210-F	SW345-20191209
SAMPLE DATE	20191209	20191209	20191209	20191209	20191209	20191209	20191209	20191209	20191210	20191210	20191209
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Creek	Rocklick Creek	Rocklick Creek	Rocklick Creek	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
PCB-52/69	0.000041 U	--	0.00005	--	0.00004 U	--	0.000042 U	--	--	--	0.000015 J
PCB-53	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-54	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-55	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-56/60	0.000041 U	--	0.000026 J	--	0.00004 U	--	0.000042 U	--	--	--	0.000041 U
PCB-57	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-58	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-6	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-61/70	0.000041 U	--	0.000057	--	0.00004 U	--	0.000042 U	--	--	--	0.000019 J
PCB-62	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-63	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-65	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-66	--	--	--	--	--	--	--	--	0.00000519 Z	--	--
PCB-66/76	0.000041 U	--	0.000041	--	0.00004 U	--	0.000042 U	--	--	--	0.000014 J
PCB-67	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-68	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-7	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-73	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-74	0.000021 U	--	0.000023	--	0.00002 U	--	0.000021 U	--	--	--	0.00001 J
PCB-77	0.000017 U	--	0.000013 U	--	0.0000041 U	--	0.000004 U	--	0.0000987 U	--	0.0000045 U
PCB-78	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-79	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-8	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	0.0000987 U	--	0.000013 J
PCB-80	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-81	0.000012 U	--	0.0000091 U	--	0.000004 U	--	0.0000037 U	--	0.0000987 U	--	0.0000039 U
PCB-82	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-83/112	0.000041 U	--	0.000041 U	--	0.00004 U	--	0.000042 U	--	--	--	0.000041 U
PCB-84/92	0.000041 U	--	0.000027 J	--	0.00004 U	--	0.000042 U	--	--	--	0.000041 U
PCB-85/116	0.000041 U	--	0.000041 U	--	0.00004 U	--	0.000042 U	--	--	--	0.000041 U
PCB-86	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-87/117/125	0.000062 U	--	0.000029 J	--	0.00006 U	--	0.000063 U	--	--	--	0.0000083 J
PCB-88/91	0.000041 U	--	0.000041 U	--	0.00004 U	--	0.000042 U	--	--	--	0.000041 U
PCB-89	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-9	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-90/101/113	--	--	--	--	--	--	--	--	0.000296 U	--	--
PCB-93	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-94	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-95	0.000021 U	--	0.000035	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-96	0.000021 U	--	0.000021 U	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-97	0.000021 U	--	0.000015 J	--	0.00002 U	--	0.000021 U	--	--	--	0.00002 U
PCB-98/102	0.000041 U	--	0.000041 U	--	0.00004 U	--	0.000042 U	--	--	--	0.000041 U
PCB-99	0.000021 U	--	0.00003	--	0.00002 U	--	0.000021 U	--	--	--	0.000011 J
PENTACHLOROBIPHENYLS	0.000069 J	--	0.00034 J	--	0.000062 J	--	0 UJ	--	--	--	0.000068 J
TEQ DIOXIN-LIKE PCBs (BIRD)	0.000011 U	--	2.3E-09	--	8.1E-10	--	0.0000061 U	--	1.21E-10	--	0.0000067 U
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	0.000011 U	--	1.6393E-06	--	6.1097E-07	--	0.0000061 U	--	1.2411E-05	--	0.0000067 U
TEQ DIOXIN-LIKE PCBs (FISH)	0.000011 U	--	1.15E-10	--	4E-11	--	0.0000061 U	--	6E-11	--	0.0000067 U
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	0.000011 U	--	4.5946E-08	--	1.6658E-08	--	0.0000061 U	--	2.8073E-07	--	0.0000067 U
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	0.000011 U	--	6.9E-10	--	2.43E-10	--	0.0000061 U	--	3.63E-10	--	0.0000067 U
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	0.000011 U	--	1.0185E-06	--	3.5753E-07	--	0.0000061 U	--	6.4467E-06	--	0.0000067 U
TETRACHLOROBIPHENYLS	0 UJ	--	0.00032 J	--	0 UJ	--	0 UJ	--	--	--	0.00011 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0 U	--	0.000023	--	0.0000081	--	0 U	--	0.0000121	--	0 U
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00017	--	0.0016642	--	0.0004548	--	0.0000418	--	0.0000209	--	0.0004523
TOTAL PCB CONGENERS ZEROND	0.00017	--	0.0016872	--	0.0004629	--	0.0000418	--	0.000033	--	0.0004523
TOTAL PCB CONGENERS-NOAA	0.000124	--	0.000494	--	0.0002401	--	0.0000184	--	0.000033	--	0.000106
TOTAL PCB CONGENERS-NOAA HALFND	0.00216915	--	0.00327465	--	0.00213765	--	0.00205825	--	0.0018327	--	0.00213225
TOTAL PCB CONGENERS-NOAA X2	0.000248	--	0.000988	--	0.0004802	--	0.0000368	--	0.000066	--	0.000212
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.00057	--	0.001175	--	0.0007002	--	0.0004492	--	0.0026788	--	0.0005017
TRICHLOROBIPHENYLS	0 UJ	--	0.00025 J	--	0 UJ	--	0 UJ	--	--	--	0.000064 J
DIOXINS/FURANS (PG/L)											
1,2,3,4,6,7,8,9-OCDD	32 J	--	71 J	--	42 J	--	16 J	--	98.3 U	--	16 J
1,2,3,4,6,7,8,9-OCDF	3.3 U	--	4.3 U	--	5.8 J	--	3.5 U	--	98.3 U	--	3.5 U
1,2,3,4,6,7,8-HPCDD	2.8 J	--	5.3 J	--	3.3 J	--	2.3 U	--	5.31 J	--	2.6 U
1,2,3,4,6,7,8-HPCDF	1.9 U	--	2.2 U	--	4.9 J	--	1.6 U	--	49.1 U	--	2.4 U
1,2,3,4,7,8,9-HPCDF	2.7 U	--	2.8 U	--	2.8 U	--	2.8 U	--	49.1 U	--	2.7 U
1,2,3,4,7,8-HXCDD	2.9 U	--	3.1 U	--	3.1 U	--	3.1 U	--	49.1 U	--	3 U
1,2,3,4,7,8-HXCDF	2.3 U	--	2.4 U	--	2.3 U	--	2.4 U	--	49.1 U	--	2.3 U
1,2,3,6,7,8-HXCDD	2.6 U	--	2.4 U	--	3 U	--	2.4 U	--	49.1 U	--	2.6 U
1,2,3,6,7,8-HXCDF	1.8 U	--	1.9 U	--	1.8 U	--	1.9 U	--	49.1 U	--	1.8 U
1,2,3,7,8,9-HXCDD	2.2 U	--	2.1 U	--	2.7 U	--	2.2 U	--	49.1 U	--	2.4 U
1,2,3,7,8,9-HXCDF	1.3 U	--	1.9 U	--	2.1 U	--	1.7 U	--	49.1 U	--	1.8 U
1,2,3,7,8-PECDD	2 U	--	2.1 U	--	2 U	--	2.1 U	--	49.1 U	--	2 U
1,2,3,7,8-PECDF	1.7 U	--	1.5 U	--	1.6 U	--	1.6 U	--	49.1 U	--	1.6 U
2,3,4,6,7,8-HXCDF	1.3 U	--	1.6 U	--	1.8 U	--	1.5 U	--	49.1 U	--	1.5 U
2,3,4,7,8-PECDF	1.7 U	--	1.5 U	--	1.5 U	--	1.6 U	--	49.1 U	--	1.6 U
2,3,7,8-TCDD	1.2 U	--	1 U	--	1.1 U	--	1.1 U	--	9.83 U	--	0.88 U
2,3,7,8-TCDF	1 U	--	1.2 U	--	1.3 U	--	1.2 U	--	9.83 U	--	1.2 U
TEQ DIOXINS (BIRD)	0.006	--	0.0124	--	0.05708	--	0.0016	--	0.00531	--	0.0016
TEQ DIOXINS (BIRD) HALFND	3.594665	--	3.597115	--	3.72858	--	3.679425	--	75.63914	--	3.526575
TEQ DIOXINS (FISH)	0.006	--	0.0124	--	0.05708	--	0.0016	--	0.00531	--	0.0016
TEQ DIOXINS (FISH) HALFND	3.205665	--	3.217615	--	3.27208	--	3.267925	--	66.30539	--	3.083575
TEQ DIOXINS (HUMANS/MAMMALS)	0.0376	--	0.0743	--	0.09634	--	0.0048	--	0.0531	--	0.0048
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	2.711595	--	2.727445	--	2.81434	--	2.722825	--	55.81659	--	2.577825
TOTAL HPCDD	6.4 J	--	11 J	--	7.2 J	--	0 UJ	--	11.1 J	--	0 UJ
TOTAL HPCDF	0 UJ	--	0 UJ	--	8.4 J	--	0 UJ	--	49.1 UJ	--	0 UJ

TABLE 10

SURFACE WATER ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD335	SW/SD335	SW/SD336	SW/SD336	SW/SD342	SW/SD342	SW/SD343	SW/SD343	SW/SD344	SW/SD344	SW/SD345
SAMPLE ID	SW335-20191209	SW335-20191209-F	SW336-20191209	SW336-20191209-F	SW342-20191209	SW342-20191209-F	SW343-20191209	SW343-20191209-F	SW344-20191210	SW344-20191210-F	SW345-20191209
SAMPLE DATE	20191209	20191209	20191209	20191209	20191209	20191209	20191209	20191209	20191210	20191210	20191209
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Creek	Rocklick Creek	Rocklick Creek	Rocklick Creek	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
TOTAL HXCDD	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ	--	49.1 UJ	--	0 UJ
TOTAL HXCDF	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ	--	49.1 UJ	--	0 UJ
TOTAL PECDD	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ	--	49.1 UJ	--	0 UJ
TOTAL PECDF	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ	--	49.1 UJ	--	0 UJ
TOTAL TCDD	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ	--	9.83 UJ	--	0 UJ
TOTAL TCDF	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ	--	9.83 UJ	--	0 UJ
METALS (UG/L)											
ALUMINUM	93.1	20 U	433 J	20 U	174	20 U	55.2	20 U	24.5	20 U	60
ANTIMONY	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
ARSENIC	0.37 J	1 U	0.51 J	0.11 J	0.49 J	0.14 J	0.35 J	0.19 J	0.14 J	0.11 J	0.34 J
BARIUM	91.6	89.1	97.1	85	61.2	56.6	48.4	46.6	46	44.6	45
BERYLLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM	29100	27900	30100	27100	27100	24800	24000	23000	12300	12000	27400
CHROMIUM	0.57 J	2 U	1.1 J	2 U	0.96 J	2 U	0.72 J	0.08 J	2 U	2 U	0.77 J
COBALT	1 UJ	0.18 J	1 UJ	0.16 J	1 UJ	0.42 J	1 UJ	0.52 J	0.51 J	0.47 J	1 UJ
COPPER	0.89 J	2 U	1.5 J	2 U	1.2 J	2 U	0.77 J	2 U	0.85 J	2 U	0.97 J
CYANIDE	6.4 J	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
IRON	524	200 U	1100	200 U	1010	415	870	601	1310	977	391
LEAD	0.57 J	1 U	1.6	1 U	0.64 J	1 U	1 U	1 U	0.17 J	1 U	1 U
MAGNESIUM	10900	10500	11100 J	10300	11000	10600	11200	10900	6080	5960	12900
MANGANESE	95.4	70.2	102	61.6	216	189	252	221	198	190	248
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	1.9	1.4	2.3	1.1	3	2.6	3.3	3.4	3.9	3.8	3.5
POTASSIUM	2340	2350	2680 J	2410	2310	2280	2190	2250	1860	1850	2260
SELENIUM	5 U	5 U	5 U	5 U	5 U	0.74 J	0.43 J	0.9 J	5 U	5 U	0.62 J
SILVER	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
SODIUM	36700	36000	39600	37700	11900	11500	4190	4050	5870	5730	3430
THALLIUM	1 UJ	1 U	1 UJ	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 UJ
VANADIUM	1.2 J	5 U	1.6 J	5 U	1.4 J	5 U	1.4 J	5 U	0.06 J	5 U	1.4 J
ZINC	4.2	8.1	8.1	7.6	8.6	12	7.1	14.5	19.1	18.5	6.3

TABLE 10

SURFACE WATER ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD345	SW/SD346	SW/SD346	SW/SD347	SW/SD347
SAMPLE ID	SW345-20191209-F	SW346-20191209	SW346-20191209-F	SW347-20191209	SW347-20191209-F
SAMPLE DATE	20191209	20191209	20191209	20191209	20191209
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
VOLATILES (UG/L)					
1,1,1-TRICHLOROETHANE	--	5 U	--	5 U	--
1,1,2,2-TETRACHLOROETHANE	--	5 U	--	5 U	--
1,1,2-TRICHLOROETHANE	--	5 U	--	5 U	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	5 U	--	5 U	--
1,1-DICHLOROETHANE	--	5 U	--	5 U	--
1,1-DICHLOROETHENE	--	5 U	--	5 U	--
1,2,3-TRICHLOROBENZENE	--	5 U	--	5 U	--
1,2,4-TRICHLOROBENZENE	--	5 U	--	5 U	--
1,2-DIBROMO-3-CHLOROPROPANE	--	5 U	--	5 U	--
1,2-DIBROMOETHANE	--	5 U	--	5 U	--
1,2-DICHLOROBENZENE	--	5 U	--	5 U	--
1,2-DICHLOROETHANE	--	5 U	--	5 U	--
1,2-DICHLOROPROPANE	--	5 U	--	5 U	--
1,3-DICHLOROBENZENE	--	5 U	--	5 U	--
1,4-DICHLOROBENZENE	--	5 U	--	5 U	--
2-BUTANONE	--	10 U	--	10 U	--
2-HEXANONE	--	10 U	--	10 U	--
4-METHYL-2-PENTANONE	--	10 U	--	10 U	--
ACETONE	--	10 U	--	10 U	--
BENZENE	--	5 U	--	5 U	--
BROMOCHLOROMETHANE	--	5 U	--	5 U	--
BROMODICHLOROMETHANE	--	5 U	--	5 U	--
BROMOFORM	--	5 U	--	5 U	--
BROMOMETHANE	--	5 U	--	5 U	--
CARBON DISULFIDE	--	5 U	--	5 UJ	--
CARBON TETRACHLORIDE	--	5 U	--	5 U	--
CHLOROBENZENE	--	5 U	--	5 U	--
CHLORODIBROMOMETHANE	--	5 U	--	5 U	--
CHLOROETHANE	--	5 U	--	5 U	--
CHLOROFORM	--	5 U	--	5 U	--
CHLOROMETHANE	--	5 U	--	5 U	--
CIS-1,2-DICHLOROETHENE	--	5 U	--	5 U	--
CIS-1,3-DICHLOROPROPENE	--	5 U	--	5 U	--
CYCLOHEXANE	--	5 U	--	5 U	--
DICHLORODIFLUOROMETHANE	--	5 U	--	5 U	--
ETHYLBENZENE	--	5 UJ	--	5 U	--
ISOPROPYLBENZENE	--	5 UJ	--	5 U	--
M+P-XYLENES	--	5 UJ	--	5 U	--
METHYL ACETATE	--	5 U	--	5 U	--
METHYL CYCLOHEXANE	--	5 U	--	5 U	--
METHYL TERT-BUTYL ETHER	--	5 U	--	5 U	--
METHYLENE CHLORIDE	--	5 U	--	5 U	--
O-XYLENE	--	5 UJ	--	5 U	--
STYRENE	--	5 UJ	--	5 U	--
TETRACHLOROETHENE	--	5 UJ	--	5 U	--
TOLUENE	--	5 UJ	--	5 U	--
TRANS-1,2-DICHLOROETHENE	--	5 U	--	5 U	--
TRANS-1,3-DICHLOROPROPENE	--	5 U	--	5 U	--
TRICHLOROETHENE	--	5 UJ	--	5 U	--
TRICHLOROFLUOROMETHANE	--	5 U	--	5 U	--
VINYL CHLORIDE	--	5 U	--	5 U	--
SEMIVOLATILES (UG/L)					
1,1-BIPHENYL	--	5 U	--	5 U	--
1,2,4,5-TETRACHLOROBENZENE	--	5 U	--	5 U	--
1,4-DIOXANE	--	2 U	--	2 U	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	10 U	--	10 U	--
2,3,4,6-TETRACHLOROPHENOL	--	5 U	--	5 U	--
2,4,5-TRICHLOROPHENOL	--	5 U	--	5 U	--
2,4,6-TRICHLOROPHENOL	--	5 U	--	5 U	--
2,4-DICHLOROPHENOL	--	5 U	--	5 U	--
2,4-DIMETHYLPHENOL	--	5 U	--	5 U	--
2,4-DINITROPHENOL	--	10 R	--	10 R	--
2,4-DINITROTOLUENE	--	5 U	--	5 U	--
2,6-DINITROTOLUENE	--	5 U	--	5 U	--
2-CHLORONAPHTHALENE	--	5 U	--	5 U	--
2-CHLOROPHENOL	--	5 U	--	5 U	--
2-METHYLNAPHTHALENE	--	5 U	--	5 U	--
2-METHYLPHENOL	--	10 U	--	10 U	--
2-NITROANILINE	--	5 R	--	5 R	--
2-NITROPHENOL	--	5 U	--	5 U	--
3&4-METHYLPHENOL	--	10 U	--	10 U	--
3,3'-DICHLOROBENZIDINE	--	10 U	--	10 U	--
3-NITROANILINE	--	10 R	--	10 R	--
4,6-DINITRO-2-METHYLPHENOL	--	10 U	--	10 U	--
4-BROMOPHENYL PHENYL ETHER	--	5 U	--	5 U	--
4-CHLORO-3-METHYLPHENOL	--	5 U	--	5 U	--
4-CHLOROANILINE	--	10 U	--	10 U	--
4-CHLOROPHENYL PHENYL ETHER	--	5 U	--	5 U	--
4-NITROANILINE	--	10 R	--	10 R	--
4-NITROPHENOL	--	10 R	--	10 R	--
ACENAPHTHENE	--	5 U	--	5 U	--
ACENAPHTHYLENE	--	5 U	--	5 U	--
ACETOPHENONE	--	10 U	--	10 U	--

TABLE 10

SURFACE WATER ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD345	SW/SD346	SW/SD346	SW/SD347	SW/SD347
SAMPLE ID	SW345-20191209-F	SW346-20191209	SW346-20191209-F	SW347-20191209	SW347-20191209-F
SAMPLE DATE	20191209	20191209	20191209	20191209	20191209
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
ANTHRACENE	--	5 U	--	5 U	--
ATRAZINE	--	10 U	--	10 U	--
BAP EQUIVALENT-HALFND	--	5 U	--	5 U	--
BAP EQUIVALENT-POS	--	5 U	--	5 U	--
BENZALDEHYDE	--	10 U	--	10 U	--
BENZO(A)ANTHRACENE	--	5 U	--	5 U	--
BENZO(A)PYRENE	--	5 U	--	5 U	--
BENZO(B)FLUORANTHENE	--	5 U	--	5 U	--
BENZO(G,H,I)PERYLENE	--	5 U	--	5 U	--
BENZO(K)FLUORANTHENE	--	5 U	--	5 U	--
BIS(2-CHLOROETHOXY)METHANE	--	5 U	--	5 U	--
BIS(2-CHLOROETHYL)ETHER	--	10 U	--	10 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	5 U	--	5 UJ	--
BUTYL BENZYL PHTHALATE	--	5 U	--	5 U	--
CAPROLACTAM	--	10 U	--	10 U	--
CARBAZOLE	--	10 U	--	10 U	--
CHRYSENE	--	5 U	--	5 U	--
DIBENZO(A,H)ANTHRACENE	--	5 U	--	5 U	--
DIBENZOFURAN	--	5 U	--	5 U	--
DIETHYL PHTHALATE	--	5 U	--	5 U	--
DIMETHYL PHTHALATE	--	1.9 J	--	1.8 J	--
DI-N-BUTYL PHTHALATE	--	5 U	--	5 U	--
DI-N-OCTYL PHTHALATE	--	10 U	--	10 U	--
FLUORANTHENE	--	10 U	--	10 U	--
FLUORENE	--	5 U	--	5 U	--
HEXACHLOROBENZENE	--	5 U	--	5 U	--
HEXACHLOROBUTADIENE	--	5 U	--	5 U	--
HEXACHLOROCYCLOPENTADIENE	--	10 U	--	10 U	--
HEXACHLOROETHANE	--	5 U	--	5 U	--
HIGH MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--
INDENO(1,2,3-CD)PYRENE	--	5 U	--	5 U	--
ISOPHORONE	--	5 U	--	5 U	--
LOW MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--
NAPHTHALENE	--	5 U	--	5 U	--
NITROBENZENE	--	5 U	--	5 U	--
N-NITROSO-DI-N-PROPYLAMINE	--	5 U	--	5 U	--
N-NITROSODIPHENYLAMINE	--	5 U	--	5 U	--
PENTACHLOROPHENOL	--	10 U	--	10 U	--
PHENANTHRENE	--	5 U	--	5 U	--
PHENOL	--	10 U	--	10 U	--
PYRENE	--	5 U	--	5 U	--
TOTAL PAHS	--	0 U	--	0 U	--
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L					
2-METHYLNAPHTHALENE	--	0.1 U	--	0.1 U	--
ACENAPHTHENE	--	0.1 U	--	0.1 U	--
ACENAPHTHYLENE	--	0.1 U	--	0.1 U	--
ANTHRACENE	--	0.1 U	--	0.1 U	--
BAP EQUIVALENT-HALFND	--	0.1 U	--	0.1 U	--
BAP EQUIVALENT-POS	--	0.1 U	--	0.1 U	--
BENZO(A)ANTHRACENE	--	0.1 U	--	0.1 U	--
BENZO(A)PYRENE	--	0.1 U	--	0.1 U	--
BENZO(B)FLUORANTHENE	--	0.1 U	--	0.1 U	--
BENZO(G,H,I)PERYLENE	--	0.1 U	--	0.1 U	--
BENZO(K)FLUORANTHENE	--	0.1 U	--	0.1 U	--
CHRYSENE	--	0.1 U	--	0.1 U	--
DIBENZO(A,H)ANTHRACENE	--	0.1 U	--	0.1 U	--
FLUORANTHENE	--	0.1 U	--	0.1 U	--
FLUORENE	--	0.1 U	--	0.1 U	--
HIGH MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--
INDENO(1,2,3-CD)PYRENE	--	0.1 U	--	0.1 U	--
LOW MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--
NAPHTHALENE	--	0.1 U	--	0.1 U	--
PENTACHLOROPHENOL	--	0.2 U	--	0.2 U	--
PHENANTHRENE	--	0.1 U	--	0.1 U	--
PYRENE	--	0.1 U	--	0.1 U	--
TOTAL PAHS	--	0.1	--	0.1	--
PESTICIDES (UG/L)					
4,4'-DDD	--	0.1 U	--	0.1 U	--
4,4'-DDE	--	0.1 U	--	0.1 U	--
4,4'-DDT	--	0.1 U	--	0.1 U	--
ALDRIN	--	0.05 U	--	0.05 U	--
ALPHA-BHC	--	0.05 U	--	0.05 U	--
ALPHA-CHLORDANE	--	0.05 U	--	0.05 U	--
BETA-BHC	--	0.05 U	--	0.05 U	--
DELTA-BHC	--	0.05 U	--	0.05 U	--
DIELDRIN	--	0.1 U	--	0.1 U	--
ENDOSULFAN I	--	0.05 U	--	0.05 U	--
ENDOSULFAN II	--	0.1 U	--	0.1 U	--
ENDOSULFAN SULFATE	--	0.1 U	--	0.1 U	--
ENDRIN	--	0.1 U	--	0.1 U	--
ENDRIN ALDEHYDE	--	0.1 U	--	0.1 U	--
ENDRIN KETONE	--	0.1 U	--	0.1 U	--
GAMMA-BHC (LINDANE)	--	0.05 U	--	0.05 U	--
GAMMA-CHLORDANE	--	0.05 U	--	0.05 U	--

TABLE 10

SURFACE WATER ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD345	SW/SD346	SW/SD346	SW/SD347	SW/SD347
SAMPLE ID	SW345-20191209-F	SW346-20191209	SW346-20191209-F	SW347-20191209	SW347-20191209-F
SAMPLE DATE	20191209	20191209	20191209	20191209	20191209
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
HEPTACHLOR	--	0.05 U	--	0.05 U	--
HEPTACHLOR EPOXIDE	--	0.05 U	--	0.05 U	--
METHOXYCHLOR	--	0.5 U	--	0.5 U	--
TOXAPHENE	--	5 U	--	5 U	--
PCBS (UG/L)					
AROCLOR-1016	--	1 U	--	1 U	--
AROCLOR-1221	--	1 U	--	1 U	--
AROCLOR-1232	--	1 U	--	1 U	--
AROCLOR-1242	--	1 U	--	1 U	--
AROCLOR-1248	--	1 U	--	1 U	--
AROCLOR-1254	--	1 U	--	1 U	--
AROCLOR-1260	--	1 U	--	1 U	--
AROCLOR-1262	--	1 U	--	1 U	--
AROCLOR-1268	--	1 U	--	1 U	--
TOTAL AROCLOR	--	0 U	--	0 U	--
TOTAL AROCLOR HALFND	--	4.5	--	4.5	--
PCB CONGENERS (UG/L)					
DICHLOROBIPHENYLS	--	0 UJ	--	0 UJ	--
HEPTACHLOROBIPHENYLS	--	0 UJ	--	0 UJ	--
HEXACHLOROBIPHENYLS	--	0 UJ	--	0 UJ	--
MONOCHLOROBIPHENYLS	--	0 UJ	--	0 UJ	--
NONACHLOROBIPHENYLS	--	0 UJ	--	0 UJ	--
OCTACHLOROBIPHENYLS	--	0 UJ	--	0 UJ	--
PCB-1	--	0.000021 U	--	0.00002 U	--
PCB-10	--	0.000021 U	--	0.00002 U	--
PCB-100	--	0.000021 U	--	0.00002 U	--
PCB-101/90	--	0.000041 U	--	0.00004 U	--
PCB-103	--	0.000021 U	--	0.00002 U	--
PCB-104	--	0.000021 U	--	0.00002 U	--
PCB-105	--	0.0000081 U	--	0.0000051 U	--
PCB-108/107	--	0.000041 U	--	0.00004 U	--
PCB-109	--	0.000021 U	--	0.00002 U	--
PCB-11	--	0.000021 U	--	0.00002 U	--
PCB-110	--	0.000021 U	--	0.00002 U	--
PCB-111/115	--	0.000041 U	--	0.00004 U	--
PCB-113	--	0.000021 U	--	0.00002 U	--
PCB-114	--	0.0000087 U	--	0.0000083 U	--
PCB-118	--	--	--	--	--
PCB-118/106	--	0.0000087 U	--	0.0000069 U	--
PCB-119	--	0.000021 U	--	0.00002 U	--
PCB-12	--	0.000021 U	--	0.00002 U	--
PCB-120	--	0.000021 U	--	0.00002 U	--
PCB-121	--	0.000021 U	--	0.00002 U	--
PCB-122	--	0.000021 U	--	0.00002 U	--
PCB-123	--	0.0000061 U	--	0.0000046 U	--
PCB-124	--	0.000021 U	--	0.00002 U	--
PCB-126	--	0.0000076 U	--	0.000006 U	--
PCB-127	--	0.000021 U	--	0.00002 U	--
PCB-128/162	--	0.000041 U	--	0.00004 U	--
PCB-128/166	--	--	--	--	--
PCB-129	--	0.000021 U	--	0.00002 U	--
PCB-129/138/163	--	--	--	--	--
PCB-13	--	0.000021 U	--	0.00002 U	--
PCB-130	--	0.000021 U	--	0.00002 U	--
PCB-131/133	--	0.000041 U	--	0.00004 U	--
PCB-132/161	--	0.000041 U	--	0.00004 U	--
PCB-134/143	--	0.000041 U	--	0.00004 U	--
PCB-135	--	0.000021 U	--	0.00002 U	--
PCB-136	--	0.000021 U	--	0.00002 U	--
PCB-137	--	0.000021 U	--	0.00002 U	--
PCB-138/163/164	--	0.000062 U	--	0.000059 U	--
PCB-139/149	--	0.000041 U	--	0.00004 U	--
PCB-14	--	0.000021 U	--	0.00002 U	--
PCB-140	--	0.000021 U	--	0.00002 U	--
PCB-141	--	0.000021 U	--	0.00002 U	--
PCB-142	--	0.000021 U	--	0.00002 U	--
PCB-144	--	0.000021 U	--	0.00002 U	--
PCB-145	--	0.000021 U	--	0.00002 U	--
PCB-146/165	--	0.000041 U	--	0.00004 U	--
PCB-147	--	0.000021 U	--	0.00002 U	--
PCB-148	--	0.000021 U	--	0.00002 U	--
PCB-15	--	0.000021 U	--	0.00002 U	--
PCB-150	--	0.000021 U	--	0.00002 U	--
PCB-151	--	0.000021 U	--	0.00002 U	--
PCB-152	--	0.000021 U	--	0.00002 U	--
PCB-153	--	0.000021 U	--	0.00002 U	--
PCB-153/168	--	--	--	--	--
PCB-154	--	0.000021 U	--	0.00002 U	--
PCB-155	--	0.000021 U	--	0.00002 U	--
PCB-156	--	0.0000051 U	--	0.0000049 U	--
PCB-157	--	0.0000046 U	--	0.0000045 U	--
PCB-158/160	--	0.000041 U	--	0.00004 U	--
PCB-159	--	0.000021 U	--	0.00002 U	--
PCB-16	--	0.000021 U	--	0.00002 U	--

TABLE 10

SURFACE WATER ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD345	SW/SD346	SW/SD346	SW/SD347	SW/SD347
SAMPLE ID	SW345-20191209-F	SW346-20191209	SW346-20191209-F	SW347-20191209	SW347-20191209-F
SAMPLE DATE	20191209	20191209	20191209	20191209	20191209
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
PCB-166	--	0.000021 U	--	0.00002 U	--
PCB-167	--	0.0000052 U	--	0.0000038 U	--
PCB-168	--	0.000021 U	--	0.00002 U	--
PCB-169	--	0.0000041 U	--	0.0000034 U	--
PCB-17	--	0.000021 U	--	0.00002 U	--
PCB-170	--	0.000021 U	--	0.00002 U	--
PCB-171	--	0.000021 U	--	0.00002 U	--
PCB-172	--	0.000021 U	--	0.00002 U	--
PCB-173	--	0.000021 U	--	0.00002 U	--
PCB-174	--	0.000021 U	--	0.00002 U	--
PCB-175	--	0.000021 U	--	0.00002 U	--
PCB-176	--	0.000021 U	--	0.00002 U	--
PCB-177	--	0.000021 U	--	0.00002 U	--
PCB-178	--	0.000021 U	--	0.00002 U	--
PCB-179	--	0.000021 U	--	0.00002 U	--
PCB-18	--	0.000021 U	--	0.00002 U	--
PCB-18/30	--	--	--	--	--
PCB-180	--	0.000021 U	--	0.00002 U	--
PCB-180/193	--	--	--	--	--
PCB-181	--	0.000021 U	--	0.00002 U	--
PCB-182/187	--	0.000041 U	--	0.00004 U	--
PCB-183	--	0.000021 U	--	0.00002 U	--
PCB-184	--	0.000021 U	--	0.00002 U	--
PCB-185	--	0.000021 U	--	0.00002 U	--
PCB-186	--	0.000021 U	--	0.00002 U	--
PCB-187	--	--	--	--	--
PCB-188	--	0.000021 U	--	0.00002 U	--
PCB-189	--	0.0000057 U	--	0.0000053 U	--
PCB-19	--	0.000021 U	--	0.00002 U	--
PCB-190	--	0.000021 U	--	0.00002 U	--
PCB-191	--	0.000021 U	--	0.00002 U	--
PCB-192	--	0.000021 U	--	0.00002 U	--
PCB-193	--	0.000021 U	--	0.00002 U	--
PCB-194	--	0.000021 U	--	0.00002 U	--
PCB-195	--	0.000021 U	--	0.00002 U	--
PCB-196/203	--	0.000041 U	--	0.00004 U	--
PCB-197	--	0.000021 U	--	0.00002 U	--
PCB-198	--	0.000021 U	--	0.00002 U	--
PCB-199	--	0.000021 U	--	0.00002 U	--
PCB-2	--	0.000021 U	--	0.00002 U	--
PCB-20/21/33	--	0.000062 U	--	0.000059 U	--
PCB-20/28	--	--	--	--	--
PCB-200	--	0.000021 U	--	0.00002 U	--
PCB-201	--	0.000021 U	--	0.00002 U	--
PCB-202	--	0.000021 U	--	0.00002 U	--
PCB-204	--	0.000021 U	--	0.00002 U	--
PCB-205	--	0.000021 U	--	0.00002 U	--
PCB-206	--	0.000021 U	--	0.00002 U	--
PCB-207	--	0.000021 U	--	0.00002 U	--
PCB-208	--	0.000021 U	--	0.00002 U	--
PCB-209	--	0.000021 U	--	0.00002 U	--
PCB-22	--	0.000021 U	--	0.00002 U	--
PCB-23	--	0.000021 U	--	0.00002 U	--
PCB-24	--	0.000021 U	--	0.00002 U	--
PCB-25	--	0.000021 U	--	0.00002 U	--
PCB-26	--	0.000021 U	--	0.00002 U	--
PCB-27	--	0.000021 U	--	0.00002 U	--
PCB-28	--	0.000021 U	--	0.00002 U	--
PCB-29	--	0.000021 U	--	0.00002 U	--
PCB-3	--	0.000021 U	--	0.00002 U	--
PCB-30	--	0.000021 U	--	0.00002 U	--
PCB-31	--	0.000021 U	--	0.00002 U	--
PCB-32	--	0.000021 U	--	0.00002 U	--
PCB-34	--	0.000021 U	--	0.00002 U	--
PCB-35	--	0.000021 U	--	0.00002 U	--
PCB-36	--	0.000021 U	--	0.00002 U	--
PCB-37	--	0.000021 U	--	0.00002 U	--
PCB-38	--	0.000021 U	--	0.00002 U	--
PCB-39	--	0.000021 U	--	0.00002 U	--
PCB-4	--	0.000021 U	--	0.00002 U	--
PCB-40	--	0.000021 U	--	0.00002 U	--
PCB-41/64/71/72	--	0.000083 U	--	0.000079 U	--
PCB-42/59	--	0.000041 U	--	0.00004 U	--
PCB-43/49	--	0.000041 U	--	0.00004 U	--
PCB-44	--	0.000021 U	--	0.00002 U	--
PCB-44/47/65	--	--	--	--	--
PCB-45	--	0.000021 U	--	0.00002 U	--
PCB-46	--	0.000021 U	--	0.00002 U	--
PCB-47	--	0.000021 U	--	0.00002 U	--
PCB-48/75	--	0.000041 U	--	0.00004 U	--
PCB-5	--	0.000021 U	--	0.00002 U	--
PCB-50	--	0.000021 U	--	0.00002 U	--
PCB-51	--	0.000021 U	--	0.00002 U	--
PCB-52	--	--	--	--	--

TABLE 10

SURFACE WATER ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD345	SW/SD346	SW/SD346	SW/SD347	SW/SD347
SAMPLE ID	SW345-20191209-F	SW346-20191209	SW346-20191209-F	SW347-20191209	SW347-20191209-F
SAMPLE DATE	20191209	20191209	20191209	20191209	20191209
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
PCB-52/69	--	0.000041 U	--	0.00004 U	--
PCB-53	--	0.000021 U	--	0.00002 U	--
PCB-54	--	0.000021 U	--	0.00002 U	--
PCB-55	--	0.000021 U	--	0.00002 U	--
PCB-56/60	--	0.000041 U	--	0.00004 U	--
PCB-57	--	0.000021 U	--	0.00002 U	--
PCB-58	--	0.000021 U	--	0.00002 U	--
PCB-6	--	0.000021 U	--	0.00002 U	--
PCB-61/70	--	0.000041 U	--	0.00004 U	--
PCB-62	--	0.000021 U	--	0.00002 U	--
PCB-63	--	0.000021 U	--	0.00002 U	--
PCB-65	--	0.000021 U	--	0.00002 U	--
PCB-66	--	--	--	--	--
PCB-66/76	--	0.000041 U	--	0.00004 U	--
PCB-67	--	0.000021 U	--	0.00002 U	--
PCB-68	--	0.000021 U	--	0.00002 U	--
PCB-7	--	0.000021 U	--	0.00002 U	--
PCB-73	--	0.000021 U	--	0.00002 U	--
PCB-74	--	0.000021 U	--	0.00002 U	--
PCB-77	--	0.0000044 U	--	0.0000037 U	--
PCB-78	--	0.000021 U	--	0.00002 U	--
PCB-79	--	0.000021 U	--	0.00002 U	--
PCB-8	--	0.000021 U	--	0.00002 U	--
PCB-80	--	0.000021 U	--	0.00002 U	--
PCB-81	--	0.000004 U	--	0.0000038 U	--
PCB-82	--	0.000021 U	--	0.00002 U	--
PCB-83/112	--	0.000041 U	--	0.00004 U	--
PCB-84/92	--	0.000041 U	--	0.00004 U	--
PCB-85/116	--	0.000041 U	--	0.00004 U	--
PCB-86	--	0.000021 U	--	0.00002 U	--
PCB-87/117/125	--	0.000062 U	--	0.000059 U	--
PCB-88/91	--	0.000041 U	--	0.00004 U	--
PCB-89	--	0.000021 U	--	0.00002 U	--
PCB-9	--	0.000021 U	--	0.00002 U	--
PCB-90/101/113	--	--	--	--	--
PCB-93	--	0.000021 U	--	0.00002 U	--
PCB-94	--	0.000021 U	--	0.00002 U	--
PCB-95	--	0.000021 U	--	0.00002 U	--
PCB-96	--	0.000021 U	--	0.00002 U	--
PCB-97	--	0.000021 U	--	0.00002 U	--
PCB-98/102	--	0.000041 U	--	0.00004 U	--
PCB-99	--	0.000021 U	--	0.00002 U	--
PENTACHLOROBIPHENYLS	--	0 UJ	--	0 UJ	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	0.0000081 U	--	0.0000051 U	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	0.0000081 U	--	0.0000051 U	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	0.0000081 U	--	0.0000051 U	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	0.0000081 U	--	0.0000051 U	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	0.0000081 U	--	0.0000051 U	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	0.0000081 U	--	0.0000051 U	--
TETRACHLOROBIPHENYLS	--	0 UJ	--	0 UJ	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	0 U	--	0 U	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	0 U	--	0 U	--
TOTAL PCB CONGENERS ZEROND	--	0 U	--	0 U	--
TOTAL PCB CONGENERS-NOAA	--	0 U	--	0 U	--
TOTAL PCB CONGENERS-NOAA HALFND	--	0.00208015	--	0.00198815	--
TOTAL PCB CONGENERS-NOAA X2	--	0 U	--	0 U	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	0.0004938	--	0.000471	--
TRICHLOROBIPHENYLS	--	0 UJ	--	0 UJ	--
DIOXINS/FURANS (PG/L)					
1,2,3,4,6,7,8,9-OCDD	--	8 J	--	10 J	--
1,2,3,4,6,7,8,9-OCDF	--	3.5 U	--	3.5 U	--
1,2,3,4,6,7,8-HPCDD	--	2.6 U	--	2.4 U	--
1,2,3,4,6,7,8-HPCDF	--	1.5 U	--	1.7 U	--
1,2,3,4,7,8,9-HPCDF	--	2.7 U	--	2.8 U	--
1,2,3,4,7,8-HXCDD	--	3 U	--	3.1 U	--
1,2,3,4,7,8-HXCDF	--	2.3 U	--	2.4 U	--
1,2,3,6,7,8-HXCDD	--	2.8 U	--	2.6 U	--
1,2,3,6,7,8-HXCDF	--	1.8 U	--	2.4 U	--
1,2,3,7,8,9-HXCDD	--	2.6 U	--	2.3 U	--
1,2,3,7,8,9-HXCDF	--	1.8 U	--	2.4 U	--
1,2,3,7,8-PECDD	--	2.1 U	--	2.6 U	--
1,2,3,7,8-PECDF	--	1.9 U	--	1.4 U	--
2,3,4,6,7,8-HXCDF	--	1.6 U	--	2.1 U	--
2,3,4,7,8-PECDF	--	1.8 U	--	1.5 U	--
2,3,7,8-TCDD	--	1 U	--	1.1 U	--
2,3,7,8-TCDF	--	1.2 U	--	1.2 U	--
TEQ DIOXINS (BIRD)	--	0.0008	--	0.001	--
TEQ DIOXINS (BIRD) HALFND	--	3.762275	--	3.965375	--
TEQ DIOXINS (FISH)	--	0.0008	--	0.001	--
TEQ DIOXINS (FISH) HALFND	--	3.252775	--	3.579375	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	0.0024	--	0.003	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	2.740425	--	3.059025	--
TOTAL HPCDD	--	0 UJ	--	0 UJ	--
TOTAL HPCDF	--	0 UJ	--	0 UJ	--

TABLE 10

SURFACE WATER ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD345	SW/SD346	SW/SD346	SW/SD347	SW/SD347
SAMPLE ID	SW345-20191209-F	SW346-20191209	SW346-20191209-F	SW347-20191209	SW347-20191209-F
SAMPLE DATE	20191209	20191209	20191209	20191209	20191209
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
TOTAL HXCDD	--	0 UJ	--	0 UJ	--
TOTAL HXCDF	--	0 UJ	--	0 UJ	--
TOTAL PECDD	--	0 UJ	--	0 UJ	--
TOTAL PECDF	--	0 UJ	--	0 UJ	--
TOTAL TCDD	--	0 UJ	--	0 UJ	--
TOTAL TCDF	--	0 UJ	--	0 UJ	--
METALS (UG/L)					
ALUMINUM	20 U	15.6 J	20 U	61.7	20 U
ANTIMONY	2 U	2 U	2 U	2 U	2 U
ARSENIC	0.2 J	0.26 J	1 U	0.23 J	1 U
BARIUM	41.9	42.3	40.8	45.3	42.1
BERYLLIUM	1 U	1 U	1 U	1 U	1 U
CADMIUM	1 U	1 U	1 U	1 U	1 U
CALCIUM	25700	25700	24100	26900	24200
CHROMIUM	0.09 J	0.57 J	2 U	0.45 J	2 U
COBALT	0.49 J	1 UJ	0.5 J	1 UJ	0.58 J
COPPER	2 U	0.58 J	2 U	0.68 J	2 U
CYANIDE	--	10 U	--	10 U	--
IRON	200 U	174 J	200 U	248	200 U
LEAD	1 U	1 U	1 U	1 U	1 U
MAGNESIUM	12900	12300	11800	12800	11500
MANGANESE	213	234	209	291	229
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	3.4	3.3	3.5	4.4	4
POTASSIUM	2370	2090	2150	2320	2130
SELENIUM	0.78 J	0.48 J	0.89 J	0.36 J	1.1 J
SILVER	1 U	1 U	1 U	1 U	1 U
SODIUM	3410	3230	3130	3440	3100
THALLIUM	1 U	1 UJ	1 U	1 UJ	1 U
VANADIUM	5 U	1.1 J	5 U	1.5 J	5 U
ZINC	11.8	4	11.1	6.3	11.8

TABLE 11

SEDIMENT ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD335	SW/SD336	SW/SD342	SW/SD343	SW/SD344	SW/SD345	SW/SD346	SW/SD347
SAMPLE ID	SD335-20191209	SD336-20191209	SD342-20191209	SD343-20191209	SD344-20191210	SD345-20191209	SD346-20191209	SD347-20191209
SAMPLE DATE	20191209	20191209	20191209	20191209	20191210	20191209	20191209	20191209
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Creek	Rocklick Creek	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
VOLATILES (MG/KG)								
1,1,1-TRICHLOROETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
1,1,2,2-TETRACHLOROETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
1,1,2-TRICHLOROETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
1,1-DICHLOROETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
1,1-DICHLOROETHENE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
1,2,3-TRICHLOROBENZENE	0.0054 U	0.0059 UJ	0.0057 U	0.0078 UJ	0.015 U	0.0079 UJ	0.0088 UJ	0.0076 R
1,2,4-TRICHLOROBENZENE	0.0054 U	0.0059 UJ	0.0057 U	0.0078 UJ	0.015 U	0.0079 UJ	0.0088 UJ	0.0076 R
1,2-DIBROMO-3-CHLOROPROPANE	0.0054 U	0.0059 UJ	0.0057 U	0.0078 UJ	0.015 U	0.0079 UJ	0.0088 UJ	0.0076 R
1,2-DIBROMOETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
1,2-DICHLOROBENZENE	0.0054 U	0.0059 UJ	0.0057 U	0.0078 UJ	0.015 U	0.0079 UJ	0.0088 UJ	0.0076 R
1,2-DICHLOROETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
1,2-DICHLOROPROPANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
1,3-DICHLOROBENZENE	0.0054 U	0.0059 UJ	0.0057 U	0.0078 UJ	0.015 U	0.0079 UJ	0.0088 UJ	0.0076 R
1,4-DICHLOROBENZENE	0.0054 U	0.0059 UJ	0.0057 U	0.0078 UJ	0.015 U	0.0079 UJ	0.0088 UJ	0.0076 R
2-BUTANONE	0.011 U	0.012 U	0.011 U	0.015 J	0.03 U	0.011 J	0.012 J	0.015 UJ
2-HEXANONE	0.011 U	0.012 U	0.011 U	0.016 U	0.03 U	0.016 U	0.018 U	0.015 UJ
4-METHYL-2-PENTANONE	0.011 U	0.012 U	0.011 U	0.016 U	0.03 U	0.016 U	0.018 U	0.015 UJ
ACETONE	0.016 U	0.015 U	0.021 U	0.052	0.047	0.038	0.042	0.036 J+
BENZENE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
BROMOCHLOROMETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
BROMODICHLOROMETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
BROMOFORM	0.0054 U	0.0059 UJ	0.0057 U	0.0078 UJ	0.015 U	0.0079 UJ	0.0088 UJ	0.0076 R
BROMOMETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
CARBON DISULFIDE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0012 J	0.0088 U	0.0076 UJ
CARBON TETRACHLORIDE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
CHLOROBENZENE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
CHLORODIBROMOMETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
CHLOROETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
CHLOROFORM	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
CHLOROMETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
CIS-1,2-DICHLOROETHENE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
CIS-1,3-DICHLOROPROPENE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
CYCLOHEXANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
DICHLORODIFLUOROMETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
ETHYLBENZENE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
ISOPROPYLBENZENE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
M+P-XYLENES	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
METHYL ACETATE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
METHYL CYCLOHEXANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
METHYL TERT-BUTYL ETHER	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
METHYLENE CHLORIDE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.021	0.0079 U	0.0088 U	0.0076 UJ
O-XYLENE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
STYRENE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
TETRACHLOROETHENE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
TOLUENE	0.0054 U	0.0059 U	0.0057 U	0.0015 J	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
TRANS-1,2-DICHLOROETHENE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
TRANS-1,3-DICHLOROPROPENE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
TRICHLOROETHENE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
TRICHLOROFLUOROMETHANE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
VINYL CHLORIDE	0.0054 U	0.0059 U	0.0057 U	0.0078 U	0.015 U	0.0079 U	0.0088 U	0.0076 UJ
SEMIVOLATILES (MG/KG)								
1,1-BIPHENYL	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
1,2,4,5-TETRACHLOROBENZENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
1,4-DIOXANE	0.09 U	0.088 U	0.089 U	0.1 U	0.16 U	0.099 U	0.11 U	0.1 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
2,3,4,6-TETRACHLOROPHENOL	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
2,4,5-TRICHLOROPHENOL	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
2,4,6-TRICHLOROPHENOL	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
2,4-DICHLOROPHENOL	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
2,4-DIMETHYLPHENOL	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
2,4-DINITROPHENOL	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
2,4-DINITROTOLUENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
2,6-DINITROTOLUENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
2-CHLORONAPHTHALENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
2-CHLOROPHENOL	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
2-METHYLNAPHTHALENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
2-METHYLPHENOL	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
2-NITROANILINE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
2-NITROPHENOL	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
3&4-METHYLPHENOL	0.44 U	0.43 U	0.44 U	0.052 J	0.78 U	0.49 U	0.55 U	0.5 U
3,3'-DICHLOROBENZIDINE	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
3-NITROANILINE	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
4,6-DINITRO-2-METHYLPHENOL	0.44 UJ	0.43 UJ	0.44 UJ	0.49 UJ	0.78 U	0.49 UJ	0.55 UJ	0.5 UJ
4-BROMOPHENYL PHENYL ETHER	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
4-CHLORO-3-METHYLPHENOL	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
4-CHLOROANILINE	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
4-CHLOROPHENYL PHENYL ETHER	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
4-NITROANILINE	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
4-NITROPHENOL	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U

TABLE 11

SEDIMENT ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD335	SW/SD336	SW/SD342	SW/SD343	SW/SD344	SW/SD345	SW/SD346	SW/SD347
SAMPLE ID	SD335-20191209	SD336-20191209	SD342-20191209	SD343-20191209	SD344-20191210	SD345-20191209	SD346-20191209	SD347-20191209
SAMPLE DATE	20191209	20191209	20191209	20191209	20191210	20191209	20191209	20191209
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Creek	Rocklick Creek	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ACENAPHTHENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
ACENAPHTHYLENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
ACETOPHENONE	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
ANTHRACENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
ATRAZINE	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
BAP EQUIVALENT-HALFND	0.23 U	0.191967	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
BAP EQUIVALENT-POS	0.23 U	0.069867	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
BENZALDEHYDE	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
BENZO(A)ANTHRACENE	0.23 U	0.065 J	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
BENZO(A)PYRENE	0.23 U	0.057 J	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
BENZO(B)FLUORANTHENE	0.23 U	0.063 J	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
BENZO(G,H,I)PERYLENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
BENZO(K)FLUORANTHENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
BIS(2-CHLOROETHOXY)METHANE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
BIS(2-CHLOROETHYL)ETHER	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.23 UJ	0.22 UJ	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.21 J
BUTYL BENZYL PHTHALATE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
CAPROLACTAM	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
CARBAZOLE	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
CHRYSENE	0.23 U	0.067 J	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
DIBENZO(A,H)ANTHRACENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
DIBENZOFURAN	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
DIETHYL PHTHALATE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
DIMETHYL PHTHALATE	0.14 J	0.17 J	0.12 J	0.2 J	0.44	0.2 J	0.16 J	0.13 J
DI-N-BUTYL PHTHALATE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
DI-N-OCTYL PHTHALATE	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
FLUORANTHENE	0.44 U	0.12 J	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
FLUORENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
HEXACHLOROBENZENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
HEXACHLOROBUTADIENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
HEXACHLOROCYCLOPENTADIENE	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
HEXACHLOROETHANE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
HIGH MOLECULAR WEIGHT PAHS	0 U	0.392	0 U	0 U	0 U	0 U	0 U	0 U
INDENO(1,2,3-CD)PYRENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
ISOPHORONE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
LOW MOLECULAR WEIGHT PAHS	0 U	0.23	0 U	0 U	0 U	0 U	0 U	0 U
NAPHTHALENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
NITROBENZENE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
N-NITROSO-DI-N-PROPYLAMINE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
N-NITROSODIPHENYLAMINE	0.23 U	0.22 U	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
PENTACHLOROPHENOL	0.44 U	0.43 U	0.44 U	0.49 U	0.78 U	0.49 U	0.55 U	0.5 U
PHENANTHRENE	0.23 U	0.11 J	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
PHENOL	0.1 J	0.11 J	0.093 J	0.11 J	0.29 J	0.12 J	0.1 J	0.089 J
PYRENE	0.23 U	0.14 J	0.23 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
TOTAL PAHS	0 U	0.622	0 U	0 U	0 U	0 U	0 U	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K								
2-METHYLNAPHTHALENE	0.0044 U	0.0048	0.0044 U	0.0018 J	0.0078 U	0.0029 J	0.0055 U	0.0011 J
ACENAPHTHENE	0.0044 U	0.0034 J	0.0044 U	0.0049 U	0.0078 U	0.0049 U	0.0055 U	0.005 U
ACENAPHTHYLENE	0.0044 U	0.011	0.0044 U	0.0049 U	0.0078 U	0.0049 U	0.0055 U	0.005 U
ANTHRACENE	0.0044 U	0.019	0.0044 U	0.0049 U	0.0078 U	0.0049 U	0.0055 U	0.005 U
BAP EQUIVALENT-HALFND	0.003602	0.069017	0.0044 U	0.006806	0.0078 U	0.004215	0.0055 U	0.005776
BAP EQUIVALENT-POS	0.00116	0.069017	0.0044 U	0.004356	0.0078 U	0.001251	0.0055 U	0.000001
BENZO(A)ANTHRACENE	0.00089 J	0.054	0.0044 U	0.0041 J	0.0078 U	0.0049 U	0.0055 U	0.005 U
BENZO(A)PYRENE	0.00094 J	0.047	0.0044 U	0.0031 J	0.0078 U	0.0011 J	0.0055 U	0.005 U
BENZO(B)FLUORANTHENE	0.0013 J	0.05	0.0044 U	0.0059	0.0078 U	0.0015 J	0.0055 U	0.005 U
BENZO(G,H,I)PERYLENE	0.00098 J	0.034	0.0044 U	0.0029 J	0.0078 U	0.00099 J	0.0055 U	0.005 U
BENZO(K)FLUORANTHENE	0.0044 U	0.016	0.0044 U	0.0021 J	0.0078 U	0.0049 U	0.0055 U	0.005 U
CHRYSENE	0.0012 J	0.057	0.0044 U	0.0057	0.0078 U	0.0015 J	0.0055 U	0.0013 J
DIBENZO(A,H)ANTHRACENE	0.0044 U	0.0088	0.0044 U	0.0049 U	0.0078 U	0.0049 U	0.0055 U	0.005 U
FLUORANTHENE	0.0013 J	0.087	0.0044 U	0.01	0.0078 U	0.0013 J	0.0055 U	0.0021 J
FLUORENE	0.0044 U	0.012	0.0044 U	0.0049 U	0.0078 U	0.0049 U	0.0055 U	0.005 U
HIGH MOLECULAR WEIGHT PAHS	0.00691	0.4228	0 U	0.0371	0 U	0.00669	0.0012	0.0049
INDENO(1,2,3-CD)PYRENE	0.0044 U	0.026	0.0044 U	0.0023 J	0.0078 U	0.0049 U	0.0055 U	0.005 U
LOW MOLECULAR WEIGHT PAHS	0.0013	0.2296	0 U	0.0192	0.0016	0.0061	0.0014	0.0036
NAPHTHALENE	0.0044 U	0.0042 J	0.0044 U	0.0012 J	0.0078 U	0.0019 J	0.0055 U	0.005 U
PENTACHLOROPHENOL	0.009 U	0.0088 U	0.0089 U	0.01 U	0.016 U	0.0099 U	0.011 U	0.01 U
PHENANTHRENE	0.0044 U	0.093	0.0044 U	0.008	0.0016 J	0.0029 J	0.0014 J	0.0015 J
PYRENE	0.0016 J	0.13	0.0044 U	0.011	0.0078 U	0.0016 J	0.0012 J	0.0036 J
TOTAL PAHS	0.0012	0.057	0.0044	0.0057	0.0078	0.0015	0.0055	0.0013
PESTICIDES (MG/KG)								
4,4'-DDD	0.0044 U	0.0016 J	0.0044 U	0.0049 U	0.0078 U	0.0049 U	0.0055 U	0.005 U
4,4'-DDE	0.0044 U	0.0043 U	0.0044 U	0.0049 U	0.0078 U	0.0049 U	0.0055 U	0.005 U
4,4'-DDT	0.0044 U	0.0043 U	0.0044 U	0.0049 U	0.0078 U	0.0049 U	0.0055 U	0.005 U
ALDRIN	0.0023 U	0.0022 U	0.0022 U	0.0025 U	0.004 U	0.0025 U	0.0028 U	0.0026 U
ALPHA-BHC	0.0023 U	0.0022 U	0.0022 U	0.0025 U	0.004 U	0.0025 U	0.0028 U	0.0026 U
ALPHA-CHLORDANE	0.0023 U	0.0022 U	0.0022 U	0.0025 U	0.004 U	0.0025 U	0.0028 U	0.0026 U
BETA-BHC	0.0023 U	0.0022 U	0.0022 U	0.0025 U	0.004 U	0.0025 U	0.0028 U	0.0026 U
DELTA-BHC	0.0023 U	0.0022 U	0.0022 U	0.0025 U	0.004 U	0.0025 U	0.0028 U	0.0026 U
DIELDRIN	0.0044 U	0.0043 U	0.0044 U	0.0049 U	0.0078 U	0.0049 U	0.0055 U	0.005 U
ENDOSULFAN I	0.0023 U	0.0022 U	0.0022 U	0.0025 U	0.004 U	0.0025 U	0.0028 U	0.0026 U
ENDOSULFAN II	0.0044 U	0.0043 U	0.0044 U	0.0049 U	0.0078 U	0.0049 U	0.0055 U	0.005 U

TABLE 11

SEDIMENT ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD335	SW/SD336	SW/SD342	SW/SD343	SW/SD344	SW/SD345	SW/SD346	SW/SD347
SAMPLE ID	SD335-20191209	SD336-20191209	SD342-20191209	SD343-20191209	SD344-20191210	SD345-20191209	SD346-20191209	SD347-20191209
SAMPLE DATE	20191209	20191209	20191209	20191209	20191210	20191209	20191209	20191209
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Creek	Rocklick Creek	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ENDOSULFAN SULFATE	0.0044 U	0.0043 U	0.0044 U	0.0049 U	0.0078 U	0.0049 U	0.0055 U	0.005 U
ENDRIN	0.0044 U	0.0043 U	0.0044 U	0.0049 U	0.0078 U	0.0049 U	0.0055 U	0.005 U
ENDRIN ALDEHYDE	0.0044 U	0.0043 U	0.0044 U	0.0049 U	0.0078 U	0.0049 U	0.0055 U	0.005 U
ENDRIN KETONE	0.0044 U	0.0043 U	0.0044 U	0.0049 U	0.0078 U	0.0049 U	0.0055 U	0.005 U
GAMMA-BHC (LINDANE)	0.0023 U	0.00091 J	0.0022 U	0.0025 U	0.004 U	0.0025 U	0.0028 U	0.0026 U
GAMMA-CHLORDANE	0.0023 U	0.0022 U	0.0022 U	0.0025 U	0.004 U	0.0025 U	0.0028 U	0.0026 U
HEPTACHLOR	0.0023 U	0.0022 U	0.0022 U	0.0025 U	0.004 U	0.0025 U	0.0028 U	0.0026 U
HEPTACHLOR EPOXIDE	0.0023 U	0.0022 U	0.0022 U	0.0025 U	0.004 U	0.0025 U	0.0028 U	0.0026 U
METHOXYCHLOR	0.023 U	0.022 U	0.023 U	0.025 U	0.04 U	0.025 U	0.028 U	0.026 U
TOXAPHENE	0.23 U	0.22 U	0.22 U	0.25 U	0.4 U	0.25 U	0.28 U	0.26 U
PCBS (MG/KG)								
AROCLOR-1016	0.044 U	0.044 U	0.044 U	0.049 U	0.078 U	0.049 U	0.055 U	0.05 U
AROCLOR-1221	0.044 U	0.044 U	0.044 U	0.049 U	0.078 U	0.049 U	0.055 U	0.05 U
AROCLOR-1232	0.044 U	0.044 U	0.044 U	0.049 U	0.078 U	0.049 U	0.055 U	0.05 U
AROCLOR-1242	0.044 U	0.044 U	0.044 U	0.049 U	0.078 U	0.049 U	0.055 U	0.05 U
AROCLOR-1248	0.044 U	0.044 U	0.044 U	0.049 U	0.078 U	0.049 U	0.055 U	0.05 U
AROCLOR-1254	0.044 U	0.044 U	0.044 U	0.049 U	0.078 U	0.049 U	0.055 U	0.05 U
AROCLOR-1260	0.044 U	0.044 U	0.044 U	0.049 U	0.078 U	0.049 U	0.055 U	0.05 U
AROCLOR-1262	0.044 U	0.044 U	0.044 U	0.049 U	0.078 U	0.049 U	0.055 U	0.05 U
AROCLOR-1268	0.044 U	0.044 U	0.044 U	0.049 U	0.078 U	0.049 U	0.055 U	0.05 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U
TOTAL AROCLOR HALFND	0.198	0.198	0.198	0.2205	0.351	0.2205	0.2475	0.225
PCB CONGENERS (MG/KG)								
DICHLOROBIPHENYLS	0.000025 J	0.0016 J	0.000021 J	0.000026 J	--	0.000053 J	0.000042 J	0.00002 J
HEPTACHLOROBIPHENYLS	0.000098 J	0.00084 J	0.00025 J	0.000084 J	--	0.000029 J	0.00018 J	0.000047 J
HEXACHLOROBIPHENYLS	0.00026 J	0.0026 J	0.00036 J	0.00014 J	--	0.000041 J	0.00036 J	0.000048 J
MONOCHLOROBIPHENYLS	0.000012 J	0.000054 J	0.000008 J	0.000017 J	--	0.000023 J	0.000026 J	0.000013 J
NONACHLOROBIPHENYLS	0.000053 J	0.00018 J	0.000088 J	0.000085 J	--	0.00002 J	0.000034 J	0.00012 J
OCTACHLOROBIPHENYLS	0.000042 J	0.00021 J	0.0001 J	0.000046 J	--	0.00002 J	0.000046 J	0.000056 J
PCB-1	0.0000028	0.000027	0.0000021	0.0000051	--	0.000009	0.0000068	0.0000038
PCB-10	0.000002 U	0.000018	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-100	0.000002 U	0.0000014 J	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-101/90	0.000071	0.00026	0.000049	0.000024	--	0.0000083	0.000017	0.000011
PCB-103	0.000002 U	0.0000027	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-104	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-105	0.000036	0.00018	0.000027	0.000011	0.0000568	0.0000037	0.000011	0.0000051
PCB-108/107	0.0000056	0.000022	0.000004	0.0000017 J	--	0.000004 U	0.0000021 J	0.000004 U
PCB-109	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-11	0.0000062	0.000023	0.000005	0.0000072	--	0.0000045	0.0000068	0.0000048
PCB-110	0.000084	0.00035	0.000058	0.000028	--	0.0000085	0.000018	0.000011
PCB-111/115	0.0000014 J	0.0000045	0.0000014 J	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U
PCB-113	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-114	0.0000024	0.0000079	0.0000017 J	0.00000083 U	0.00000241 J	0.00000083 U	0.00000083 U	0.00000083 U
PCB-118	--	--	--	--	0.000128	--	--	--
PCB-118/106	0.000073	0.00032	0.000063	0.000024	--	0.0000076	0.000024	0.000011
PCB-119	0.0000016 J	0.0000034	0.0000012 J	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-12	0.0000012 J	0.000012	0.00000084 J	0.0000013 J	--	0.0000011 J	0.0000018 J	0.000002 U
PCB-120	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-121	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-122	0.0000015 J	0.0000041	0.000001 J	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-123	0.0000016 J	0.0000045	0.0000015 J	0.00000073 U	0.00000219 J	0.00000056 U	0.0000005 U	0.0000005 U
PCB-124	0.0000041	0.000017	0.0000029	0.0000016 J	--	0.000002 U	0.0000017 J	0.000002 U
PCB-126	0.00000068 U	0.0000039	0.00000067 U	0.00000076 U	0.0000144 U	0.00000067 U	0.00000067 U	0.00000067 U
PCB-127	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-128/162	0.000012	0.00016	0.000017	0.0000045	--	0.0000016 J	0.000021	0.0000022 J
PCB-128/166	--	--	--	--	0.0000218 J	--	--	--
PCB-129	0.0000043	0.000052	0.0000055	0.000002 U	--	0.000002 U	0.0000075	0.000002 U
PCB-129/138/163	--	--	--	--	0.000156	--	--	--
PCB-13	0.0000014 J	0.000034	0.00000098 J	0.000002 U	--	0.0000024	0.0000018 J	0.0000015 J
PCB-130	0.0000046	0.000048	0.0000065	0.000002	--	0.000002 U	0.0000077	0.000002 U
PCB-131/133	0.0000021 J	0.000018	0.0000024 J	0.0000016 J	--	0.000004 U	0.0000024 J	0.000004 U
PCB-132/161	0.000019	0.0002	0.00002	0.0000093	--	0.0000026 J	0.000021	0.0000032 J
PCB-134/143	0.0000038 J	0.000035	0.0000037 J	0.0000021 J	--	0.000004 U	0.0000028 J	0.000004 U
PCB-135	0.0000065	0.000059	0.0000078	0.0000039	--	0.0000016 J	0.0000064	0.0000012 J
PCB-136	0.0000073	0.000064	0.0000078	0.000004	--	0.0000016 J	0.0000041	0.0000018 J
PCB-137	0.000005	0.000053	0.0000058	0.0000017 J	--	0.000002 U	0.0000073	0.000002 U
PCB-138/163/164	0.000061	0.00063	0.000084	0.000027	--	0.0000088	0.000092	0.00001
PCB-139/149	0.000038	0.00035	0.000047	0.000024	--	0.000007	0.000037	0.0000084
PCB-14	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-140	0.000002 U	0.0000028	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-141	0.00001	0.00011	0.000015	0.0000073	--	0.0000019 J	0.000019	0.0000024
PCB-142	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-144	0.0000026	0.000019	0.0000031	0.0000014 J	--	0.000002 U	0.0000023	0.000002 U
PCB-145	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-146/165	0.0000082	0.000064	0.000011	0.0000042	--	0.0000018 J	0.000011	0.0000017 J
PCB-147	0.0000019 J	0.000011	0.0000018 J	0.000002 U	--	0.000002 U	0.0000014 J	0.000002 U
PCB-148	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-15	0.0000084	0.00025	0.0000058	0.0000046	--	0.000011	0.000011	0.000004
PCB-150	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-151	0.0000098	0.000084	0.000013	0.0000074	--	0.0000029	0.0000076	0.0000029
PCB-152	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U

TABLE 11

SEDIMENT ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD335	SW/SD336	SW/SD342	SW/SD343	SW/SD344	SW/SD345	SW/SD346	SW/SD347
SAMPLE ID	SD335-20191209	SD336-20191209	SD342-20191209	SD343-20191209	SD344-20191210	SD345-20191209	SD346-20191209	SD347-20191209
SAMPLE DATE	20191209	20191209	20191209	20191209	20191210	20191209	20191209	20191209
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Creek	Rocklick Creek	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PCB-153	0.000047	0.00043	0.000072	0.000029	--	0.0000099	0.000071	0.000011
PCB-153/168	--	--	--	--	0.00012	--	--	--
PCB-154	0.000002 U	0.000004	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-155	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-156	0.0000075	0.000095	0.000013	0.0000026	--	0.00000098 J	0.000018	0.0000013 J
PCB-156/157	--	--	--	--	0.0000174 J	--	--	--
PCB-157	0.0000021	0.000022	0.0000033	0.0000012 J	--	0.00000061 U	0.0000042	0.00000044 U
PCB-158/160	0.000008	0.000087	0.00001	0.0000035 J	--	0.000004 U	0.000012	0.0000015 J
PCB-159	0.000002 U	0.0000033	0.0000011 J	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-16	0.0000066	0.0003	0.000002 U	0.0000023	--	0.0000024	0.0000024	0.0000013 J
PCB-166	0.000002 U	0.000004	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-167	0.0000033	0.000035	0.000005	0.0000016 J	0.00000593 J	0.0000006 U	0.0000071	0.00000046 U
PCB-168	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-169	0.00000046 U	0.00000077 U	0.00000055 U	0.00000057 U	0.0000144 U	0.00000053 U	0.00000034 U	0.00000037 U
PCB-17	0.0000059	0.00044	0.0000019 J	0.0000027	--	0.0000049	0.000004	0.0000018 J
PCB-170	0.000011	0.00011	0.000031	0.0000073	0.0000215	0.0000036	0.000031	0.0000034
PCB-171	0.0000036	0.000039	0.0000087	0.000003	--	0.000002 U	0.0000084	0.000002 U
PCB-172	0.0000031	0.00002	0.0000056	0.0000023	--	0.000002 U	0.0000043	0.000002 U
PCB-173	0.000002 U	0.0000043	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-174	0.000011	0.00011	0.000031	0.000011	--	0.0000035	0.000018	0.0000051
PCB-175	0.000002 U	0.0000054	0.0000021	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-176	0.0000018 J	0.000015	0.0000039	0.0000017 J	--	0.000002 U	0.0000024	0.00000097 J
PCB-177	0.0000073	0.000074	0.000019	0.0000065	--	0.0000027	0.000013	0.0000028
PCB-178	0.0000034	0.000021	0.0000067	0.0000036	--	0.000002 U	0.0000035	0.0000017 J
PCB-179	0.0000053	0.000041	0.000012	0.0000055	--	0.0000021	0.0000057	0.0000026
PCB-18	0.000019	0.00091	0.0000041	0.0000054	--	0.000011	0.0000083	0.0000034
PCB-18/30	--	--	--	--	0.0000192 J	--	--	--
PCB-180	0.000021	0.00018	0.000059	0.000018	--	0.0000072	0.000043	0.000012
PCB-180/193	--	--	--	--	0.000057	--	--	--
PCB-181	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-182/187	0.000016	0.00011	0.000037	0.000016	--	0.0000063	0.000021	0.00001
PCB-183	0.0000075	0.00006	0.000017	0.0000074	--	0.0000035	0.000013	0.000005
PCB-184	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-185	0.000002	0.0000099	0.0000037	0.000002 U	--	0.000002 U	0.0000026	0.0000019 J
PCB-186	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-187	--	--	--	--	0.000044	--	--	--
PCB-188	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-189	0.00000068 U	0.00000075 U	0.00000063 U	0.00000073 U	0.00000138 J	0.0000007 U	0.0000021	0.00000035 U
PCB-19	0.0000042	0.000094	0.000002 U	0.000002 U	--	0.000002 U	0.0000014 J	0.000002 U
PCB-190	0.0000028	0.000023	0.0000071	0.0000019 J	--	0.000002 U	0.0000056	0.0000014 J
PCB-191	0.000002 U	0.0000053	0.000002 U	0.000002 U	--	0.000002 U	0.0000016 J	0.000002 U
PCB-192	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-193	0.000002	0.000011	0.0000038	0.000002 U	--	0.000002 U	0.0000027	0.000002 U
PCB-194	0.0000064	0.000041	0.000021	0.0000068	--	0.0000044	0.0000094	0.0000084
PCB-195	0.0000033	0.000018	0.0000085	0.0000026	0.00000636 J	0.0000014 J	0.0000037	0.0000026
PCB-196/203	0.000012	0.000056	0.000026	0.000012	--	0.0000065	0.000013	0.000016
PCB-197	0.000002 U	0.0000022	0.0000012 J	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-198	0.000002 U	0.0000029	0.0000015 J	0.000002 U	--	0.000002 U	0.0000011 J	0.000002 U
PCB-199	0.000013	0.000061	0.000029	0.000016	--	0.0000064	0.000012	0.000019
PCB-2	0.0000035	0.0000068	0.0000019 J	0.0000057	--	0.0000034	0.0000076	0.000003
PCB-20/21/33	0.0000087	0.00059	0.0000052 J	0.0000042 J	--	0.0000081	0.00001	0.0000038 J
PCB-20/28	--	--	--	--	0.000101	--	--	--
PCB-200	0.0000015 J	0.000007	0.0000027	0.0000016 J	--	0.000002 U	0.0000012 J	0.0000017 J
PCB-201	0.0000018 J	0.0000081	0.000003	0.0000021	--	0.000002 U	0.0000019 J	0.0000022
PCB-202	0.0000042	0.000015	0.0000068	0.0000048	--	0.0000017 J	0.0000034	0.0000056
PCB-204	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-205	0.000002 U	0.0000026	0.0000015 J	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-206	0.000034	0.00012	0.000059	0.000056	0.000154	0.000014	0.000023	0.000079
PCB-207	0.0000034	0.00001	0.0000052	0.000004	--	0.0000012 J	0.0000016 J	0.0000065
PCB-208	0.000016	0.000046	0.000024	0.000025	--	0.0000052	0.0000093	0.000035
PCB-209	0.000062	0.00016	0.000097	0.000076	0.000355	0.000014	0.000028	0.00012
PCB-22	0.0000087	0.00031	0.0000036	0.0000028	--	0.0000051	0.0000067	0.0000026
PCB-23	0.000002 U	0.0000023	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-24	0.0000021	0.000046	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-25	0.0000022	0.000068	0.000002 U	0.000002 U	--	0.0000015 J	0.0000019 J	0.000002 U
PCB-26	0.0000061	0.00017	0.0000018 J	0.0000015 J	--	0.0000032	0.0000037	0.0000013 J
PCB-27	0.0000018 J	0.000036	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-28	0.000025	0.00073	0.0000085	0.0000073	--	0.000014	0.000018	0.0000059
PCB-29	0.000002 U	0.000011	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-3	0.000006	0.00002	0.000004	0.0000062	--	0.000011	0.000012	0.0000063
PCB-30	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-31	0.00002	0.00086	0.000009	0.0000076	--	0.000013	0.000018	0.0000061
PCB-32	0.0000086	0.00028	0.000002 U	0.0000014 J	--	0.000004	0.0000035	0.0000013 J
PCB-34	0.000002 U	0.0000039	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-35	0.000002 U	0.00001	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-36	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-37	0.000017	0.00014	0.0000061	0.0000034	--	0.0000062	0.0000068	0.0000034
PCB-38	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-39	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-4	0.0000019 J	0.00026	0.0000015 J	0.0000031	--	0.000006	0.0000037	0.0000018 J
PCB-40	0.000012	0.000089	0.000002 U	0.000002 U	--	0.0000016 J	0.0000016 J	0.000002 U

LOCATION	SW/SD335	SW/SD336	SW/SD342	SW/SD343	SW/SD344	SW/SD345	SW/SD346	SW/SD347
SAMPLE ID	SD335-20191209	SD336-20191209	SD342-20191209	SD343-20191209	SD344-20191210	SD345-20191209	SD346-20191209	SD347-20191209
SAMPLE DATE	20191209	20191209	20191209	20191209	20191210	20191209	20191209	20191209
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Creek	Rocklick Creek	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PCB-41/64/71/72	0.000045	0.00047	0.0000062 J	0.000007 J	--	0.0000069 J	0.0000067 J	0.0000037 J
PCB-42/59	0.000021	0.00019	0.0000019 J	0.0000024 J	--	0.0000027 J	0.0000026 J	0.0000016 J
PCB-43/49	0.000047	0.00046	0.0000078	0.000006	--	0.0000063	0.0000068	0.0000042
PCB-44	0.000053	0.00048	0.0000067	0.0000072	--	0.0000067	0.0000063	0.0000047
PCB-44/47/65	--	--	--	--	0.0000465	--	--	--
PCB-45	0.000012	0.00015	0.000002 U	0.000002 U	--	0.0000019 J	0.0000017 J	0.000002 U
PCB-46	0.0000052	0.000057	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-47	0.000013	0.00012	0.000002	0.000002	--	0.0000021	0.0000023	0.0000013 J
PCB-48/75	0.000012	0.00017	0.000004 U	0.0000012 J	--	0.0000019 J	0.000002 J	0.00000081 J
PCB-5	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-50	0.000002 U	0.0000031	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-51	0.0000035	0.000035	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-52	--	--	--	--	0.0000563	--	--	--
PCB-52/69	0.000058	0.0005	0.000014	0.0000097	--	0.0000075	0.0000092	0.0000063
PCB-53	0.000011	0.00011	0.0000011 J	0.000002 U	--	0.0000014 J	0.0000013 J	0.000002 U
PCB-54	0.000002 U	0.0000022	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-55	0.0000019 J	0.0000039	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-56/60	0.00004	0.000044	0.0000093	0.0000066	--	0.0000076	0.0000098	0.0000042
PCB-57	0.000002 U	0.0000031	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-58	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-6	0.0000014 J	0.00014	0.0000014 J	0.0000021	--	0.000005	0.0000037	0.0000017 J
PCB-61/70	0.000061	0.00018	0.000025	0.000014	--	0.000011	0.000017	0.0000088
PCB-62	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-63	0.0000028	0.000012	0.000002 U	0.000002 U	--	0.000002 U	0.00000095 J	0.000002 U
PCB-65	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-66	--	--	--	--	0.0000842	--	--	--
PCB-66/76	0.000063	0.00013	0.000016	0.00001	--	0.00001	0.000014	0.0000063
PCB-67	0.0000022	0.000012	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-68	0.000002 U	0.0000021	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-7	0.000002 U	0.000039	0.000002 U	0.000002 U	--	0.0000017 J	0.000002 U	0.000002 U
PCB-73	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-74	0.000028	0.000089	0.0000067	0.000005	--	0.0000049	0.0000071	0.0000036
PCB-77	0.000008	0.0000077	0.0000027	0.0000016 J	0.0000129 J	0.0000014 J	0.0000018 J	0.0000011 J
PCB-78	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-79	0.000002 U	0.0000025	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-8	0.0000046	0.00076	0.0000052	0.0000072	0.0000165	0.00002	0.000013	0.0000057
PCB-80	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-81	0.0000015 J	0.0000041	0.0000011 J	0.00000045 U	0.00000058 J	0.00000053 U	0.00000034 U	0.00000041 U
PCB-82	0.000013	0.000042	0.0000048	0.0000035	--	0.000002 U	0.0000028	0.0000015 J
PCB-83/112	0.0000035 J	0.000013	0.0000022 J	0.0000011 J	--	0.000004 U	0.000004 U	0.000004 U
PCB-84/92	0.00003	0.00013	0.000017	0.0000091	--	0.0000038 J	0.0000059	0.0000039 J
PCB-85/116	0.000016	0.000044	0.0000095	0.0000042	--	0.0000021 J	0.0000036 J	0.0000021 J
PCB-86	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-87/117/125	0.000031	0.00012	0.00002	0.0000097	--	0.0000034 J	0.0000063	0.0000037 J
PCB-88/91	0.000013	0.000046	0.000007	0.0000031 J	--	0.000004 U	0.0000028 J	0.0000014 J
PCB-89	0.000002 U	0.0000033	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-9	0.000002 U	0.00005	0.000002 U	0.000002 U	--	0.0000015 J	0.000002 U	0.000002 U
PCB-90/101/113	--	--	--	--	0.0000937	--	--	--
PCB-93	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-94	0.000002 U	0.0000035	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-95	0.000054	0.00025	0.000032	0.000015	--	0.0000061	0.000013	0.0000074
PCB-96	0.000002 U	0.0000052	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U
PCB-97	0.000021	0.000069	0.000012	0.0000072	--	0.0000026	0.0000047	0.0000029
PCB-98/102	0.000004 U	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U
PCB-99	0.000036	0.000095	0.000024	0.000011	--	0.0000038	0.0000069	0.0000046
PENTACHLOROBIPHENYLS	0.0005 J	0.002 J	0.00034 J	0.00015 J	--	0.00005 J	0.00012 J	0.000066 J
TEQ DIOXIN-LIKE PCBs (BIRD)	5.54849E-07	1.21589E-06	2.49565E-07	8.1496E-08	7.12034E-07	7.0468E-08	9.3412E-08	5.564E-08
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	5.89082E-07	1.21627E-06	2.83343E-07	1.42328E-07	1.43923E-06	1.30812E-07	1.44125E-07	1.09893E-07
TEQ DIOXIN-LIKE PCBs (FISH)	1.813E-09	2.4041E-08	1.076E-09	2.42E-10	2.648E-09	1.62E-10	3.91E-10	1.41E-10
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	3.525E-09	2.4061E-08	2.765E-09	2.272E-09	3.9008E-08	1.988E-09	2.162E-09	1.932E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	2.837E-09	4.02332E-07	2.145E-09	6.52E-10	7.885E-09	2.8E-10	1.452E-09	3.02E-10
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	4.3747E-08	4.13893E-07	4.3904E-08	4.7301E-08	9.43885E-07	4.1857E-08	4.0122E-08	3.9449E-08
TETRACHLOROBIPHENYLS	0.0005 J	0.0033 J	0.0001 J	0.000073 J	--	0.000074 J	0.000091 J	0.000047 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0000624	0.0003601	0.0000553	0.000018	0.00022759	0.00000608	0.0000442	0.0000075
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.0016311	0.0156388	0.00134312	0.0007194	0.00135306	0.0003921	0.00096795	0.00055868
TOTAL PCB CONGENERS ZEROND	0.0016935	0.0159989	0.00139842	0.0007374	0.00158065	0.00039818	0.00101215	0.00056618
TOTAL PCB CONGENERS-NOAA	0.0006699	0.006188	0.000658	0.0003422	0.00153786	0.0001556	0.0004545	0.0003096
TOTAL PCB CONGENERS-NOAA HALFND	0.00175641	0.01603466	0.001471345	0.000822435	0.00159505	0.000500695	0.00108549	0.000664195
TOTAL PCB CONGENERS-NOAA X2	0.0013398	0.012376	0.001316	0.0006844	0.00307572	0.0003112	0.000909	0.0006192
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0013398	0.012376	0.001316	0.0006844	0.00307572	0.0003112	0.000909	0.0006192
TRICHLOROBIPHENYLS	0.00014 J	0.005 J	0.00004 J	0.000039 J	--	0.000073 J	0.000085 J	0.000031 J
DIOXINS/FURANS (NG/KG)								
1,2,3,4,6,7,8,9-OCDD	190	160	790	160	68	270	400	980
1,2,3,4,6,7,8,9-OCDF	3.7 J	3.6 J	2.2 J	2.4 J	9.99 U	1.6 J	3.1 J	8.4 J
1,2,3,4,6,7,8-HPCDD	7.1	6.4	11	4.7 J	1.56 J	5.2	13	13
1,2,3,4,6,7,8-HPCDF	3.3 J	3 J	1.8 J	2.3 J	4.99 U	2 J	3.8 J	9.4
1,2,3,4,7,8,9-HPCDF	0.22 U	0.22 J	0.26 U	0.24 U	4.99 U	0.2 U	0.15 U	0.3 J
1,2,3,4,7,8-HXCDD	0.18 U	0.21 J	0.22 U	0.23 U	4.99 U	0.18 U	0.5 J	0.21 U
1,2,3,4,7,8-HXCDF	0.21 U	0.56 J	0.26 J	0.29 J	4.99 U	0.3 J	0.75 J	0.69 J
1,2,3,6,7,8-HXCDD	0.41 J	0.49 J	0.35 J	0.22 U	4.99 U	0.45 J	1.7 J	0.76 J
1,2,3,6,7,8-HXCDF	0.2 U	0.46 J	0.2 U	0.23 J	4.99 U	0.2 U	0.55 J	0.79 J

TABLE 11

SEDIMENT ANALYTICAL DATA - ROCKLICK ROAD
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD335	SW/SD336	SW/SD342	SW/SD343	SW/SD344	SW/SD345	SW/SD346	SW/SD347
SAMPLE ID	SD335-20191209	SD336-20191209	SD342-20191209	SD343-20191209	SD344-20191210	SD345-20191209	SD346-20191209	SD347-20191209
SAMPLE DATE	20191209	20191209	20191209	20191209	20191210	20191209	20191209	20191209
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Rocklick Creek	Rocklick Creek	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road	Rocklick Road
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
1,2,3,7,8,9-HXCDD	0.3 J	0.34 J	0.29 J	0.2 U	4.99 U	0.32 J	0.92 J	0.49 J
1,2,3,7,8,9-HXCDF	0.2 U	0.25 U	0.24 U	0.24 U	4.99 U	0.17 U	0.16 U	0.3 J
1,2,3,7,8-PECDD	0.18 U	0.2 U	0.2 U	0.19 U	0.134 JZ	0.18 U	0.51 J	0.38 J
1,2,3,7,8-PECDF	0.15 U	0.66 J	0.17 U	0.24 J	4.99 U	0.2 J	0.54 J	0.37 J
2,3,4,6,7,8-HXCDF	0.17 U	0.45 J	0.2 U	0.26 J	0.174 JZ	0.14 U	0.49 J	1.5 J
2,3,4,7,8-PECDF	0.14 U	1 J	0.19 U	0.41 J	0.23 J	0.26 J	0.79 J	3.5 J
2,3,7,8-TCDD	0.087 U	0.081 U	0.11 U	0.097 U	0.999 U	0.11 U	0.098 U	0.26 J
2,3,7,8-TCDF	0.19 J	0.94 J	0.13 U	0.42 J	0.999 U	0.32 J	0.86 J	0.7 J
TEQ DIOXINS (BIRD)	0.28357	2.25736	0.16672	0.97594	0.38976	0.71886	2.61831	5.47044
TEQ DIOXINS (BIRD) HALFND	0.53917	2.41036	0.52902	1.14949	2.8363595	0.89486	2.67606	5.47569
TEQ DIOXINS (FISH)	0.07607	0.89526	0.14062	0.35994	0.27476	0.24606	1.52151	2.99284
TEQ DIOXINS (FISH) HALFND	0.33342	1.04826	0.43892	0.57624	3.0202845	0.46256	1.57926	3.04534
TEQ DIOXINS (HUMANS/MAMMALS)	0.25211	0.81008	0.45566	0.36892	0.2564	0.37648	1.62913	2.74762
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	0.45796	0.96308	0.69251	0.55812	2.4290985	0.55698	1.68688	2.75812
TOTAL HPCDD	16 J	13 J	24 J	9.7 J	2.89 J	10 J	23 J	28 J
TOTAL HPCDF	6.5 J	5.9 J	3.1 J	4 J	1.26 J	3.3 J	5.9 J	18 J
TOTAL HXCDD	3.9 J	5.6 J	5.5 J	4.7 J	0.523 J	8.7 J	23 J	11 J
TOTAL HXCDF	1.8 J	5.6 J	1.8 J	2.8 J	0.931 J	1.4 J	4.1 J	17 J
TOTAL PECDD	1.7 J	3.4 J	1.4 J	3.2 J	0.525 J	4.4 J	12 J	5 J
TOTAL PECDF	0.7 J	10 J	0.75 J	3.6 J	1.08 J	3 J	4.9 J	18 J
TOTAL TCDD	1.6 J	4.9 J	1.1 J	3.7 J	0.999 UJ	3.9 J	7.6 J	2.9 J
TOTAL TCDF	3.3 J	17 J	1.3 J	7.3 J	0.719 J	4.2 J	10 J	15 J
METALS (MG/KG)								
ALUMINUM	7900 J	4500	8560	5760	4810	8440	6560	7070
ANTIMONY	0.27 J	0.23 J	0.23 J	0.39 J	1.7 U	0.43 J	0.58 J	0.57 J
ARSENIC	2.8 J	5.7	7.1	8.4	9.1	8.5	12.4	8.7
BARIUM	38.7 J	82.9	88.3	88.1	119	117	122	111
BERYLLIUM	0.37 J	0.77	1.2	1	1.7	1.2	1.1	1.3
CADMIUM	0.069 J	0.27 J	0.13 J	0.17 J	0.83 UJ	0.18 J	0.2 J	0.28 J
CALCIUM	908	93000	954	3530	1530	1510	1440	1600
CHROMIUM	6.3 R	12.5	16	64.9	8.8	16.6	14.8	11.7
COBALT	4.6 J	7.7	17.4	11.2	12.3	16.3	15.9	20.5
COPPER	7.1 J	15.8	21.4	22.9	35.9	29.8	36.1	32.1
CYANIDE	0.63 U	0.63 U	0.66 U	0.65 U	1.1 U	0.67 U	0.57 U	0.66 U
IRON	11700 J	17600	18300	20900	16700	24400	20200	14300
LEAD	17	23.6	22.7	19.7	38.7	24	28.2	26.7
MAGNESIUM	633	3830	768	1480	765 J	2330	1240	998
MANGANESE	108 J	485	272	525	248	793	439	408
MERCURY	0.02 J	0.12 U	0.035 J	0.12 U	0.19 U	0.13 U	0.045 J	0.041 J
NICKEL	6.7 J	16.2	16.8	29.3	40.8	38.6	34.3	36.6
POTASSIUM	827 J	1160	1270	1370	753 J	2040	1440	1520
SELENIUM	3 UJ	2.9 UJ	3 UJ	2.9 UJ	2.2 J	3.2 UJ	3.5 UJ	3.3 UJ
SILVER	0.59 U	0.59 U	0.59 U	0.59 U	0.83 U	0.64 U	0.69 U	0.66 U
SODIUM	622 UJ	593 UJ	627 UJ	633 UJ	60.3 J	621 UJ	648 UJ	670 UJ
THALLIUM	0.048 J	0.59 U	0.091 J	0.041 J	0.83 U	0.11 J	0.11 J	0.084 J
VANADIUM	8.3 J	10.5	20.7	5.3	12.7	15.1	14.1	12.2
ZINC	34.6 J	81.4 J	73.2 J	131 J	143	113 J	108 J	101 J
MISCELLANEOUS (%)								
TOTAL SOLIDS	--	79	--	--	45	--	--	--
MISCELLANEOUS (MG/KG)								
TOTAL ORGANIC CARBON	--	33300 J	--	--	408000	--	--	--

APPENDIX G.7

NR&P SUPPLY HOUSE ANALYTICAL DATA

TABLE 12

SOIL ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-363	SB-363	SB-363	SB-363	SB-363	SB-364	SB-364	SB-364	SB-364	SB-364
SAMPLE ID	SB363-20191112-0006	SB363-20191112-0624	SB363-20191112-120144	SB363-20191112-144168	SB363-20191112-96120	SB364-20191112-0006	SB364-20191112-0624	SB364-20191112-2448	SB364-20191112-4872	SB364-20191112-7296
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House
SUBMATRIX	SS	SS	SB	SB	SB	SS	SS	SB	SB	SB
TOP DEPTH	0	0.5	10	12	8	0	0.5	2	4	6
BOTTOM DEPTH	0.5	2	12	14	10	0.5	2	4	6	8
VOLATILES (MG/KG)										
1,1,1-TRICHLOROETHANE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 UJ	0.005 UJ	--	0.0047 UJ	--
1,1,2,2-TETRACHLOROETHANE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
1,1,2-TRICHLOROETHANE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 UJ	0.005 UJ	--	0.0047 UJ	--
1,1-DICHLOROETHANE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 U	0.005 U	--	0.0047 U	--
1,1-DICHLOROETHENE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 U	0.005 U	--	0.0047 U	--
1,2,3-TRICHLOROBENZENE	0.0064 UJ	0.0054 R	0.0073 UJ	--	--	0.0048 UJ	0.005 R	--	0.0047 UJ	--
1,2,4-TRICHLOROBENZENE	0.0064 UJ	0.0054 R	0.0073 UJ	--	--	0.0048 UJ	0.005 R	--	0.0047 UJ	--
1,2-DIBROMO-3-CHLOROPROPANE	0.0064 U	0.0054 R	0.0073 UJ	--	--	0.0048 U	0.005 R	--	0.0047 UJ	--
1,2-DIBROMOETHANE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 UJ	0.005 UJ	--	0.0047 UJ	--
1,2-DICHLOROBENZENE	0.0064 UJ	0.0054 R	0.0073 UJ	--	--	0.0048 UJ	0.005 R	--	0.0047 UJ	--
1,2-DICHLOROETHANE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 UJ	0.005 UJ	--	0.0047 UJ	--
1,2-DICHLOROPROPANE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
1,3-DICHLOROBENZENE	0.0064 UJ	0.0054 R	0.0073 UJ	--	--	0.0048 UJ	0.005 R	--	0.0047 UJ	--
1,4-DICHLOROBENZENE	0.0064 UJ	0.0054 R	0.0073 UJ	--	--	0.0048 UJ	0.005 R	--	0.0047 UJ	--
2-BUTANONE	0.013 U	0.011 UJ	0.006 J	--	--	0.0096 U	0.0099 U	--	0.0095 U	--
2-HEXANONE	0.013 U	0.011 R	0.015 U	--	--	0.0096 U	0.0099 UJ	--	0.0095 U	--
4-METHYL-2-PENTANONE	0.013 U	0.011 R	0.015 U	--	--	0.0096 U	0.0099 UJ	--	0.0095 U	--
ACETONE	0.013 U	0.021 J+	0.014 J	--	--	0.0065 J	0.01	--	0.0062 J	--
BENZENE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
BROMOCHLOROMETHANE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 U	0.005 U	--	0.0047 U	--
BROMODICHLOROMETHANE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
BROMOFORM	0.0064 U	0.0054 R	0.0073 UJ	--	--	0.0048 U	0.005 R	--	0.0047 UJ	--
BROMOMETHANE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 U	0.005 U	--	0.0047 U	--
CARBON DISULFIDE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 U	0.005 U	--	0.0047 U	--
CARBON TETRACHLORIDE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 UJ	0.005 UJ	--	0.0047 UJ	--
CHLOROBENZENE	0.0064 UJ	0.0054 R	0.0073 U	--	--	0.0048 UJ	0.005 UJ	--	0.0047 UJ	--
CHLORODIBROMOMETHANE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
CHLOROETHANE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 U	0.005 U	--	0.0047 U	--
CHLOROFORM	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 U	0.005 U	--	0.0047 U	--
CHLOROMETHANE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 U	0.005 U	--	0.0047 U	--
CIS-1,2-DICHLOROETHENE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 U	0.005 U	--	0.0047 U	--
CIS-1,3-DICHLOROPROPENE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
CYCLOHEXANE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
DICHLORODIFLUOROMETHANE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 U	0.005 U	--	0.0047 U	--
ETHYLBENZENE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
ISOPROPYLBENZENE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
M+P-XYLENES	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
METHYL ACETATE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 UJ	0.005 UJ	--	0.0047 UJ	--
METHYL CYCLOHEXANE	0.0018 J	0.0054 R	0.0073 U	--	--	0.0012 J	0.005 UJ	--	0.0031 J	--
METHYL TERT-BUTYL ETHER	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 UJ	0.005 UJ	--	0.0047 UJ	--
METHYLENE CHLORIDE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 UJ	0.005 UJ	--	0.0047 UJ	--
O-XYLENE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
STYRENE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
TETRACHLOROETHENE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
TOLUENE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
TRANS-1,2-DICHLOROETHENE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 U	0.005 U	--	0.0047 U	--
TRANS-1,3-DICHLOROPROPENE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
TRICHLOROETHENE	0.0064 U	0.0054 R	0.0073 U	--	--	0.0048 U	0.005 UJ	--	0.0047 U	--
TRICHLOROFLUOROMETHANE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 UJ	0.005 UJ	--	0.0047 UJ	--
VINYL CHLORIDE	0.0064 U	0.0054 UJ	0.0073 U	--	--	0.0048 U	0.005 U	--	0.0047 U	--
SEMIVOLATILES (MG/KG)										
1,1-BIPHENYL	0.27 U	0.027 J	0.22 U	--	--	0.19 U	0.019 J	--	0.19 U	--
1,2,4,5-TETRACHLOROBENZENE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
1,4-DIOXANE	0.11 U	0.073 U	0.085 U	--	--	0.077 U	0.073 UJ	--	0.077 U	--
2,2'-OXYBIS(1-CHLOROPROPANE)	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
2,3,4,6-TETRACHLOROPHENOL	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
2,4,5-TRICHLOROPHENOL	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
2,4,6-TRICHLOROPHENOL	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
2,4-DICHLOROPHENOL	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
2,4-DIMETHYLPHENOL	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
2,4-DINITROPHENOL	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
2,4-DINITROTOLUENE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
2,6-DINITROTOLUENE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
2-CHLORONAPHTHALENE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
2-CHLOROPHENOL	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
2-METHYLNAPHTHALENE	0.27 U	0.076 J	0.22 U	--	--	0.023 J	0.052 J	--	0.033 J	--
2-METHYLPHENOL	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
2-NITROANILINE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
2-NITROPHENOL	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
3&4-METHYLPHENOL	0.53 U	0.36 U	0.037 J	--	--	0.38 U	0.36 U	--	0.38 U	--
3,3'-DICHLOROBENZIDINE	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
3-NITROANILINE	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
4,6-DINITRO-2-METHYLPHENOL	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
4-BROMOPHENYL PHENYL ETHER	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
4-CHLORO-3-METHYLPHENOL	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
4-CHLOROANILINE	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
4-CHLOROPHENYL PHENYL ETHER	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
4-NITROANILINE	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
4-NITROPHENOL	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--

TABLE 12

SOIL ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-363	SB-363	SB-363	SB-363	SB-363	SB-364	SB-364	SB-364	SB-364	SB-364
SAMPLE ID	SB363-20191112-0006	SB363-20191112-0624	SB363-20191112-120144	SB363-20191112-144168	SB363-20191112-96120	SB364-20191112-0006	SB364-20191112-0624	SB364-20191112-2448	SB364-20191112-4872	SB364-20191112-7296
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House
SUBMATRIX	SS	SS	SB	SB	SB	SS	SS	SB	SB	SB
TOP DEPTH	0	0.5	10	12	8	0	0.5	2	4	6
BOTTOM DEPTH	0.5	2	12	14	10	0.5	2	4	6	8
ACENAPHTHENE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
ACENAPHTHYLENE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
ACETOPHENONE	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
ANTHRACENE	0.27 U	0.026 J	0.22 U	--	--	0.19 U	0.018 J	--	0.19 U	--
ATRAZINE	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
BAP EQUIVALENT-HALFND	0.27 U	0.20969	0.245328	--	--	0.19 U	0.206516	--	0.211981	--
BAP EQUIVALENT-POS	0.27 U	0.00924	0.002228	--	--	0.19 U	0.006066	--	0.002031	--
BENZALDEHYDE	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
BENZO(A)ANTHRACENE	0.27 U	0.031 J	0.22 U	--	--	0.19 U	0.02 J	--	0.19 U	--
BENZO(A)PYRENE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
BENZO(B)FLUORANTHENE	0.27 U	0.06 J	0.022 J	--	--	0.19 U	0.04 J	--	0.02 J	--
BENZO(G,H,I)PERYLENE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.018 J	--	0.19 U	--
BENZO(K)FLUORANTHENE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
BIS(2-CHLOROETHOXY)METHANE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
BIS(2-CHLOROETHYL)ETHER	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	0.032 J	0.04 J	0.22 U	--	--	0.19 U	0.035 J	--	0.19 U	--
BUTYL BENZYL PHTHALATE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
CAPROLACTAM	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
CARBAZOLE	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
CHRYSENE	0.27 U	0.14 J	0.028 J	--	--	0.19 U	0.066 J	--	0.031 J	--
DIBENZO(A,H)ANTHRACENE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
DIBENZOFURAN	0.27 U	0.021 J	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
DIETHYL PHTHALATE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
DIMETHYL PHTHALATE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
DI-N-BUTYL PHTHALATE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
DI-N-OCTYL PHTHALATE	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
FLUORANTHENE	0.53 U	0.062 J	0.42 U	--	--	0.38 U	0.043 J	--	0.02 J	--
FLUORENE	0.27 U	0.022 J	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
HEXACHLOROBENZENE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
HEXACHLOROBUTADIENE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
HEXACHLOROCYCLOPENTADIENE	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
HEXACHLOROETHANE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
HIGH MOLECULAR WEIGHT PAHS	0 U	0.315	0.077	--	--	0 U	0.193	--	0.051	--
INDENO(1,2,3-CD)PYRENE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
ISOPHORONE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
LOW MOLECULAR WEIGHT PAHS	0.036	0.336	0.049	--	--	0.031	0.191	--	0.082	--
NAPHTHALENE	0.27 U	0.026 J	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
NITROBENZENE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
N-NITROSO-DI-N-PROPYLAMINE	0.27 U	0.19 U	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
N-NITROSODIPHENYLAMINE	0.27 U	0.035 J	0.22 U	--	--	0.19 U	0.19 U	--	0.19 U	--
PENTACHLOROPHENOL	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
PHENANTHRENE	0.036 J	0.2	0.049 J	--	--	0.031 J	0.13 J	--	0.062 J	--
PHENOL	0.53 U	0.36 U	0.42 U	--	--	0.38 U	0.36 U	--	0.38 U	--
PYRENE	0.27 U	0.084 J	0.027 J	--	--	0.19 U	0.049 J	--	0.19 U	--
TOTAL PAHS	0.036	0.651	0.126	--	--	0.031	0.384	--	0.133	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K										
1,4-DIOXANE	0.011 U	0.0073 U	0.0085 U	--	--	0.0075 U	0.0073 U	--	0.0077 U	--
2-METHYLNAPHTHALENE	0.026	0.084	0.0059	--	--	0.022	0.15	--	0.075	--
ACENAPHTHENE	0.0026 J	0.0098	0.0022 J	--	--	0.0038 U	0.0019 J	--	0.0062	--
ACENAPHTHYLENE	0.0019 J	0.0035 J	0.00091 J	--	--	0.001 J	0.0036 UJ	--	0.0038 U	--
ANTHRACENE	0.0051 J	0.028	0.0052	--	--	0.0038 U	0.016	--	0.01	--
BAP EQUIVALENT-HALFND	0.013208	0.020758	0.012805	--	--	0.004944	0.012828	--	0.01242	--
BAP EQUIVALENT-POS	0.010558	0.02074	0.012784	--	--	0.003044	0.01101	--	0.01052	--
BENZO(A)ANTHRACENE	0.0085	0.02	0.0086	--	--	0.0023 J	0.013 J-	--	0.01	--
BENZO(A)PYRENE	0.0071	0.01	0.0054	--	--	0.0019 J	0.0067 J-	--	0.0068	--
BENZO(B)FLUORANTHENE	0.02	0.046	0.024	--	--	0.0077	0.025 J-	--	0.021	--
BENZO(G,H,I)PERYLENE	0.007	0.0067	0.0072	--	--	0.0022 J	0.0078 J-	--	0.0091	--
BENZO(K)FLUORANTHENE	0.0056	0.0036 U	0.0042 U	--	--	0.0013 J	0.0036 U	--	0.0032 J	--
CHRYSENE	0.022	0.11	0.034	--	--	0.011	0.15	--	0.038	--
DIBENZO(A,H)ANTHRACENE	0.0053 U	0.0037	0.0036 J	--	--	0.0038 U	0.0036 U	--	0.0038 U	--
FLUORANTHENE	0.022	0.058	0.018	--	--	0.0071	0.025	--	0.031 J	--
FLUORENE	0.0079	0.027	0.0029 J	--	--	0.0025 J	0.012	--	0.01	--
HIGH MOLECULAR WEIGHT PAHS	0.0955	0.2527	0.1067	--	--	0.033	0.2401	--	0.1166	--
INDENO(1,2,3-CD)PYRENE	0.0053	0.0033 J	0.0049	--	--	0.0012 J	0.0036 J-	--	0.0055	--
LOW MOLECULAR WEIGHT PAHS	0.0895	0.3593	0.07521	--	--	0.0363	0.3529	--	0.1842	--
NAPHTHALENE	0.012	0.033	0.0042 U	--	--	0.0057	0.018	--	0.017	--
PENTACHLOROPHENOL	0.011 U	0.0073 U	0.0085 U	--	--	0.0077 U	0.0073 U	--	0.0077 U	--
PHENANTHRENE	0.038	0.2	0.046	--	--	0.02	0.28	--	0.11	--
PYRENE	0.02	0.053	0.019	--	--	0.0054	0.034 J-	--	0.023	--
TOTAL PAHS	0.022	0.11	0.034	--	--	0.011	0.15	--	0.038	--
PESTICIDES (MG/KG)										
4,4'-DDD	0.0053 UJ	0.0037 U	0.0043 U	--	--	0.0043 U	0.0037 U	--	0.004 U	--
4,4'-DDE	0.0053 UJ	0.0037 U	0.0043 U	--	--	0.0043 U	0.0037 U	--	0.004 U	--
4,4'-DDT	0.0053 UJ	0.0037 U	0.0043 U	--	--	0.0043 U	0.0037 U	--	0.004 U	--
ALDRIN	0.0027 UJ	0.0019 U	0.0022 U	--	--	0.0022 U	0.0019 U	--	0.0021 U	--
ALPHA-BHC	0.0027 UJ	0.0019 U	0.0022 U	--	--	0.0022 U	0.0019 U	--	0.0021 U	--
ALPHA-CHLORDANE	0.0027 UJ	0.0019 U	0.0022 U	--	--	0.0022 U	0.0019 U	--	0.0021 U	--
BETA-BHC	0.0027 UJ	0.0019 U	0.0022 U	--	--	0.0022 U	0.0019 U	--	0.0021 U	--
DELTA-BHC	0.0027 UJ	0.0019 U	0.0022 U	--	--	0.0022 U	0.0019 U	--	0.0021 U	--
DIELDRIN	0.0053 UJ	0.0037 U	0.0043 U	--	--	0.0043 U	0.0037 U	--	0.004 U	--
ENDOSULFAN I	0.0027 UJ	0.0019 U	0.0022 U	--	--	0.0022 U	0.0019 U	--	0.0021 U	--

TABLE 12

SOIL ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-363	SB-363	SB-363	SB-363	SB-363	SB-364	SB-364	SB-364	SB-364	SB-364
SAMPLE ID	SB363-20191112-0006	SB363-20191112-0624	SB363-20191112-120144	SB363-20191112-144168	SB363-20191112-96120	SB364-20191112-0006	SB364-20191112-0624	SB364-20191112-2448	SB364-20191112-4872	SB364-20191112-7296
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House
SUBMATRIX	SS	SS	SB	SB	SB	SS	SS	SB	SB	SB
TOP DEPTH	0	0.5	10	12	8	0	0.5	2	4	6
BOTTOM DEPTH	0.5	2	12	14	10	0.5	2	4	6	8
ENDOSULFAN II	0.0053 UJ	0.0037 U	0.0043 U	--	--	0.0043 U	0.0037 U	--	0.004 U	--
ENDOSULFAN SULFATE	0.0053 UJ	0.0037 U	0.0043 U	--	--	0.0043 U	0.0037 U	--	0.004 U	--
ENDRIN	0.0053 UJ	0.0037 U	0.0043 U	--	--	0.0043 U	0.0037 U	--	0.004 U	--
ENDRIN ALDEHYDE	0.0053 UJ	0.0037 U	0.0043 U	--	--	0.0043 U	0.0037 U	--	0.004 U	--
ENDRIN KETONE	0.0053 UJ	0.0037 U	0.0043 U	--	--	0.0043 U	0.0037 U	--	0.004 U	--
GAMMA-BHC (LINDANE)	0.0027 UJ	0.00078 J	0.0022 U	--	--	0.0022 U	0.00076 J	--	0.00082 J	--
GAMMA-CHLORDANE	0.0027 UJ	0.0019 U	0.0022 U	--	--	0.0022 U	0.0019 U	--	0.0021 U	--
HEPTACHLOR	0.0027 UJ	0.0019 U	0.0022 U	--	--	0.0022 U	0.0019 U	--	0.0021 U	--
HEPTACHLOR EPOXIDE	0.0027 UJ	0.0019 U	0.0022 U	--	--	0.0022 U	0.0019 U	--	0.0021 U	--
METHOXYCHLOR	0.027 UJ	0.019 U	0.022 U	--	--	0.022 U	0.019 U	--	0.021 U	--
TOXAPHENE	0.27 UJ	0.19 U	0.22 U	--	--	0.22 U	0.19 U	--	0.21 U	--
PCBS (MG/KG)										
AROCLOR-1016	--	--	--	--	--	--	0.037 U	--	--	--
AROCLOR-1221	--	--	--	--	--	--	0.037 U	--	--	--
AROCLOR-1232	--	--	--	--	--	--	0.037 U	--	--	--
AROCLOR-1242	--	--	--	--	--	--	0.037 U	--	--	--
AROCLOR-1248	--	--	--	--	--	--	0.037 U	--	--	--
AROCLOR-1254	--	--	--	--	--	--	0.037 U	--	--	--
AROCLOR-1260	--	--	--	--	--	--	0.037 U	--	--	--
AROCLOR-1262	--	--	--	--	--	--	0.037 U	--	--	--
AROCLOR-1268	--	--	--	--	--	--	0.037 U	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	0 U	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	0.1665	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)										
AROCLOR-1016	--	0.278 U	--	0.316 U	0.325 U	--	0.278 U	0.287 U	--	0.294 U
AROCLOR-1221	--	0.556 U	--	0.633 U	0.649 U	--	0.556 U	0.575 U	--	0.588 U
AROCLOR-1232	--	0.278 U	--	0.316 U	0.325 U	--	0.278 U	0.287 U	--	0.294 U
AROCLOR-1242	--	0.278 U	--	0.316 U	0.325 U	--	0.278 U	0.287 U	--	0.294 U
AROCLOR-1248	--	0.278 U	--	0.316 U	0.325 U	--	0.278 U	0.287 U	--	0.294 U
AROCLOR-1254	--	0.278 U	--	0.316 U	0.325 U	--	0.278 U	0.287 U	--	0.294 U
AROCLOR-1260	--	0.278 U	--	0.316 U	0.325 U	--	0.278 U	0.287 U	--	0.294 U
AROCLOR-1262	--	0.278 U	--	0.316 U	0.325 U	--	0.278 U	0.287 U	--	0.294 U
AROCLOR-1268	--	0.278 U	--	0.316 U	0.325 U	--	0.278 U	0.287 U	--	0.294 U
TOTAL AROCLOR	--	0 U	--	0 U	0 U	--	0 U	0 U	--	0 U
TOTAL AROCLOR HALFND	--	1.39	--	1.5805	1.6245	--	1.39	1.4355	--	1.47
PCB CONGENERS (MG/KG)										
DICHLOROBIPHENYLS	0.00015 J	0.00054 J	0 UJ	--	--	0.000021 J	0.00013 J	--	0 UJ	--
HEPTACHLOROBIPHENYLS	0.00033 J	0.00083 J	0 UJ	--	--	0.000082 J	0.00063 J	--	0 UJ	--
HEXACHLOROBIPHENYLS	0.00059 J	0.0013 J	0 UJ	--	--	0.00014 J	0.00096 J	--	0 UJ	--
MONOCHLOROBIPHENYLS	0.000033 J	0.00035 J	0.000011 J	--	--	0.0000083 J	0.00016 J	--	0.0000085 J	--
NONACHLOROBIPHENYLS	0.000045 J	0.000064 J	0 UJ	--	--	0.000026 J	0.000052 J	--	0.0000038 J	--
OCTACHLOROBIPHENYLS	0.000098 J	0.00022 J	0 UJ	--	--	0.000027 J	0.00018 J	--	0 UJ	--
PCB-1	0.0000065	0.00013	0.0000015 J	--	--	0.0000025	0.000066	--	0.0000012 J	--
PCB-10	0.000002 U	0.0000033	0.000002 U	--	--	0.000002 U	0.0000012 J	--	0.000002 U	--
PCB-100	0.000002 U	0.00000094 J	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-101/90	0.000098	0.0003	0.000004 U	--	--	0.000019	0.00017	--	0.000004 U	--
PCB-103	0.000002 U	0.0000013 J	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-104	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-105	0.000041	0.000096	0.00000048 U	--	--	0.0000084	0.00006	--	0.0000012 U	--
PCB-108/107	0.0000074	0.000018	0.000004 U	--	--	0.0000016 J	0.00001	--	0.000004 U	--
PCB-109	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-11	0.000097	0.000013	0.000002 U	--	--	0.000011	0.000013	--	0.000002 U	--
PCB-110	0.0001	0.0003	0.000002 U	--	--	0.000022	0.00017	--	0.000002 U	--
PCB-111/115	0.000004 U	0.0000078	0.000004 U	--	--	0.000004 U	0.0000028 J	--	0.000004 U	--
PCB-113	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-114	0.0000023	0.0000083	0.00000083 U	--	--	0.00000083 U	0.000005	--	0.0000012 U	--
PCB-118/106	0.0001	0.00024	0.00000047 U	--	--	0.00002	0.00016	--	0.0000011 U	--
PCB-119	0.0000022	0.000005	0.000002 U	--	--	0.000002 U	0.0000033	--	0.000002 U	--
PCB-12	0.0000072	0.000027	0.000002 U	--	--	0.000002 U	0.0000055	--	0.000002 U	--
PCB-120	0.0000011 J	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-121	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-122	0.0000018 J	0.0000034	0.000002 U	--	--	0.000002 U	0.0000024	--	0.000002 U	--
PCB-123	0.0000037	0.0000042	0.0000005 U	--	--	0.00000092 J	0.0000034	--	0.0000012 U	--
PCB-124	0.0000048	0.0000097	0.000002 U	--	--	0.0000011 J	0.0000061	--	0.000002 U	--
PCB-126	0.0000043	0.0000029	0.00000067 U	--	--	0.00000069 U	0.0000024	--	0.0000014 U	--
PCB-127	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-128/162	0.000024	0.000049	0.000004 U	--	--	0.0000055	0.000033	--	0.000004 U	--
PCB-129	0.0000059	0.000014	0.000002 U	--	--	0.0000018 J	0.000009	--	0.000002 U	--
PCB-13	0.000005	0.000021	0.000002 U	--	--	0.000002 U	0.0000056	--	0.000002 U	--
PCB-130	0.000013	0.000019	0.000002 U	--	--	0.0000025	0.000012	--	0.000002 U	--
PCB-131/133	0.00001	0.0000083	0.000004 U	--	--	0.000004 U	0.0000068	--	0.000004 U	--
PCB-132/161	0.000032	0.000091	0.000004 U	--	--	0.0000059	0.000051	--	0.000004 U	--
PCB-134/143	0.0000067	0.000017	0.000004 U	--	--	0.0000017 J	0.00001	--	0.000004 U	--
PCB-135	0.000014	0.000035	0.000002 U	--	--	0.0000031	0.000026	--	0.000002 U	--
PCB-136	0.000013	0.000046	0.000002 U	--	--	0.0000029	0.000032	--	0.000002 U	--
PCB-137	0.0000077	0.000019	0.000002 U	--	--	0.0000018 J	0.000013	--	0.000002 U	--
PCB-138/163/164	0.00013	0.00031	0.000006 U	--	--	0.000033	0.00022	--	0.000006 U	--
PCB-139/149	0.000081	0.0002	0.000004 U	--	--	0.000021	0.00015	--	0.000004 U	--
PCB-14	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-140	0.000002 U	0.0000014 J	0.000002 U	--	--	0.000002 U	0.0000018 J	--	0.000002 U	--
PCB-141	0.000029	0.000065	0.000002 U	--	--	0.0000056	0.000045	--	0.000002 U	--

TABLE 12

SOIL ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-363	SB-363	SB-363	SB-363	SB-363	SB-364	SB-364	SB-364	SB-364	SB-364
SAMPLE ID	SB363-20191112-0006	SB363-20191112-0624	SB363-20191112-120144	SB363-20191112-144168	SB363-20191112-96120	SB364-20191112-0006	SB364-20191112-0624	SB364-20191112-2448	SB364-20191112-4872	SB364-20191112-7296
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House
SUBMATRIX	SS	SS	SB	SB	SB	SS	SS	SB	SB	SB
TOP DEPTH	0	0.5	10	12	8	0	0.5	2	4	6
BOTTOM DEPTH	0.5	2	12	14	10	0.5	2	4	6	8
PCB-142	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-144	0.0000039	0.000015	0.000002 U	--	--	0.0000012 J	0.0000087	--	0.000002 U	--
PCB-145	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-146/165	0.000023	0.000036	0.000004 U	--	--	0.0000048	0.000028	--	0.000004 U	--
PCB-147	0.0000022	0.0000041	0.000002 U	--	--	0.000002 U	0.0000033	--	0.000002 U	--
PCB-148	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-15	0.000023	0.00014	0.000002 U	--	--	0.0000053	0.000035	--	0.000002 U	--
PCB-150	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-151	0.000022	0.000064	0.000002 U	--	--	0.0000058	0.000045	--	0.000002 U	--
PCB-152	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-153	0.00012	0.00024	0.000002 U	--	--	0.00003	0.00019	--	0.000002 U	--
PCB-154	0.0000014 J	0.0000022	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-155	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-156	0.000016	0.000035	0.00000052 U	--	--	0.0000034	0.000023	--	0.0000012 U	--
PCB-157	0.0000048	0.0000092	0.00000056 U	--	--	0.0000011 J	0.0000084	--	0.0000012 U	--
PCB-158/160	0.000015	0.000036	0.000004 U	--	--	0.0000035 J	0.000025	--	0.000004 U	--
PCB-159	0.0000015 J	0.0000027	0.000002 U	--	--	0.000002 U	0.000003	--	0.000002 U	--
PCB-16	0.0000027	0.000048	0.000002 U	--	--	0.000002 U	0.000013	--	0.000002 U	--
PCB-166	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-167	0.0000089	0.000015	0.00000062 U	--	--	0.0000016 J	0.000011	--	0.0000013 U	--
PCB-168	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-169	0.0000017 J	0.00000083 U	0.00000052 U	--	--	0.00000071 U	0.0000011 U	--	0.0000014 U	--
PCB-17	0.0000034	0.000055	0.000002 U	--	--	0.000002 U	0.000014	--	0.000002 U	--
PCB-170	0.000037	0.0001	0.000002 U	--	--	0.0000092	0.000069	--	0.000002 U	--
PCB-171	0.00001	0.000027	0.000002 U	--	--	0.0000029	0.000021	--	0.000002 U	--
PCB-172	0.000012	0.000019	0.000002 U	--	--	0.0000023	0.000016	--	0.000002 U	--
PCB-173	0.0000019 J	0.0000034	0.000002 U	--	--	0.000002 U	0.0000025	--	0.000002 U	--
PCB-174	0.000035	0.000093	0.000002 U	--	--	0.0000088	0.00007	--	0.000002 U	--
PCB-175	0.0000011 J	0.0000053	0.000002 U	--	--	0.000002 U	0.0000037	--	0.000002 U	--
PCB-176	0.0000033	0.000013	0.000002 U	--	--	0.000001 J	0.000011	--	0.000002 U	--
PCB-177	0.000023	0.000057	0.000002 U	--	--	0.0000058	0.000038	--	0.000002 U	--
PCB-178	0.0000082	0.000019	0.000002 U	--	--	0.0000025	0.000014	--	0.000002 U	--
PCB-179	0.000013	0.000037	0.000002 U	--	--	0.0000039	0.000029	--	0.000002 U	--
PCB-18	0.0000074	0.00011	0.000002 U	--	--	0.0000031	0.000033	--	0.000002 U	--
PCB-180	0.000093	0.00024	0.000002 U	--	--	0.000021	0.00018	--	0.000002 U	--
PCB-181	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-182/187	0.000048	0.00011	0.000004 U	--	--	0.000013	0.000086	--	0.000004 U	--
PCB-183	0.000018	0.000057	0.000002 U	--	--	0.0000054	0.000043	--	0.000002 U	--
PCB-184	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-185	0.0000046	0.000012	0.000002 U	--	--	0.0000013 J	0.000011	--	0.000002 U	--
PCB-186	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-188	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-189	0.0000044	0.0000056	0.00000056 U	--	--	0.00000073 J	0.0000058	--	0.0000014 U	--
PCB-19	0.000002 U	0.00001	0.000002 U	--	--	0.000002 U	0.0000037	--	0.000002 U	--
PCB-190	0.00001	0.00002	0.000002 U	--	--	0.0000024	0.000015	--	0.000002 U	--
PCB-191	0.0000021	0.0000048	0.000002 U	--	--	0.000002 U	0.0000044	--	0.000002 U	--
PCB-192	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-193	0.0000065	0.00001	0.000002 U	--	--	0.0000015 J	0.000011	--	0.000002 U	--
PCB-194	0.000023	0.000048	0.000002 U	--	--	0.0000059	0.00004	--	0.000002 U	--
PCB-195	0.0000074	0.000018	0.000002 U	--	--	0.000002	0.000014	--	0.000002 U	--
PCB-196/203	0.000023	0.000059	0.000004 U	--	--	0.0000068	0.000049	--	0.000004 U	--
PCB-197	0.0000012 J	0.0000022	0.000002 U	--	--	0.00000074 J	0.0000029	--	0.000002 U	--
PCB-198	0.0000014 J	0.0000036	0.000002 U	--	--	0.000002 U	0.0000035	--	0.000002 U	--
PCB-199	0.000027	0.000058	0.000002 U	--	--	0.0000076	0.000046	--	0.000002 U	--
PCB-2	0.00001	0.00005	0.0000048	--	--	0.0000019 J	0.000022	--	0.0000038	--
PCB-20/21/33	0.00001	0.00011	0.000006 U	--	--	0.0000025 J	0.000031	--	0.000006 U	--
PCB-200	0.000003	0.0000072	0.000002 U	--	--	0.000001 J	0.0000057	--	0.000002 U	--
PCB-201	0.000003	0.000008	0.000002 U	--	--	0.0000011 J	0.0000071	--	0.000002 U	--
PCB-202	0.000006	0.000012	0.000002 U	--	--	0.000002	0.00001	--	0.000002 U	--
PCB-204	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-205	0.000003	0.0000047	0.000002 U	--	--	0.000002 U	0.0000052	--	0.000002 U	--
PCB-206	0.000031	0.000047	0.000002 U	--	--	0.000019	0.000038	--	0.0000023	--
PCB-207	0.0000035	0.0000054	0.000002 U	--	--	0.0000029	0.0000051	--	0.000002 U	--
PCB-208	0.00001	0.000012	0.000002 U	--	--	0.0000041	0.0000093	--	0.0000015 J	--
PCB-209	0.000033	0.000044	0.000002 U	--	--	0.000024	0.000037	--	0.000002 U	--
PCB-22	0.0000069	0.000048	0.000002 U	--	--	0.000002	0.000016	--	0.000002 U	--
PCB-23	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-24	0.000002 U	0.0000064	0.000002 U	--	--	0.000002 U	0.000002	--	0.000002 U	--
PCB-25	0.000002	0.000015	0.000002 U	--	--	0.000002 U	0.0000038	--	0.000002 U	--
PCB-26	0.0000032	0.000026	0.000002 U	--	--	0.000002 U	0.0000077	--	0.000002 U	--
PCB-27	0.000002 U	0.0000052	0.000002 U	--	--	0.000002 U	0.000002	--	0.000002 U	--
PCB-28	0.000018	0.00012	0.000002 U	--	--	0.000005	0.000039	--	0.000002 U	--
PCB-29	0.000002 U	0.000002	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-3	0.000016	0.00017	0.0000049	--	--	0.0000039	0.00007	--	0.0000035	--
PCB-30	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-31	0.000016	0.00015	0.000002 U	--	--	0.0000041	0.000042	--	0.000002 U	--
PCB-32	0.0000023	0.000036	0.000002 U	--	--	0.000002 U	0.000011	--	0.000002 U	--
PCB-34	0.000002 U	0.0000013 J	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-35	0.000011	0.0000074	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-36	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-37	0.000015	0.000065	0.000002 U	--	--	0.0000033	0.000024	--	0.000002 U	--

TABLE 12

SOIL ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA
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LOCATION	SB-363	SB-363	SB-363	SB-363	SB-363	SB-364	SB-364	SB-364	SB-364	SB-364
SAMPLE ID	SB363-20191112-0006	SB363-20191112-0624	SB363-20191112-120144	SB363-20191112-144168	SB363-20191112-96120	SB364-20191112-0006	SB364-20191112-0624	SB364-20191112-2448	SB364-20191112-4872	SB364-20191112-7296
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House
SUBMATRIX	SS	SS	SB	SB	SB	SS	SS	SB	SB	SB
TOP DEPTH	0	0.5	10	12	8	0	0.5	2	4	6
BOTTOM DEPTH	0.5	2	12	14	10	0.5	2	4	6	8
PCB-38	0.0000016 J	0.0000017 J	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-39	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-4	0.0000021	0.00005	0.000002 U	--	--	0.0000013 J	0.000014	--	0.000002 U	--
PCB-40	0.000002	0.000023	0.000002 U	--	--	0.000002 U	0.0000074	--	0.000002 U	--
PCB-41/64/71/72	0.000017	0.00012	0.000008 U	--	--	0.0000048 J	0.000039	--	0.000008 U	--
PCB-42/59	0.0000055	0.000047	0.000004 U	--	--	0.0000017 J	0.000015	--	0.000004 U	--
PCB-43/49	0.000017	0.0001	0.000004 U	--	--	0.0000048	0.000035	--	0.000004 U	--
PCB-44	0.000016	0.00013	0.000002 U	--	--	0.0000051	0.00005	--	0.000002 U	--
PCB-45	0.0000016 J	0.000021	0.000002 U	--	--	0.000002 U	0.0000056	--	0.000002 U	--
PCB-46	0.000002 U	0.0000092	0.000002 U	--	--	0.000002 U	0.0000025	--	0.000002 U	--
PCB-47	0.0000084	0.000043	0.000002 U	--	--	0.0000028	0.000013	--	0.000002 U	--
PCB-48/75	0.0000027 J	0.000025	0.000004 U	--	--	0.000004 U	0.0000075	--	0.000004 U	--
PCB-5	0.000002 U	0.0000032	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-50	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-51	0.000002 U	0.0000051	0.000002 U	--	--	0.000002 U	0.0000018 J	--	0.000002 U	--
PCB-52/69	0.000027	0.00016	0.000004 U	--	--	0.000008	0.000072	--	0.000004 U	--
PCB-53	0.0000016 J	0.000018	0.000002 U	--	--	0.000002 U	0.000006	--	0.000002 U	--
PCB-54	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-55	0.000001 J	0.0000046	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-56/60	0.000014	0.000093	0.000004 U	--	--	0.0000037 J	0.000029	--	0.000004 U	--
PCB-57	0.000002 U	0.0000014 J	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-58	0.000002 U	0.00000079 J	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-6	0.0000024	0.000047	0.000002 U	--	--	0.000002 U	0.00001	--	0.000002 U	--
PCB-61/70	0.000045	0.00023	0.000004 U	--	--	0.00001	0.000096	--	0.000004 U	--
PCB-62	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-63	0.0000013 J	0.0000065	0.000002 U	--	--	0.000002 U	0.0000028	--	0.000002 U	--
PCB-65	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-66/76	0.00003	0.00015	0.000004 U	--	--	0.000007	0.000055	--	0.000004 U	--
PCB-67	0.0000027	0.0000069	0.000002 U	--	--	0.000002 U	0.0000028	--	0.000002 U	--
PCB-68	0.00000085 J	0.0000013 J	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-7	0.0000011 J	0.000017	0.000002 U	--	--	0.000002 U	0.0000029	--	0.000002 U	--
PCB-73	0.000002 U	0.0000017 J	0.000002 U	--	--	0.000002 U	0.0000013 J	--	0.000002 U	--
PCB-74	0.000015	0.000085	0.000002 U	--	--	0.0000035	0.000032	--	0.000002 U	--
PCB-77	0.000011	0.000021	0.00000057 U	--	--	0.0000018 J	0.0000097	--	0.0000012 U	--
PCB-78	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-79	0.0000019 J	0.0000018 J	0.000002 U	--	--	0.000002 U	0.0000017 J	--	0.000002 U	--
PCB-8	0.000011	0.0002	0.000002 U	--	--	0.0000034	0.000042	--	0.000002 U	--
PCB-80	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-81	0.0000021	0.0000045	0.00000057 U	--	--	0.00000037 U	0.0000028	--	0.000001 U	--
PCB-82	0.0000085	0.000038	0.000002 U	--	--	0.0000022	0.000019	--	0.000002 U	--
PCB-83/112	0.0000038 J	0.000013	0.000004 U	--	--	0.000004 U	0.0000067	--	0.000004 U	--
PCB-84/92	0.000032	0.00011	0.000004 U	--	--	0.000007	0.000057	--	0.000004 U	--
PCB-85/116	0.000014	0.000041	0.000004 U	--	--	0.0000035 J	0.000023	--	0.000004 U	--
PCB-86	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-87/117/125	0.00003	0.00012	0.000006 U	--	--	0.0000065	0.000061	--	0.000006 U	--
PCB-88/91	0.00001	0.000034	0.000004 U	--	--	0.0000024 J	0.00002	--	0.000004 U	--
PCB-89	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-9	0.00000078 J	0.000015	0.000002 U	--	--	0.000002 U	0.0000044	--	0.000002 U	--
PCB-93	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-94	0.000002 U	0.0000016 J	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-95	0.000055	0.00022	0.000002 U	--	--	0.000012	0.00014	--	0.000002 U	--
PCB-96	0.000002 U	0.0000019 J	0.000002 U	--	--	0.000002 U	0.000002 U	--	0.000002 U	--
PCB-97	0.000022	0.000094	0.000002 U	--	--	0.0000049	0.000049	--	0.000002 U	--
PCB-98/102	0.000004 U	0.000004 U	0.000004 U	--	--	0.000004 U	0.000004 U	--	0.000004 U	--
PCB-99	0.000049	0.000096	0.000002 U	--	--	0.0000089	0.000052	--	0.000002 U	--
PENTACHLOROBIPHENYLS	0.00059 J	0.0018 J	0 UJ	--	--	0.00012 J	0.001 J	--	0 UJ	--
TEQ DIOXIN-LIKE PCBs (BIRD)	1.19828E-06	1.8051E-06	0.00000048 U	--	--	9.1322E-08	1.01484E-06	--	0.0000012 U	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.19828E-06	1.80551E-06	0.00000048 U	--	--	1.44718E-07	1.01539E-06	--	0.0000012 U	--
TEQ DIOXIN-LIKE PCBs (FISH)	2.4139E-08	1.9716E-08	0.00000048 U	--	--	2.59E-10	1.4953E-08	--	0.0000012 U	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	2.4139E-08	1.9736E-08	0.00000048 U	--	--	2.095E-09	1.498E-08	--	0.0000012 U	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	4.85163E-07	2.98649E-07	0.00000048 U	--	--	6.63E-10	2.45308E-07	--	0.0000012 U	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	4.85163E-07	3.11099E-07	0.00000048 U	--	--	4.588E-08	2.61808E-07	--	0.0000012 U	--
TETRACHLOROBIPHENYLS	0.00022 J	0.0013 J	0 UJ	--	--	0.000053 J	0.00049 J	--	0 UJ	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0001002	0.0002017	0 U	--	--	0.00001795	0.0001315	--	0 U	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00208923	0.00707473	0.0000112	--	--	0.00050004	0.0037715	--	0.0000123	--
TOTAL PCB CONGENERS ZEROND	0.00218943	0.00727643	0.0000112	--	--	0.00051799	0.003903	--	0.0000123	--
TOTAL PCB CONGENERS-NOAA	0.0008718	0.002664	0 U	--	--	0.0002357	0.001548	--	0.0000023	--
TOTAL PCB CONGENERS-NOAA HALFND	0.00224343	0.007312845	0.000207635	--	--	0.00061029	0.00395355	--	0.0002107	--
TOTAL PCB CONGENERS-NOAA X2	0.0017436	0.005328	0 U	--	--	0.0004714	0.003096	--	0.0000046	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0017436	0.005328	0.00004695	--	--	0.0004714	0.003096	--	0.0000509	--
TRICHLOROBIPHENYLS	0.0001 J	0.00082 J	0 UJ	--	--	0.00002 J	0.00024 J	--	0 UJ	--
DIOXINS/FURANS (NG/KG)										
1,2,3,4,6,7,8,9-OCDD	410	100	490	--	--	120	110	--	6600 J	--
1,2,3,4,6,7,8,9-OCDF	88	8.7 J	0.34 U	--	--	12	15	--	0.47 U	--
1,2,3,4,6,7,8-HPCDD	48	33	6.5	--	--	8.2	31	--	27	--
1,2,3,4,6,7,8-HPCDF	130	14	0.75 J	--	--	18	35	--	0.27 U	--
1,2,3,4,7,8,9-HPCDF	9.9	0.49 J	0.15 U	--	--	1.3 J	0.85 J	--	0.39 U	--
1,2,3,4,7,8-HXCDD	2.9 J	1.3 J	0.37 J	--	--	0.51 J	1.5 J	--	0.29 U	--
1,2,3,4,7,8-HXCDF	23	3.9 J	0.28 J	--	--	3.1 J	4.1 J	--	0.21 U	--
1,2,3,6,7,8-HXCDD	5.6	6.3	0.35 J	--	--	0.91 J	6.1	--	0.3 U	--
1,2,3,6,7,8-HXCDF	17	1.9 J	0.24 J	--	--	2.2 J	2.6 J	--	0.2 U	--

TABLE 12

SOIL ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-363	SB-363	SB-363	SB-363	SB-363	SB-364	SB-364	SB-364	SB-364	SB-364
SAMPLE ID	SB363-20191112-0006	SB363-20191112-0624	SB363-20191112-120144	SB363-20191112-144168	SB363-20191112-96120	SB364-20191112-0006	SB364-20191112-0624	SB364-20191112-2448	SB364-20191112-4872	SB364-20191112-7296
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House
SUBMATRIX	SS	SS	SB	SB	SB	SS	SS	SB	SB	SB
TOP DEPTH	0	0.5	10	12	8	0	0.5	2	4	6
BOTTOM DEPTH	0.5	2	12	14	10	0.5	2	4	6	8
1,2,3,7,8,9-HXCDD	3.7 J	2.9 J	0.34 J	--	--	0.7 J	3 J	--	0.27 U	--
1,2,3,7,8,9-HXCDF	5.4	0.33 J	0.16 U	--	--	0.75 J	0.59 J	--	0.29 U	--
1,2,3,7,8-PECDD	2.5 J	1.9 J	0.37 J	--	--	0.45 J	2.3 J	--	0.18 U	--
1,2,3,7,8-PECDF	7.4	2.4 J	0.29 J	--	--	1 J	2.1 J	--	0.16 U	--
2,3,4,6,7,8-HXCDF	23	1.1 J	0.13 U	--	--	3.2 J	2.7 J	--	0.24 U	--
2,3,4,7,8-PECDF	15	2.2 J	0.31 J	--	--	2.1 J	2 J	--	0.18 U	--
2,3,7,8-TCDD	0.54 J	0.36 J	0.09 J	--	--	0.072 U	0.42 J	--	0.11 U	--
2,3,7,8-TCDF	4.8	9.8	0.42 J	--	--	0.8 J	2	--	0.11 U	--
TEQ DIOXINS (BIRD)	32.4878	15.82977	1.39	--	--	4.694	8.767	--	0.687	--
TEQ DIOXINS (BIRD) HALFND	32.4878	15.82977	1.405267	--	--	4.73	8.767	--	1.0575735	--
TEQ DIOXINS (FISH)	21.0298	5.62377	0.9574	--	--	3.0005	6.167	--	0.687	--
TEQ DIOXINS (FISH) HALFND	21.0298	5.62377	0.972667	--	--	3.0365	6.167	--	1.0094235	--
TEQ DIOXINS (HUMANS/MAMMALS)	18.3304	6.25251	0.9812	--	--	2.6416	6.348	--	2.25	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	18.3304	6.25251	0.996501	--	--	2.6776	6.348	--	2.5232705	--
TOTAL HPCDD	92 J	59 J	14 J	--	--	19 J	53 J	--	51 J	--
TOTAL HPCDF	170 J	16 J	0.75 J	--	--	24 J	39 J	--	0 UJ	--
TOTAL HXCDD	67 J	110 J	8.1 J	--	--	14 J	120 J	--	2.4 J	--
TOTAL HXCDF	190 J	14 J	1.1 J	--	--	25 J	30 J	--	0 UJ	--
TOTAL PECDD	45 J	74 J	8.6 J	--	--	10 J	75 J	--	0 UJ	--
TOTAL PECDF	160 J	19 J	3 J	--	--	23 J	27 J	--	0 UJ	--
TOTAL TCDD	32 J	68 J	9.4 J	--	--	7 J	71 J	--	0.7 J	--
TOTAL TCDF	140 J	42 J	7.8 J	--	--	21 J	28 J	--	0.37 J	--
METALS (MG/KG)										
ALUMINUM	6780	8030	8490	--	--	8840	12000	--	11000	--
ANTIMONY	1.5 U	1 U	1.2 U	--	--	1.3 U	1.1 U	--	1.1 U	--
ARSENIC	6	14	4.6	--	--	2.5	13	--	7.7	--
BARIUM	67.4	86.3	48.3	--	--	25	80.6	--	78.7	--
BERYLLIUM	2.1	0.54	0.77	--	--	0.76	0.64	--	0.64	--
CADMIUM	0.37 J	0.074 J	0.16 J	--	--	0.13 J	0.16 J	--	0.56 U	--
CALCIUM	2100	21800	926	--	--	60200	4360	--	552 J	--
CHROMIUM	11.3	9.4	7.1	--	--	4	9.8	--	13.8	--
COBALT	33.3	4.9	8.5	--	--	15.8	7.1	--	14.1	--
COPPER	73.7	24.5	14.5	--	--	14	24.9	--	23.1	--
CYANIDE	0.76 R	0.55 R	0.62 R	--	--	0.62 R	0.53 R	--	0.53 R	--
IRON	14800	25100	18400	--	--	20000	19300	--	29000	--
LEAD	29.8	18.2	10.8	--	--	7.7	19.7	--	22.6	--
MAGNESIUM	2050	2150	965	--	--	19300	2440	--	2080	--
MANGANESE	410	183	230	--	--	378	240	--	438	--
MERCURY	0.027 J	0.043 J	0.12 U	--	--	0.12 U	0.034 J	--	0.06 J	--
NICKEL	73.3	11.9	10.3	--	--	40.4	16.9	--	15.3	--
POTASSIUM	1530	2240	1300	--	--	1880	2470	--	2230	--
SELENIUM	3.7 U	2.6 U	3.1 U	--	--	3.2 U	2.8 U	--	2.8 U	--
SILVER	0.74 U	0.52 U	0.62 U	--	--	0.64 U	0.55 U	--	0.56 U	--
SODIUM	742 U	539 U	624 U	--	--	630 U	539 U	--	574 U	--
THALLIUM	0.74 U	0.52 U	0.62 U	--	--	0.64 U	0.55 U	--	0.56 U	--
VANADIUM	11.1	9.3	11.4	--	--	4.3	9.1	--	13.1	--
ZINC	144	33.3	38.2	--	--	63.1	44.8	--	43.6	--
MISCELLANEOUS (%)										
TOTAL SOLIDS	69	--	--	--	--	--	88	--	--	--
MISCELLANEOUS (MG/KG)										
TOTAL ORGANIC CARBON	51700	--	--	--	--	--	73500	--	--	--
MOBILE LAB MISCELLANEOUS (%)										
PERCENT SOLIDS	--	90	--	79	77	--	90	87	--	85

TABLE 12

SOIL ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-365	SB-365	SB-365	SB-365	SB-365	SB-365
SAMPLE ID	SB365-20191112-0006	SB365-20191112-0006-D	SB365-20191112-0624	SB365-20191112-120144	SB365-20191112-144168	SB365-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE		SB365-20191112-0006				
SAMPLE CODE	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House
SUBMATRIX	SS	SS	SS	SB	SB	SB
TOP DEPTH	0	0	0.5	10	12	5
BOTTOM DEPTH	0.5	0.5	2	12	14	7
VOLATILES (MG/KG)						
1,1,1-TRICHLOROETHANE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
1,1,2,2-TETRACHLOROETHANE	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
1,1,2-TRICHLOROETHANE	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
1,1-DICHLOROETHANE	0.0051 U	--	0.0049 U	--	0.0052 U	--
1,1-DICHLOROETHENE	0.0051 U	--	0.0049 U	--	0.0052 U	--
1,2,3-TRICHLOROBENZENE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
1,2,4-TRICHLOROBENZENE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
1,2-DIBROMO-3-CHLOROPROPANE	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
1,2-DIBROMOETHANE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
1,2-DICHLOROBENZENE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
1,2-DICHLOROETHANE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
1,2-DICHLOROPROPANE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
1,3-DICHLOROBENZENE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
1,4-DICHLOROBENZENE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
2-BUTANONE	0.01 U	--	0.0099 U	--	0.01 U	--
2-HEXANONE	0.01 U	--	0.0099 UJ	--	0.01 U	--
4-METHYL-2-PENTANONE	0.01 U	--	0.0099 UJ	--	0.01 U	--
ACETONE	0.01 U	--	0.0099 U	--	0.01 U	--
BENZENE	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
BROMOCHLOROMETHANE	0.0051 U	--	0.0049 U	--	0.0052 U	--
BROMODICHLOROMETHANE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
BROMOFORM	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
BROMOMETHANE	0.0051 U	--	0.0049 U	--	0.0052 U	--
CARBON DISULFIDE	0.0051 U	--	0.0049 U	--	0.0052 U	--
CARBON TETRACHLORIDE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
CHLOROBENZENE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
CHLORODIBROMOMETHANE	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
CHLOROETHANE	0.0051 U	--	0.0049 U	--	0.0052 U	--
CHLOROFORM	0.0051 U	--	0.0049 U	--	0.0052 U	--
CHLOROMETHANE	0.0051 U	--	0.0049 U	--	0.0052 U	--
CIS-1,2-DICHLOROETHENE	0.0051 U	--	0.0049 U	--	0.0052 U	--
CIS-1,3-DICHLOROPROPENE	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
CYCLOHEXANE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
DICHLORODIFLUOROMETHANE	0.0051 U	--	0.0049 U	--	0.0052 U	--
ETHYLBENZENE	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
ISOPROPYLBENZENE	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
M+P-XYLENES	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
METHYL ACETATE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
METHYL CYCLOHEXANE	0.0051 UJ	--	0.0024 J	--	0.0052 U	--
METHYL TERT-BUTYL ETHER	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
METHYLENE CHLORIDE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
O-XYLENE	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
STYRENE	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
TETRACHLOROETHENE	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
TOLUENE	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
TRANS-1,2-DICHLOROETHENE	0.0051 U	--	0.0049 U	--	0.0052 U	--
TRANS-1,3-DICHLOROPROPENE	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
TRICHLOROETHENE	0.0051 U	--	0.0049 UJ	--	0.0052 U	--
TRICHLOROFLUOROMETHANE	0.0051 UJ	--	0.0049 UJ	--	0.0052 U	--
VINYL CHLORIDE	0.0051 U	--	0.0049 U	--	0.0052 U	--
SEMIVOLATILES (MG/KG)						
1,1-BIPHENYL	0.19 U	--	0.023 J	--	0.2 U	--
1,2,4,5-TETRACHLOROBENZENE	0.19 U	--	0.19 U	--	0.2 U	--
1,4-DIOXANE	0.076 U	--	0.074 U	--	0.077 U	--
2,2'-OXYBIS(1-CHLOROPROPANE)	0.38 U	--	0.36 U	--	0.38 U	--
2,3,4,6-TETRACHLOROPHENOL	0.19 U	--	0.19 U	--	0.2 U	--
2,4,5-TRICHLOROPHENOL	0.19 U	--	0.19 U	--	0.2 U	--
2,4,6-TRICHLOROPHENOL	0.19 U	--	0.19 U	--	0.2 U	--
2,4-DICHLOROPHENOL	0.19 U	--	0.19 U	--	0.2 U	--
2,4-DIMETHYLPHENOL	0.19 U	--	0.19 U	--	0.2 U	--
2,4-DINITROPHENOL	0.38 U	--	0.36 U	--	0.38 U	--
2,4-DINITROTOLUENE	0.19 U	--	0.19 U	--	0.2 U	--
2,6-DINITROTOLUENE	0.19 U	--	0.19 U	--	0.2 U	--
2-CHLORONAPHTHALENE	0.19 U	--	0.19 U	--	0.2 U	--
2-CHLOROPHENOL	0.19 U	--	0.19 U	--	0.2 U	--
2-METHYLNAPHTHALENE	0.19 U	--	0.058 J	--	0.2 U	--
2-METHYLPHENOL	0.38 U	--	0.36 U	--	0.38 U	--
2-NITROANILINE	0.19 U	--	0.19 U	--	0.2 U	--
2-NITROPHENOL	0.19 U	--	0.19 U	--	0.2 U	--
3&4-METHYLPHENOL	0.38 U	--	0.36 U	--	0.38 U	--
3,3'-DICHLOROBENZIDINE	0.38 U	--	0.36 U	--	0.38 U	--
3-NITROANILINE	0.38 U	--	0.36 U	--	0.38 U	--
4,6-DINITRO-2-METHYLPHENOL	0.38 U	--	0.36 U	--	0.38 U	--
4-BROMOPHENYL PHENYL ETHER	0.19 U	--	0.19 U	--	0.2 U	--
4-CHLORO-3-METHYLPHENOL	0.19 U	--	0.19 U	--	0.2 U	--
4-CHLOROANILINE	0.38 U	--	0.36 U	--	0.38 U	--
4-CHLOROPHENYL PHENYL ETHER	0.19 U	--	0.19 U	--	0.2 U	--
4-NITROANILINE	0.38 U	--	0.36 U	--	0.38 U	--
4-NITROPHENOL	0.38 U	--	0.36 U	--	0.38 U	--

TABLE 12

SOIL ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-365	SB-365	SB-365	SB-365	SB-365	SB-365
SAMPLE ID	SB365-20191112-0006	SB365-20191112-0006-D	SB365-20191112-0624	SB365-20191112-120144	SB365-20191112-144168	SB365-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE		SB365-20191112-0006				
SAMPLE CODE	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House
SUBMATRIX	SS	SS	SS	SB	SB	SB
TOP DEPTH	0	0	0.5	10	12	5
BOTTOM DEPTH	0.5	0.5	2	12	14	7
ACENAPHTHENE	0.19 U	--	0.19 U	--	0.2 U	--
ACENAPHTHYLENE	0.19 U	--	0.19 U	--	0.2 U	--
ACETOPHENONE	0.38 U	--	0.36 U	--	0.38 U	--
ANTHRACENE	0.19 U	--	0.19 U	--	0.2 U	--
ATRAZINE	0.38 U	--	0.36 U	--	0.38 U	--
BAP EQUIVALENT-HALFND	0.212645	--	0.13396	--	0.2 U	--
BAP EQUIVALENT-POS	0.0026	--	0.02851	--	0.2 U	--
BENZALDEHYDE	0.38 U	--	0.36 U	--	0.38 U	--
BENZO(A)ANTHRACENE	0.19 U	--	0.029 J	--	0.2 U	--
BENZO(A)PYRENE	0.19 U	--	0.02 J	--	0.2 U	--
BENZO(B)FLUORANTHENE	0.026 J	--	0.055 J	--	0.2 U	--
BENZO(G,H,I)PERYLENE	0.04 J	--	0.023 J	--	0.2 U	--
BENZO(K)FLUORANTHENE	0.19 U	--	0.19 U	--	0.2 U	--
BIS(2-CHLOROETHOXY)METHANE	0.19 U	--	0.19 U	--	0.2 U	--
BIS(2-CHLOROETHYL)ETHER	0.38 U	--	0.36 U	--	0.38 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	0.19 U	--	0.07 J	--	0.2 U	--
BUTYL BENZYL PHTHALATE	0.19 U	--	0.031 J	--	0.2 U	--
CAPROLACTAM	0.38 U	--	0.36 U	--	0.38 U	--
CARBAZOLE	0.38 U	--	0.36 U	--	0.38 U	--
CHRYSENE	0.19 U	--	0.11 J	--	0.2 U	--
DIBENZO(A,H)ANTHRACENE	0.19 U	--	0.19 U	--	0.2 U	--
DIBENZOFURAN	0.19 U	--	0.02 J	--	0.2 U	--
DIETHYL PHTHALATE	0.19 U	--	0.19 U	--	0.2 U	--
DIMETHYL PHTHALATE	0.19 U	--	0.19 U	--	0.2 U	--
DI-N-BUTYL PHTHALATE	0.19 U	--	0.19 U	--	0.2 U	--
DI-N-OCTYL PHTHALATE	0.38 U	--	0.36 U	--	0.38 U	--
FLUORANTHENE	0.38 U	--	0.058 J	--	0.38 U	--
FLUORENE	0.19 U	--	0.19 U	--	0.2 U	--
HEXACHLOROBENZENE	0.19 U	--	0.19 U	--	0.2 U	--
HEXACHLOROBUTADIENE	0.19 U	--	0.19 U	--	0.2 U	--
HEXACHLOROCYCLOPENTADIENE	0.38 U	--	0.36 U	--	0.38 U	--
HEXACHLOROETHANE	0.19 U	--	0.19 U	--	0.2 U	--
HIGH MOLECULAR WEIGHT PAHS	0.066	--	0.304	--	0 U	--
INDENO(1,2,3-CD)PYRENE	0.19 U	--	0.19 U	--	0.2 U	--
ISOPHORONE	0.19 U	--	0.19 U	--	0.2 U	--
LOW MOLECULAR WEIGHT PAHS	0.025	--	0.267	--	0 U	--
NAPHTHALENE	0.19 U	--	0.029 J	--	0.2 U	--
NITROBENZENE	0.19 U	--	0.19 U	--	0.2 U	--
N-NITROSO-DI-N-PROPYLAMINE	0.19 U	--	0.19 U	--	0.2 U	--
N-NITROSODIPHENYLAMINE	0.19 U	--	0.19 U	--	0.2 U	--
PENTACHLOROPHENOL	0.38 U	--	0.36 U	--	0.38 U	--
PHENANTHRENE	0.025 J	--	0.18 J	--	0.2 U	--
PHENOL	0.38 U	--	0.36 U	--	0.38 U	--
PYRENE	0.19 U	--	0.067 J	--	0.2 U	--
TOTAL PAHS	0.091	--	0.571	--	0 U	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K						
1,4-DIOXANE	0.0077 U	--	0.0075 U	--	0.0076 U	--
2-METHYLNAPHTHALENE	0.012	--	0.051	--	0.0036 J	--
ACENAPHTHENE	0.0038 U	--	0.005	--	0.0038 U	--
ACENAPHTHYLENE	0.0018 J	--	0.0029 J	--	0.00052 J	--
ANTHRACENE	0.0038 U	--	0.012	--	0.0038 U	--
BAP EQUIVALENT-HALFND	0.011812	--	0.017635	--	0.003767	--
BAP EQUIVALENT-POS	0.009893	--	0.015835	--	0.001677	--
BENZO(A)ANTHRACENE	0.0064 J+	--	0.017	--	0.0012 J	--
BENZO(A)PYRENE	0.0073 J+	--	0.01 J+	--	0.0011 J	--
BENZO(B)FLUORANTHENE	0.015 J+	--	0.035 J+	--	0.0044	--
BENZO(G,H,I)PERYLENE	0.019 J+	--	0.0067 J+	--	0.0012 J	--
BENZO(K)FLUORANTHENE	0.0038 U	--	0.0065 J+	--	0.0012 J	--
CHRYSENE	0.023 J+	--	0.16	--	0.0053	--
DIBENZO(A,H)ANTHRACENE	0.0038 U	--	0.0036 UJ	--	0.0038 U	--
FLUORANTHENE	0.014 J+	--	0.042	--	0.0037 J	--
FLUORENE	0.0047	--	0.0089	--	0.0038 U	--
HIGH MOLECULAR WEIGHT PAHS	0.089	--	0.2793	--	0.0182	--
INDENO(1,2,3-CD)PYRENE	0.0043 J+	--	0.0041 J+	--	0.0038 U	--
LOW MOLECULAR WEIGHT PAHS	0.05	--	0.3968	--	0.01102	--
NAPHTHALENE	0.0045	--	0.026	--	0.0038 U	--
PENTACHLOROPHENOL	0.0076 U	--	0.0074 U	--	0.0077 U	--
PHENANTHRENE	0.025	--	0.3 J	--	0.0068	--
PYRENE	0.014 J+	--	0.04	--	0.0038	--
TOTAL PAHS	0.023	--	0.16	--	0.0053	--
PESTICIDES (MG/KG)						
4,4'-DDD	0.0039 U	--	0.0037 U	--	0.0039 U	--
4,4'-DDE	0.0039 U	--	0.0037 U	--	0.0039 U	--
4,4'-DDT	0.0039 U	--	0.0037 U	--	0.0039 U	--
ALDRIN	0.002 U	--	0.0019 U	--	0.002 U	--
ALPHA-BHC	0.002 U	--	0.0019 U	--	0.002 U	--
ALPHA-CHLORDANE	0.002 U	--	0.0019 U	--	0.002 U	--
BETA-BHC	0.002 U	--	0.0019 U	--	0.002 U	--
DELTA-BHC	0.002 U	--	0.0019 U	--	0.002 U	--
DIELDRIN	0.0039 U	--	0.0037 U	--	0.0039 U	--
ENDOSULFAN I	0.002 U	--	0.0019 U	--	0.002 U	--

TABLE 12

SOIL ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-365	SB-365	SB-365	SB-365	SB-365	SB-365
SAMPLE ID	SB365-20191112-0006	SB365-20191112-0006-D	SB365-20191112-0624	SB365-20191112-120144	SB365-20191112-144168	SB365-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE		SB365-20191112-0006				
SAMPLE CODE	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House
SUBMATRIX	SS	SS	SS	SB	SB	SB
TOP DEPTH	0	0	0.5	10	12	5
BOTTOM DEPTH	0.5	0.5	2	12	14	7
ENDOSULFAN II	0.0039 U	--	0.0037 U	--	0.0039 U	--
ENDOSULFAN SULFATE	0.0039 U	--	0.0037 U	--	0.0039 U	--
ENDRIN	0.0039 U	--	0.0037 U	--	0.0039 U	--
ENDRIN ALDEHYDE	0.0039 U	--	0.0037 U	--	0.0039 U	--
ENDRIN KETONE	0.0039 U	--	0.0037 U	--	0.0039 U	--
GAMMA-BHC (LINDANE)	0.00034 J	--	0.00053 J	--	0.002 U	--
GAMMA-CHLORDANE	0.002 U	--	0.0019 U	--	0.002 U	--
HEPTACHLOR	0.002 U	--	0.0019 U	--	0.002 U	--
HEPTACHLOR EPOXIDE	0.002 U	--	0.0019 U	--	0.002 U	--
METHOXYCHLOR	0.02 U	--	0.019 U	--	0.02 U	--
TOXAPHENE	0.2 U	--	0.19 U	--	0.2 U	--
PCBS (MG/KG)						
AROCLOR-1016	--	--	--	--	0.039 U	--
AROCLOR-1221	--	--	--	--	0.039 U	--
AROCLOR-1232	--	--	--	--	0.039 U	--
AROCLOR-1242	--	--	--	--	0.039 U	--
AROCLOR-1248	--	--	--	--	0.039 U	--
AROCLOR-1254	--	--	--	--	0.039 U	--
AROCLOR-1260	--	--	--	--	0.039 U	--
AROCLOR-1262	--	--	--	--	0.039 U	--
AROCLOR-1268	--	--	--	--	0.039 U	--
TOTAL AROCLOR	--	--	--	--	0 U	--
TOTAL AROCLOR HALFND	--	--	--	--	0.1755	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)						
AROCLOR-1016	--	--	0.294 U	0.298 U	--	0.321 U
AROCLOR-1221	--	--	0.588 U	0.595 U	--	0.641 U
AROCLOR-1232	--	--	0.294 U	0.298 U	--	0.321 U
AROCLOR-1242	--	--	0.294 U	0.298 U	--	0.321 U
AROCLOR-1248	--	--	0.294 U	0.298 U	--	0.321 U
AROCLOR-1254	--	--	0.294 U	0.298 U	--	0.321 U
AROCLOR-1260	--	--	0.294 U	0.298 U	--	0.321 U
AROCLOR-1262	--	--	0.294 U	0.298 U	--	0.321 U
AROCLOR-1268	--	--	0.294 U	0.298 U	--	0.321 U
TOTAL AROCLOR	--	--	0 U	0 U	--	0 U
TOTAL AROCLOR HALFND	--	--	1.47	1.4895	--	1.6045
PCB CONGENERS (MG/KG)						
DICHLOROBIPHENYLS	0.000018 J	--	0.00021 J	--	0.000005 J	--
HEPTACHLOROBIPHENYLS	0.00017 J	--	0.0015 J	--	0.000045 J	--
HEXACHLOROBIPHENYLS	0.00021 J	--	0.0017 J	--	0.000069 J	--
MONOCHLOROBIPHENYLS	0.000005 J	--	0.00021 J	--	0.0000054 J	--
NONACHLOROBIPHENYLS	0.000015 J	--	0.000079 J	--	0.0000029 J	--
OCTACHLOROBIPHENYLS	0.00004 J	--	0.00039 J	--	0.000013 J	--
PCB-1	0.0000011 J	--	0.000076	--	0.0000017 J	--
PCB-10	0.000002 U	--	0.0000012 J	--	0.000002 U	--
PCB-100	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-101/90	0.000027	--	0.00023	--	0.000011	--
PCB-103	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-104	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-105	0.000012	--	0.000063	--	0.0000034	--
PCB-108/107	0.0000021 J	--	0.00001	--	0.00000097 J	--
PCB-109	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-11	0.00001	--	0.000022	--	0.0000014 J	--
PCB-110	0.000033	--	0.00021	--	0.000011	--
PCB-111/115	0.000004 U	--	0.0000042	--	0.000004 U	--
PCB-113	0.000002 U	--	0.000002 U	--	0.0000036	--
PCB-114	0.00000084 U	--	0.0000063	--	0.00000083 U	--
PCB-118/106	0.000027	--	0.00017	--	0.0000096	--
PCB-119	0.000002 U	--	0.0000029	--	0.000002 U	--
PCB-12	0.000002 U	--	0.00001	--	0.000002 U	--
PCB-120	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-121	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-122	0.000002 U	--	0.0000027	--	0.000002 U	--
PCB-123	0.000001 U	--	0.0000034	--	0.0000005 U	--
PCB-124	0.0000013 J	--	0.0000076	--	0.000002 U	--
PCB-126	0.0000011 U	--	0.0000022	--	0.00000067 U	--
PCB-127	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-128/162	0.0000079	--	0.000045	--	0.0000027 J	--
PCB-129	0.0000023	--	0.000012	--	0.000002 U	--
PCB-13	0.000002 U	--	0.00001	--	0.000002 U	--
PCB-130	0.0000036	--	0.000017	--	0.0000011 J	--
PCB-131/133	0.0000017 J	--	0.0000086	--	0.000004 U	--
PCB-132/161	0.0000097	--	0.00011	--	0.0000036 J	--
PCB-134/143	0.0000021 J	--	0.000016	--	0.0000012 J	--
PCB-135	0.0000052	--	0.000047	--	0.000002	--
PCB-136	0.0000049	--	0.000059	--	0.0000023	--
PCB-137	0.0000022	--	0.000013	--	0.000002 U	--
PCB-138/163/164	0.00005	--	0.00039	--	0.000016	--
PCB-139/149	0.000034	--	0.0003	--	0.000012	--
PCB-14	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-140	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-141	0.00001	--	0.000097	--	0.0000034	--

TABLE 12

SOIL ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-365	SB-365	SB-365	SB-365	SB-365	SB-365
SAMPLE ID	SB365-20191112-0006	SB365-20191112-0006-D	SB365-20191112-0624	SB365-20191112-120144	SB365-20191112-144168	SB365-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE		SB365-20191112-0006				
SAMPLE CODE	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House
SUBMATRIX	SS	SS	SS	SB	SB	SB
TOP DEPTH	0	0	0.5	10	12	5
BOTTOM DEPTH	0.5	0.5	2	12	14	7
PCB-142	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-144	0.0000015 J	--	0.000024	--	0.00000076 J	--
PCB-145	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-146/165	0.0000062	--	0.00005	--	0.000002 J	--
PCB-147	0.00000094 J	--	0.000003	--	0.000002 U	--
PCB-148	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-15	0.0000044	--	0.00006	--	0.0000017 J	--
PCB-150	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-151	0.0000097	--	0.000092	--	0.0000034	--
PCB-152	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-153	0.000044	--	0.00035	--	0.000014	--
PCB-154	0.000002 U	--	0.0000024	--	0.000002 U	--
PCB-155	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-156	0.0000052	--	0.000037	--	0.0000018 J	--
PCB-157	0.0000015 J	--	0.0000067	--	0.0000005 U	--
PCB-158/160	0.0000051	--	0.000042	--	0.0000019 J	--
PCB-159	0.000002 U	--	0.0000042	--	0.000002 U	--
PCB-16	0.000002 U	--	0.000014	--	0.000002 U	--
PCB-166	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-167	0.0000029	--	0.000017	--	0.00000094 J	--
PCB-168	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-169	0.00000066 U	--	0.0000012 U	--	0.00000054 U	--
PCB-17	0.000002 U	--	0.000022	--	0.000002 U	--
PCB-170	0.00002	--	0.00018	--	0.0000059	--
PCB-171	0.0000058	--	0.000051	--	0.0000019 J	--
PCB-172	0.0000042	--	0.00003	--	0.000002 U	--
PCB-173	0.000002 U	--	0.0000045	--	0.000002 U	--
PCB-174	0.000018	--	0.00017	--	0.0000049	--
PCB-175	0.000002 U	--	0.0000066	--	0.000002 U	--
PCB-176	0.0000019 J	--	0.000022	--	0.000002 U	--
PCB-177	0.000013	--	0.0001	--	0.0000032	--
PCB-178	0.0000053	--	0.000034	--	0.0000016 J	--
PCB-179	0.0000077	--	0.000066	--	0.0000022	--
PCB-18	0.0000027	--	0.000046	--	0.0000017 J	--
PCB-180	0.000047	--	0.00044	--	0.000013	--
PCB-181	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-182/187	0.000025	--	0.0002	--	0.0000074	--
PCB-183	0.000011	--	0.00011	--	0.0000037	--
PCB-184	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-185	0.0000026	--	0.000022	--	0.000002 U	--
PCB-186	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-188	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-189	0.0000017 J	--	0.0000082	--	0.00000049 U	--
PCB-19	0.000002 U	--	0.0000041	--	0.000002 U	--
PCB-190	0.0000051	--	0.000037	--	0.0000013 J	--
PCB-191	0.0000011 J	--	0.0000084	--	0.000002 U	--
PCB-192	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-193	0.0000029	--	0.000021	--	0.000002 U	--
PCB-194	0.0000097	--	0.000086	--	0.0000032	--
PCB-195	0.0000035	--	0.000034	--	0.000002 U	--
PCB-196/203	0.00001	--	0.00011	--	0.0000031 J	--
PCB-197	0.000002 U	--	0.0000042	--	0.000002 U	--
PCB-198	0.000002 U	--	0.0000051	--	0.0000032	--
PCB-199	0.000012	--	0.0001	--	0.0000036	--
PCB-2	0.0000015 J	--	0.000036	--	0.0000014 J	--
PCB-20/21/33	0.0000034 J	--	0.000052	--	0.0000013 J	--
PCB-200	0.0000015 J	--	0.000013	--	0.000002 U	--
PCB-201	0.0000015 J	--	0.000013	--	0.000002 U	--
PCB-202	0.0000021	--	0.000019	--	0.000002 U	--
PCB-204	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-205	0.000002 U	--	0.000007	--	0.000002 U	--
PCB-206	0.00001	--	0.000056	--	0.0000029	--
PCB-207	0.0000011 J	--	0.0000066	--	0.000002 U	--
PCB-208	0.0000041	--	0.000016	--	0.000002 U	--
PCB-209	0.000012	--	0.000051	--	0.0000026	--
PCB-22	0.0000028	--	0.000027	--	0.00000088 J	--
PCB-23	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-24	0.000002 U	--	0.0000032	--	0.000002 U	--
PCB-25	0.000002 U	--	0.000008	--	0.000002 U	--
PCB-26	0.0000012 J	--	0.000014	--	0.000002 U	--
PCB-27	0.000002 U	--	0.0000027	--	0.000002 U	--
PCB-28	0.0000069	--	0.000069	--	0.000002	--
PCB-29	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-3	0.0000024	--	0.0001	--	0.0000023	--
PCB-30	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-31	0.0000058	--	0.000076	--	0.0000019 J	--
PCB-32	0.000002 U	--	0.000022	--	0.000002 U	--
PCB-34	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-35	0.000002 U	--	0.000004	--	0.000002 U	--
PCB-36	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-37	0.0000043	--	0.000033	--	0.0000012 J	--

TABLE 12

SOIL ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-365	SB-365	SB-365	SB-365	SB-365	SB-365
SAMPLE ID	SB365-20191112-0006	SB365-20191112-0006-D	SB365-20191112-0624	SB365-20191112-120144	SB365-20191112-144168	SB365-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE		SB365-20191112-0006				
SAMPLE CODE	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House
SUBMATRIX	SS	SS	SS	SB	SB	SB
TOP DEPTH	0	0	0.5	10	12	5
BOTTOM DEPTH	0.5	0.5	2	12	14	7
PCB-38	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-39	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-4	0.000002 U	--	0.000016	--	0.000002 U	--
PCB-40	0.000002 U	--	0.0000097	--	0.000002 U	--
PCB-41/64/71/72	0.0000078 J	--	0.000069	--	0.0000026 J	--
PCB-42/59	0.0000025 J	--	0.000024	--	0.000001 J	--
PCB-43/49	0.0000052	--	0.00006	--	0.0000022 J	--
PCB-44	0.0000057	--	0.000069	--	0.000003	--
PCB-45	0.000002 U	--	0.00001	--	0.000002 U	--
PCB-46	0.000002 U	--	0.0000045	--	0.000002 U	--
PCB-47	0.0000031	--	0.000023	--	0.0000011 J	--
PCB-48/75	0.0000013 J	--	0.000014	--	0.000004 U	--
PCB-5	0.000002 U	--	0.000003	--	0.000002 U	--
PCB-50	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-51	0.000002 U	--	0.0000027	--	0.000002 U	--
PCB-52/69	0.0000079	--	0.0001	--	0.0000056	--
PCB-53	0.000002 U	--	0.0000093	--	0.000002 U	--
PCB-54	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-55	0.000002 U	--	0.0000024	--	0.000002 U	--
PCB-56/60	0.0000056	--	0.000047	--	0.0000016 J	--
PCB-57	0.000002 U	--	0.0000011 J	--	0.000002 U	--
PCB-58	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-6	0.000002 U	--	0.000014	--	0.000002 U	--
PCB-61/70	0.000015	--	0.00013	--	0.0000059	--
PCB-62	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-63	0.000002 U	--	0.0000033	--	0.000002 U	--
PCB-65	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-66/76	0.000011	--	0.00008	--	0.0000029 J	--
PCB-67	0.000002 U	--	0.0000036	--	0.000002 U	--
PCB-68	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-7	0.000002 U	--	0.0000056	--	0.000002 U	--
PCB-73	0.000002 U	--	0.0000015 J	--	0.000002 U	--
PCB-74	0.0000053	--	0.000044	--	0.0000015 J	--
PCB-77	0.0000025	--	0.000011	--	0.00000042 U	--
PCB-78	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-79	0.000002 U	--	0.0000016 J	--	0.000002 U	--
PCB-8	0.0000032	--	0.000065	--	0.0000019 J	--
PCB-80	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-81	0.00000055 U	--	0.0000021	--	0.00000033 U	--
PCB-82	0.0000022	--	0.00002	--	0.0000016 J	--
PCB-83/112	0.000004 U	--	0.0000076	--	0.000004 U	--
PCB-84/92	0.0000082	--	0.000075	--	0.0000038 J	--
PCB-85/116	0.0000041	--	0.000023	--	0.0000015 J	--
PCB-86	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-87/117/125	0.0000079	--	0.000065	--	0.000004 J	--
PCB-88/91	0.0000035 J	--	0.000024	--	0.0000013 J	--
PCB-89	0.000002 U	--	0.0000021	--	0.000002 U	--
PCB-9	0.000002 U	--	0.0000048	--	0.000002 U	--
PCB-93	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-94	0.000002 U	--	0.000002 U	--	0.000002 U	--
PCB-95	0.000016	--	0.0002	--	0.0000089	--
PCB-96	0.000002 U	--	0.0000013 J	--	0.000002 U	--
PCB-97	0.0000069	--	0.000049	--	0.0000029	--
PCB-98/102	0.000004 U	--	0.000004 U	--	0.000004 U	--
PCB-99	0.000011	--	0.000057	--	0.0000037	--
PENTACHLOROBIPHENYLS	0.00016 J	--	0.0012 J	--	0.000067 J	--
TEQ DIOXIN-LIKE PCBs (BIRD)	1.26916E-07	--	9.91586E-07	--	5.29E-10	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	2.09793E-07	--	9.92186E-07	--	6.1369E-08	--
TEQ DIOXIN-LIKE PCBs (FISH)	3.65E-10	--	1.3857E-08	--	3E-11	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	3.272E-09	--	1.3887E-08	--	1.826E-09	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	9.49E-10	--	2.25978E-07	--	1.84E-10	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	6.5958E-08	--	2.43978E-07	--	4.1887E-08	--
TETRACHLOROBIPHENYLS	0.000073 J	--	0.00072 J	--	0.000027 J	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0000258	--	0.0001569	--	0.00000614	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00070944	--	0.0063973	--	0.00024071	--
TOTAL PCB CONGENERS ZEROND	0.00073524	--	0.0065542	--	0.00024685	--
TOTAL PCB CONGENERS-NOAA	0.0003228	--	0.002638	--	0.0001056	--
TOTAL PCB CONGENERS-NOAA HALFND	0.000823315	--	0.0065988	--	0.00035299	--
TOTAL PCB CONGENERS-NOAA X2	0.0006456	--	0.005276	--	0.0002112	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0006456	--	0.005276	--	0.0002132	--
TRICHLOROBIPHENYLS	0.000027 J	--	0.0004 J	--	0.000009 J	--
DIOXINS/FURANS (NG/KG)						
1,2,3,4,6,7,8,9-OCDD	93	--	100	--	79	--
1,2,3,4,6,7,8,9-OCDF	4.8 J	--	6.3 J	--	0.51 J	--
1,2,3,4,6,7,8-HPCDD	5.2	--	48	--	2.9 J	--
1,2,3,4,6,7,8-HPCDF	6.2	--	9.1	--	0.9 J	--
1,2,3,4,7,8,9-HPCDF	0.55 J	--	0.46 J	--	0.16 U	--
1,2,3,4,7,8-HXCDD	0.31 J	--	1.4 J	--	0.18 U	--
1,2,3,4,7,8-HXCDF	1 J	--	2.4 J	--	0.25 J	--
1,2,3,6,7,8-HXCDD	0.5 J	--	9.6	--	0.43 J	--
1,2,3,6,7,8-HXCDF	0.89 J	--	1.3 J	--	0.2 U	--

TABLE 12

SOIL ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-365	SB-365	SB-365	SB-365	SB-365	SB-365
SAMPLE ID	SB365-20191112-0006	SB365-20191112-0006-D	SB365-20191112-0624	SB365-20191112-120144	SB365-20191112-144168	SB365-20191112-6084
SAMPLE DATE	20191112	20191112	20191112	20191112	20191112	20191112
DUPLICATE		SB365-20191112-0006				
SAMPLE CODE	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House	NR&P Supply House
SUBMATRIX	SS	SS	SS	SB	SB	SB
TOP DEPTH	0	0	0.5	10	12	5
BOTTOM DEPTH	0.5	0.5	2	12	14	7
1,2,3,7,8,9-HXCDD	0.39 J	--	4.9 J	--	0.27 J	--
1,2,3,7,8,9-HXCDF	0.3 J	--	0.27 J	--	0.16 U	--
1,2,3,7,8-PECDD	0.23 J	--	1.7 J	--	0.18 U	--
1,2,3,7,8-PECDF	0.42 J	--	1.3 J	--	0.15 U	--
2,3,4,6,7,8-HXCDF	1.1 J	--	0.99 J	--	0.13 U	--
2,3,4,7,8-PECDF	0.69 J	--	1.4 J	--	0.14 U	--
2,3,7,8-TCDD	0.11 U	--	0.31 J	--	0.05 U	--
2,3,7,8-TCDF	0.37 J	--	1.5	--	0.16 J	--
TEQ DIOXINS (BIRD)	1.80298	--	6.34623	--	0.236151	--
TEQ DIOXINS (BIRD) HALFND	1.85798	--	6.34623	--	0.458451	--
TEQ DIOXINS (FISH)	1.18988	--	4.34523	--	0.059851	--
TEQ DIOXINS (FISH) HALFND	1.24488	--	4.34523	--	0.283901	--
TEQ DIOXINS (HUMANS/MAMMALS)	1.08444	--	5.31249	--	0.172853	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	1.13944	--	5.31249	--	0.345403	--
TOTAL HPCDD	10 J	--	92 J	--	6.1 J	--
TOTAL HPCDF	9 J	--	12 J	--	0.9 J	--
TOTAL HXCDD	6 J	--	200 J	--	6.3 J	--
TOTAL HXCDF	8.7 J	--	12 J	--	0.78 J	--
TOTAL PECDD	4 J	--	150 J	--	3.5 J	--
TOTAL PECDF	7.3 J	--	15 J	--	0.48 J	--
TOTAL TCDD	3.3 J	--	110 J	--	2.9 J	--
TOTAL TCDF	8.2 J	--	22 J	--	1.8 J	--
METALS (MG/KG)						
ALUMINUM	5910	--	7380	--	8770	--
ANTIMONY	1.2 U	--	1.1 U	--	1.2 U	--
ARSENIC	4.1	--	8	--	4.9	--
BARIUM	30.7	--	63.6	--	52.2	--
BERYLLIUM	0.29 J	--	0.58	--	0.5 J	--
CADMIUM	0.25 J	--	0.097 J	--	0.58 U	--
CALCIUM	105000	--	6770	--	2560	--
CHROMIUM	7	--	8.8	--	12.2	--
COBALT	5.9	--	6.3	--	6.3	--
COPPER	9.1	--	21.2	--	6.8	--
CYANIDE	0.58 R	--	0.56 R	--	0.59 R	--
IRON	12300	--	16300	--	22300	--
LEAD	8.1	--	18.3	--	10.3	--
MAGNESIUM	12400	--	1900	--	910	--
MANGANESE	265	--	211	--	490	--
MERCURY	0.11 U	--	0.023 J	--	0.019 J	--
NICKEL	14.1	--	13.7	--	9.3	--
POTASSIUM	1550	--	1930	--	1270	--
SELENIUM	2.9 U	--	2.8 U	--	2.9 U	--
SILVER	0.58 U	--	0.56 U	--	0.58 U	--
SODIUM	556 U	--	552 U	--	554 U	--
THALLIUM	0.58 U	--	0.56 U	--	0.58 U	--
VANADIUM	7	--	7.6	--	11	--
ZINC	33.7	--	35	--	26.3	--
MISCELLANEOUS (%)						
TOTAL SOLIDS	87	86	--	--	--	--
MISCELLANEOUS (MG/KG)						
TOTAL ORGANIC CARBON	67000	70300	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)						
PERCENT SOLIDS	--	--	85	84	--	78

TABLE 13

SURFACE WATER ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD356	SW/SD356
SAMPLE ID	SW356-20200225	SW356-20200225-F
SAMPLE DATE	20200225	20200225
DUPLICATE		
SAMPLE CODE	NORMAL	NORMAL
MATRIX	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House (Possible Drainage)	NR&P Supply House (Possible Drainage)
VOLATILES (UG/L)		
1,1,1-TRICHLOROETHANE	5 U	-
1,1,2,2-TETRACHLOROETHANE	5 U	-
1,1,2-TRICHLOROETHANE	5 U	-
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	-
1,1-DICHLOROETHANE	5 U	-
1,1-DICHLOROETHENE	5 U	-
1,2,3-TRICHLOROBENZENE	5 U	-
1,2,4-TRICHLOROBENZENE	5 U	-
1,2-DIBROMO-3-CHLOROPROPANE	5 U	-
1,2-DIBROMOETHANE	5 U	-
1,2-DICHLOROBENZENE	5 U	-
1,2-DICHLOROETHANE	5 U	-
1,2-DICHLOROPROPANE	5 U	-
1,3-DICHLOROBENZENE	5 U	-
1,4-DICHLOROBENZENE	5 U	-
2-BUTANONE	10 U	-
2-HEXANONE	10 U	-
4-METHYL-2-PENTANONE	10 U	-
ACETONE	2.1 J	-
BENZENE	5 U	-
BROMOCHLOROMETHANE	5 U	-
BROMODICHLOROMETHANE	5 U	-
BROMOFORM	5 U	-
BROMOMETHANE	5 U	-
CARBON DISULFIDE	5 U	-
CARBON TETRACHLORIDE	5 U	-
CHLOROBENZENE	5 U	-
CHLORODIBROMOMETHANE	5 U	-
CHLOROETHANE	5 U	-
CHLOROFORM	5 U	-
CHLOROMETHANE	5 U	-
CIS-1,2-DICHLOROETHENE	5 U	-
CIS-1,3-DICHLOROPROPENE	5 U	-
CYCLOHEXANE	5 U	-
DICHLORODIFLUOROMETHANE	5 U	-
ETHYLBENZENE	5 U	-
ISOPROPYLBENZENE	5 U	-
M+P-XYLENES	5 U	-
METHYL ACETATE	5 U	-
METHYL CYCLOHEXANE	5 U	-
METHYL TERT-BUTYL ETHER	5 U	-
METHYLENE CHLORIDE	5 U	-
O-XYLENE	5 U	-
STYRENE	5 U	-
TETRACHLOROETHENE	5 U	-
TOLUENE	5 U	-
TRANS-1,2-DICHLOROETHENE	5 U	-
TRANS-1,3-DICHLOROPROPENE	5 U	-
TRICHLOROETHENE	5 U	-
TRICHLOROFLUOROMETHANE	5 U	-
VINYL CHLORIDE	5 U	-
VOLATILES-TRACE (UG/L)		
1,1,1-TRICHLOROETHANE	0.5 U	-
1,1,2,2-TETRACHLOROETHANE	0.5 U	-
1,1,2-TRICHLOROETHANE	0.5 U	-
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	-
1,1-DICHLOROETHANE	0.5 U	-
1,1-DICHLOROETHENE	0.5 U	-
1,2,3-TRICHLOROBENZENE	0.5 U	-
1,2,4-TRICHLOROBENZENE	0.5 U	-
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	-
1,2-DIBROMOETHANE	0.5 U	-
1,2-DICHLOROBENZENE	0.5 U	-
1,2-DICHLOROETHANE	0.5 U	-
1,2-DICHLOROPROPANE	0.5 U	-
1,3-DICHLOROBENZENE	0.5 U	-
1,4-DICHLOROBENZENE	0.5 U	-
2-BUTANONE	5 U	-
2-HEXANONE	5 U	-
4-METHYL-2-PENTANONE	5 U	-
ACETONE	5 U	-
BENZENE	0.5 U	-
BROMOCHLOROMETHANE	0.5 U	-
BROMODICHLOROMETHANE	0.5 U	-
BROMOFORM	0.5 U	-
BROMOMETHANE	0.5 U	-
CARBON DISULFIDE	0.5 U	-
CARBON TETRACHLORIDE	0.5 U	-
CHLOROBENZENE	0.5 U	-
CHLORODIBROMOMETHANE	0.5 U	-
CHLOROETHANE	0.5 U	-
CHLOROFORM	0.5 U	-
CHLOROMETHANE	0.16 J	-
CIS-1,2-DICHLOROETHENE	0.5 U	-
CIS-1,3-DICHLOROPROPENE	0.5 U	-
CYCLOHEXANE	0.5 U	-
DICHLORODIFLUOROMETHANE	0.5 U	-
ETHYLBENZENE	0.5 U	-
ISOPROPYLBENZENE	0.5 U	-
M+P-XYLENES	0.5 U	-
METHYL ACETATE	0.5 U	-
METHYL CYCLOHEXANE	0.5 U	-
METHYL TERT-BUTYL ETHER	0.5 U	-
METHYLENE CHLORIDE	0.5 U	-
O-XYLENE	0.5 U	-
STYRENE	0.5 U	-
TETRACHLOROETHENE	0.5 U	-
TOLUENE	0.5 U	-

TABLE 13

SURFACE WATER ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD356	SW/SD356
SAMPLE ID	SW356-20200225	SW356-20200225-F
SAMPLE DATE	20200225	20200225
DUPLICATE		
SAMPLE CODE	NORMAL	NORMAL
MATRIX	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House (Possible Drainage)	NR&P Supply House (Possible Drainage)
TRANS-1,2-DICHLOROETHENE	0.5 U	-
TRANS-1,3-DICHLOROPROPENE	0.5 U	-
TRICHLOROETHENE	0.5 U	-
TRICHLOROFLUOROMETHANE	0.5 U	-
VINYL CHLORIDE	0.5 U	-
SEMIVOLATILES (UG/L)		
1,1-BIPHENYL	5 U	-
1,2,4,5-TETRACHLOROBENZENE	5 U	-
1,4-DIOXANE	2 U	-
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	-
2,3,4,6-TETRACHLOROPHENOL	5 U	-
2,4,5-TRICHLOROPHENOL	5 U	-
2,4,6-TRICHLOROPHENOL	5 U	-
2,4-DICHLOROPHENOL	5 U	-
2,4-DIMETHYLPHENOL	5 U	-
2,4-DINITROPHENOL	10 R	-
2,4-DINITROTOLUENE	5 U	-
2,6-DINITROTOLUENE	5 U	-
2-CHLORONAPHTHALENE	5 U	-
2-CHLOROPHENOL	5 U	-
2-METHYLNAPHTHALENE	5 U	-
2-METHYLPHENOL	10 U	-
2-NITROANILINE	5 R	-
2-NITROPHENOL	5 U	-
3&4-METHYLPHENOL	10 U	-
3,3'-DICHLOROBENZIDINE	10 U	-
3-NITROANILINE	10 R	-
4,6-DINITRO-2-METHYLPHENOL	10 U	-
4-BROMOPHENYL PHENYL ETHER	5 U	-
4-CHLORO-3-METHYLPHENOL	5 U	-
4-CHLOROANILINE	10 U	-
4-CHLOROPHENYL PHENYL ETHER	5 U	-
4-NITROANILINE	10 R	-
4-NITROPHENOL	10 R	-
ACENAPHTHENE	5 U	-
ACENAPHTHYLENE	5 U	-
ACETOPHENONE	10 U	-
ANTHRACENE	5 U	-
ATRAZINE	10 U	-
BAP EQUIVALENT-HALFND	5 U	-
BAP EQUIVALENT-POS	5 U	-
BENZALDEHYDE	10 U	-
BENZO(A)ANTHRACENE	5 U	-
BENZO(A)PYRENE	5 U	-
BENZO(B)FLUORANTHENE	5 U	-
BENZO(G,H,I)PERYLENE	5 U	-
BENZO(K)FLUORANTHENE	5 U	-
BIS(2-CHLOROETHOXY)METHANE	5 U	-
BIS(2-CHLOROETHYL)ETHER	10 U	-
BIS(2-ETHYLHEXYL)PHTHALATE	5 U	-
BUTYL BENZYL PHTHALATE	5 U	-
CAPROLACTAM	10 U	-
CARBAZOLE	10 U	-
CHRYSENE	5 U	-
DIBENZO(A,H)ANTHRACENE	5 U	-
DIBENZOFURAN	5 U	-
DIETHYL PHTHALATE	5 U	-
DIMETHYL PHTHALATE	1.9 J	-
DI-N-BUTYL PHTHALATE	5 U	-
DI-N-OCTYL PHTHALATE	10 U	-
FLUORANTHENE	10 U	-
FLUORENE	5 U	-
HEXACHLOROBENZENE	5 U	-
HEXACHLOROBUTADIENE	5 U	-
HEXACHLOROCYCLOPENTADIENE	10 U	-
HEXACHLOROETHANE	5 U	-
HIGH MOLECULAR WEIGHT PAHS	0 U	-
INDENO(1,2,3-CD)PYRENE	5 U	-
ISOPHORONE	5 U	-
LOW MOLECULAR WEIGHT PAHS	0 U	-
NAPHTHALENE	5 U	-
NITROBENZENE	5 U	-
N-NITROSO-DI-N-PROPYLAMINE	5 U	-
N-NITROSODIPHENYLAMINE	5 U	-
PENTACHLOROPHENOL	10 U	-
PHENANTHRENE	5 U	-
PHENOL	10 U	-
PYRENE	5 U	-
TOTAL PAHS	0 U	-
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L)		
2-METHYLNAPHTHALENE	0.1 U	-
ACENAPHTHENE	0.1 U	-
ACENAPHTHYLENE	0.1 U	-
ANTHRACENE	0.1 U	-
BAP EQUIVALENT-HALFND	0.1 U	-
BAP EQUIVALENT-POS	0.1 U	-
BENZO(A)ANTHRACENE	0.1 U	-
BENZO(A)PYRENE	0.1 U	-
BENZO(B)FLUORANTHENE	0.1 U	-
BENZO(G,H,I)PERYLENE	0.1 U	-
BENZO(K)FLUORANTHENE	0.1 U	-
CHRYSENE	0.1 U	-
DIBENZO(A,H)ANTHRACENE	0.1 U	-
FLUORANTHENE	0.1 U	-
FLUORENE	0.1 U	-
HIGH MOLECULAR WEIGHT PAHS	0 U	-
INDENO(1,2,3-CD)PYRENE	0.1 U	-
LOW MOLECULAR WEIGHT PAHS	0 U	-
NAPHTHALENE	0.1 U	-

TABLE 13

SURFACE WATER ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD356	SW/SD356
SAMPLE ID	SW356-20200225	SW356-20200225-F
SAMPLE DATE	20200225	20200225
DUPLICATE		
SAMPLE CODE	NORMAL	NORMAL
MATRIX	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House (Possible Drainage)	NR&P Supply House (Possible Drainage)
PENTACHLOROPHENOL	0.2 U	-
PHENANTHRENE	0.1 U	-
PYRENE	0.1 U	-
TOTAL PAHS	0.1	-
PESTICIDES (UG/L)		
4,4'-DDD	0.1 U	-
4,4'-DDE	0.1 U	-
4,4'-DDT	0.1 U	-
ALDRIN	0.05 U	-
ALPHA-BHC	0.05 U	-
ALPHA-CHLORDANE	0.05 U	-
BETA-BHC	0.05 U	-
DELTA-BHC	0.05 U	-
DIELDRIN	0.1 U	-
ENDOSULFAN I	0.05 U	-
ENDOSULFAN II	0.1 U	-
ENDOSULFAN SULFATE	0.1 U	-
ENDRIN	0.1 U	-
ENDRIN ALDEHYDE	0.1 U	-
ENDRIN KETONE	0.1 U	-
GAMMA-BHC (LINDANE)	0.05 U	-
GAMMA-CHLORDANE	0.05 U	-
HEPTACHLOR	0.05 U	-
HEPTACHLOR EPOXIDE	0.05 U	-
METHOXYCHLOR	0.5 U	-
TOXAPHENE	5 U	-
PCBS (UG/L)		
AROCLOR-1016	1 U	-
AROCLOR-1221	1 U	-
AROCLOR-1232	1 U	-
AROCLOR-1242	1 U	-
AROCLOR-1248	1 U	-
AROCLOR-1254	1 U	-
AROCLOR-1260	1 U	-
AROCLOR-1262	1 U	-
AROCLOR-1268	1 U	-
TOTAL AROCLOR	0 U	-
TOTAL AROCLOR HALFND	4.5	-
PCB CONGENERS (UG/L)		
PCB-105	0.000147 U	-
PCB-114	0.0000977 U	-
PCB-118	0.0000086 J	-
PCB-123	0.0000977 U	-
PCB-126	0.0000977 U	-
PCB-128/166	0.000195 U	-
PCB-129/138/163	0.0000127 U	-
PCB-153/168	0.000011 U	-
PCB-156	0.00000199 Z	-
PCB-167	0.0000977 U	-
PCB-169	0.0000977 U	-
PCB-170	0.00000441 J	-
PCB-18/30	0.00000272 U	-
PCB-180/193	0.0000107 Z	-
PCB-187	0.00000756 J	-
PCB-189	0.0000977 U	-
PCB-195	0.0000018 Z	-
PCB-20/28	0.00000545	-
PCB-206	0.000019 J	-
PCB-209	0.0000175 U	-
PCB-44/47/65	0.00000547 U	-
PCB-52	0.00000777 U	-
PCB-66	0.00000369 Z	-
PCB-77	0.0000977 U	-
PCB-8	0.0000977 U	-
PCB-81	0.0000977 U	-
PCB-90/101/113	0.00000885 U	-
TEQ DIOXIN-LIKE PCBs (BIRD)	2.85E-10	-
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.22753E-05	-
TEQ DIOXIN-LIKE PCBs (FISH)	5.2E-11	-
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	2.77397E-07	-
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	3.17E-10	-
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	6.37842E-06	-
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.00001059	-
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00005261	-
TOTAL PCB CONGENERS ZEROND	0.0000632	-
TOTAL PCB CONGENERS-NOAA	0.00006121	-
TOTAL PCB CONGENERS-NOAA HALFND	0.000706855	-
TOTAL PCB CONGENERS-NOAA X2	0.00012242	-
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.00062813	-
DIOXINS/FURANS (PG/L)		
1,2,3,4,6,7,8,9-OCDD	12.2 J	-
1,2,3,4,6,7,8,9-OCDF	97.9 U	-
1,2,3,4,6,7,8-HPCDD	48.9 U	-
1,2,3,4,6,7,8-HPCDF	48.9 U	-
1,2,3,4,7,8,9-HPCDF	48.9 U	-
1,2,3,4,7,8-HXCDD	48.9 U	-
1,2,3,4,7,8-HXCDF	48.9 U	-
1,2,3,6,7,8-HXCDD	48.9 U	-
1,2,3,6,7,8-HXCDF	48.9 U	-
1,2,3,7,8,9-HXCDD	48.9 U	-
1,2,3,7,8,9-HXCDF	48.9 U	-
1,2,3,7,8-PECDD	48.9 U	-
1,2,3,7,8-PECDF	48.9 U	-
2,3,4,6,7,8-HXCDF	48.9 U	-
2,3,4,7,8-PECDF	48.9 U	-
2,3,7,8-TCDD	9.79 U	-
2,3,7,8-TCDF	9.79 U	-
TEQ DIOXINS (BIRD)	0.00122	-
TEQ DIOXINS (BIRD) HALFND	75.346565	-

TABLE 13

SURFACE WATER ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD356	SW/SD356
SAMPLE ID	SW356-20200225	SW356-20200225-F
SAMPLE DATE	20200225	20200225
DUPLICATE		
SAMPLE CODE	NORMAL	NORMAL
MATRIX	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House (Possible Drainage)	NR&P Supply House (Possible Drainage)
TEQ DIOXINS (FISH)	0.00122	-
TEQ DIOXINS (FISH) HALFND	66.050815	-
TEQ DIOXINS (HUMANS/MAMMALS)	0.00366	-
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	55.769845	-
TOTAL HPCDD	48.9 U	-
TOTAL HPCDF	48.9 U	-
TOTAL HXCDD	48.9 U	-
TOTAL HXCDF	48.9 U	-
TOTAL PECDD	48.9 U	-
TOTAL PECDF	48.9 U	-
TOTAL TCDD	9.79 U	-
TOTAL TCDF	9.79 U	-
METALS (UG/L)		
ALUMINUM	283	20 U
ANTIMONY	2 U	2 U
ARSENIC	1 U	1 U
BARIUM	32.9	28
BERYLLIUM	1 U	1 U
CADMIUM	1 U	1 U
CALCIUM	21300	21300
CHROMIUM	2 U	2 U
COBALT	4.5	1 U
COPPER	5.3	2 U
CYANIDE	10 U	-
IRON	897	100 U
LEAD	2.7	1 U
MAGNESIUM	10800	10800
MANGANESE	275	44.2
MERCURY	0.2 U	0.2 U
NICKEL	19.6	10.5
POTASSIUM	2320	2340
SELENIUM	5 U	5 U
SILVER	1 U	1 U
SODIUM	2250	2250
THALLIUM	1 U	1 U
VANADIUM	5 U	5 U
ZINC	36.9	22

TABLE 14

SEDIMENT ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-101	SD-102	SW/SD356	SW/SD356
SAMPLE ID	SEC-SD-101	SEC-SD-102	SD356-20200225	SD356-20200225-D
SAMPLE DATE	20180627	20180627	20200225	20200225
DUPLICATE				SD356-20200225
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP
MATRIX	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House (Possible Drainage)	NR&P Supply House (Possible Drainage)
SUBMATRIX	NA	NA	NA	NA
TOP DEPTH	0	0	0	0
BOTTOM DEPTH	6	6	0.5	0.5
VOLATILES (MG/KG)				
1,1,1-TRICHLOROETHANE	--	--	0.0087 U	0.0089 U
1,1,2,2-TETRACHLOROETHANE	--	--	0.0087 U	0.0089 U
1,1,2-TRICHLOROETHANE	--	--	0.0087 U	0.0089 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	0.0087 U	0.0089 U
1,1-DICHLOROETHANE	--	--	0.0087 U	0.0089 U
1,1-DICHLOROETHENE	--	--	0.0087 U	0.0089 U
1,2,3-TRICHLOROBENZENE	--	--	0.0087 UJ	0.0089 UJ
1,2,4-TRICHLOROBENZENE	--	--	0.0087 UJ	0.0089 UJ
1,2-DIBROMO-3-CHLOROPROPANE	--	--	0.0087 UJ	0.0089 UJ
1,2-DIBROMOETHANE	--	--	0.0087 U	0.0089 U
1,2-DICHLOROBENZENE	--	--	0.0087 UJ	0.0089 UJ
1,2-DICHLOROETHANE	--	--	0.0087 U	0.0089 U
1,2-DICHLOROPROPANE	--	--	0.0087 U	0.0089 U
1,3-DICHLOROBENZENE	--	--	0.0087 UJ	0.0089 UJ
1,4-DICHLOROBENZENE	--	--	0.0087 UJ	0.0089 UJ
2-BUTANONE	--	--	0.017 U	0.018 U
2-HEXANONE	--	--	0.017 U	0.018 U
4-METHYL-2-PENTANONE	--	--	0.017 U	0.018 U
ACETONE	--	--	0.017 U	0.018 U
BENZENE	--	--	0.0087 U	0.0089 U
BROMOCHLOROMETHANE	--	--	0.0087 U	0.0089 U
BROMODICHLOROMETHANE	--	--	0.0087 U	0.0089 U
BROMOFORM	--	--	0.0087 UJ	0.0089 UJ
BROMOMETHANE	--	--	0.0087 U	0.0089 U
CARBON DISULFIDE	--	--	0.0087 U	0.0089 U
CARBON TETRACHLORIDE	--	--	0.0087 U	0.0089 U
CHLOROBENZENE	--	--	0.0087 U	0.0089 U
CHLORODIBROMOMETHANE	--	--	0.0087 U	0.0089 U
CHLOROETHANE	--	--	0.0087 U	0.0089 U
CHLOROFORM	--	--	0.0087 U	0.0089 U
CHLOROMETHANE	--	--	0.0087 U	0.0089 U
CIS-1,2-DICHLOROETHENE	--	--	0.0087 U	0.0089 U
CIS-1,3-DICHLOROPROPENE	--	--	0.0087 U	0.0089 U
CYCLOHEXANE	--	--	0.0087 U	0.0089 U
DICHLORODIFLUOROMETHANE	--	--	0.0087 U	0.0089 U
ETHYLBENZENE	--	--	0.0087 U	0.0089 U
ISOPROPYLBENZENE	--	--	0.0087 U	0.0089 U
M+P-XYLENES	--	--	0.0087 U	0.0089 U
METHYL ACETATE	--	--	0.0087 U	0.0089 U
METHYL CYCLOHEXANE	--	--	0.0087 U	0.0089 U
METHYL TERT-BUTYL ETHER	--	--	0.0087 U	0.0089 U
METHYLENE CHLORIDE	--	--	0.0087 U	0.0089 U
O-XYLENE	--	--	0.0087 U	0.0089 U
STYRENE	--	--	0.0087 U	0.0089 U
TETRACHLOROETHENE	--	--	0.0087 U	0.0089 U
TOLUENE	--	--	0.0087 U	0.0089 U
TRANS-1,2-DICHLOROETHENE	--	--	0.0087 U	0.0089 U
TRANS-1,3-DICHLOROPROPENE	--	--	0.0087 U	0.0089 U
TRICHLOROETHENE	--	--	0.0087 U	0.0089 U
TRICHLOROFLUOROMETHANE	--	--	0.0087 U	0.0089 U
VINYL CHLORIDE	--	--	0.0087 U	0.0089 U
SEMIVOLATILES (MG/KG)				
1,1-BIPHENYL	0.21 U	0.21 U	0.28 U	0.29 U
1,2,4,5-TETRACHLOROBENZENE	0.21 U	0.21 U	0.28 U	0.29 U
1,4-DIOXANE	0.082 U	0.083 U	0.11 U	0.11 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.4 U	0.41 U	0.54 U	0.56 U
2,3,4,6-TETRACHLOROPHENOL	0.21 U	0.21 U	0.28 U	0.29 U
2,4,5-TRICHLOROPHENOL	0.21 U	0.21 U	0.28 U	0.29 U
2,4,6-TRICHLOROPHENOL	0.21 U	0.21 U	0.28 U	0.29 U
2,4-DICHLOROPHENOL	0.21 U	0.21 U	0.28 U	0.29 U
2,4-DIMETHYLPHENOL	0.21 U	0.21 U	0.28 U	0.29 U
2,4-DINITROPHENOL	0.4 U	0.41 U	0.54 R	0.56 R
2,4-DINITROTOLUENE	0.21 U	0.21 U	0.28 U	0.29 U
2,6-DINITROTOLUENE	0.21 U	0.21 U	0.28 U	0.29 U
2-CHLORONAPHTHALENE	0.21 U	0.21 U	0.28 U	0.29 U
2-CHLOROPHENOL	0.21 U	0.21 U	0.28 U	0.29 U
2-METHYLNAPHTHALENE	0.21 U	0.21 U	0.28 U	0.29 U
2-METHYLPHENOL	0.4 U	0.41 U	0.54 U	0.56 U
2-NITROANILINE	0.21 U	0.21 U	0.28 R	0.29 R
2-NITROPHENOL	0.21 U	0.21 U	0.28 U	0.29 U
3&4-METHYLPHENOL	0.4 U	0.41 U	0.54 U	0.56 U
3,3'-DICHLOROBENZIDINE	0.4 U	0.41 U	0.54 U	0.56 U
3-NITROANILINE	0.4 U	0.41 U	0.54 R	0.56 R
4,6-DINITRO-2-METHYLPHENOL	0.4 U	0.41 U	0.54 R	0.56 R
4-BROMOPHENYL PHENYL ETHER	0.21 U	0.21 U	0.28 UJ	0.29 U
4-CHLORO-3-METHYLPHENOL	0.21 U	0.21 U	0.28 U	0.29 U
4-CHLOROANILINE	0.4 U	0.41 U	0.54 U	0.56 U
4-CHLOROPHENYL PHENYL ETHER	0.21 U	0.21 U	0.28 UJ	0.29 U
4-NITROANILINE	0.4 U	0.41 U	0.54 R	0.56 R
4-NITROPHENOL	0.4 U	0.41 U	0.54 R	0.56 UJ

TABLE 14

SEDIMENT ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-101	SD-102	SW/SD356	SW/SD356
SAMPLE ID	SEC-SD-101	SEC-SD-102	SD356-20200225	SD356-20200225-D
SAMPLE DATE	20180627	20180627	20200225	20200225
DUPLICATE				SD356-20200225
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP
MATRIX	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House (Possible Drainage)	NR&P Supply House (Possible Drainage)
SUBMATRIX	NA	NA	NA	NA
ACENAPHTHENE	0.21 U	0.21 U	0.28 U	0.29 U
ACENAPHTHYLENE	0.21 U	0.21 U	0.28 U	0.29 U
ACETOPHENONE	0.4 U	0.41 U	0.54 U	0.56 U
ANTHRACENE	0.21 U	0.21 U	0.28 U	0.29 U
ATRAZINE	0.4 U	0.41 U	0.54 U	0.56 U
BAP EQUIVALENT-HALFND	0.21 U	0.21 U	0.28 U	0.29 U
BAP EQUIVALENT-POS	0.21 U	0.21 U	0.28 U	0.29 U
BENZALDEHYDE	0.4 U	0.41 U	0.54 U	0.56 U
BENZO(A)ANTHRACENE	0.21 U	0.21 U	0.28 U	0.29 U
BENZO(A)PYRENE	0.21 U	0.21 U	0.28 U	0.29 U
BENZO(B)FLUORANTHENE	0.21 U	0.21 U	0.28 U	0.29 U
BENZO(G,H,I)PERYLENE	0.21 U	0.21 U	0.28 U	0.29 U
BENZO(K)FLUORANTHENE	0.21 U	0.21 U	0.28 U	0.29 U
BIS(2-CHLOROETHOXY)METHANE	0.21 U	0.21 U	0.28 U	0.29 U
BIS(2-CHLOROETHYL)ETHER	0.4 U	0.41 U	0.54 U	0.56 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.21 U	0.21 U	0.28 U	0.29 U
BUTYL BENZYL PHTHALATE	0.21 U	0.21 U	0.28 U	0.29 U
CAPROLACTAM	0.4 U	0.41 U	0.54 U	0.56 U
CARBAZOLE	0.4 UJ	0.41 UJ	0.54 UJ	0.56 U
CHRYSENE	0.21 U	0.21 U	0.28 U	0.29 U
DIBENZO(A,H)ANTHRACENE	0.21 U	0.21 U	0.28 U	0.29 U
DIBENZOFURAN	0.21 U	0.21 U	0.28 UJ	0.29 U
DIETHYL PHTHALATE	0.21 U	0.21 U	0.28 U	0.29 U
DIMETHYL PHTHALATE	0.21 U	0.21 U	0.075 J	0.096 J
DI-N-BUTYL PHTHALATE	0.21 U	0.21 U	0.28 U	0.29 U
DI-N-OCTYL PHTHALATE	0.4 U	0.41 U	0.54 U	0.56 U
FLUORANTHENE	0.071 J	0.41 U	0.54 U	0.56 U
FLUORENE	0.21 U	0.21 U	0.28 UJ	0.29 U
HEXACHLOROBENZENE	0.21 U	0.21 U	0.28 U	0.29 U
HEXACHLOROBUTADIENE	0.21 U	0.21 U	0.28 U	0.29 U
HEXACHLOROCYCLOPENTADIENE	0.4 UJ	0.41 UJ	0.54 U	0.56 U
HEXACHLOROETHANE	0.21 U	0.21 U	0.28 U	0.29 U
HIGH MOLECULAR WEIGHT PAHS	0 U	0 U	0 U	0 U
INDENO(1,2,3-CD)PYRENE	0.21 U	0.21 U	0.28 U	0.29 U
ISOPHORONE	0.21 U	0.21 U	0.28 U	0.29 U
LOW MOLECULAR WEIGHT PAHS	0.131	0 U	0 U	0 U
NAPHTHALENE	0.21 U	0.21 U	0.28 U	0.29 U
NITROBENZENE	0.21 U	0.21 U	0.28 U	0.29 U
N-NITROSO-DI-N-PROPYLAMINE	0.21 U	0.21 U	0.28 U	0.29 U
N-NITROSODIPHENYLAMINE	0.21 U	0.21 U	0.28 U	0.29 U
PENTACHLOROPHENOL	0.4 U	0.41 U	0.54 U	0.56 U
PHENANTHRENE	0.06 J	0.21 U	0.28 U	0.29 U
PHENOL	0.4 U	0.41 U	0.54 U	0.56 U
PYRENE	0.21 U	0.21 U	0.28 U	0.29 U
TOTAL PAHS	0.131	0 U	0 U	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K				
2-METHYLNAPHTHALENE	0.011	0.0049	0.0054 U	0.0018 J
ACENAPHTHENE	0.0024 J	0.0006 J	0.0054 U	0.0056 U
ACENAPHTHYLENE	0.0073	0.0011 J	0.0054 U	0.0014 J
ANTHRACENE	0.0088	0.0016 J	0.0054 U	0.0035 J
BAP EQUIVALENT-HALFND	0.035636	0.006569	0.004938	0.009439
BAP EQUIVALENT-POS	0.035636	0.004499	0.001941	0.009439
BENZO(A)ANTHRACENE	0.028	0.004 J	0.0015 J	0.0081
BENZO(A)PYRENE	0.023	0.0031 J	0.0016 J	0.006
BENZO(B)FLUORANTHENE	0.037	0.0071	0.0019 J	0.0087
BENZO(G,H,I)PERYLENE	0.014	0.0034 J	0.0054 U	0.0032 J
BENZO(K)FLUORANTHENE	0.01	0.0041 U	0.0054 U	0.0031 J
CHRYSENE	0.036	0.0093	0.0017 J	0.0085
DIBENZO(A,H)ANTHRACENE	0.0045	0.0041 U	0.0054 U	0.0014 J
FLUORANTHENE	0.061	0.0091	0.0025 J	0.017
FLUORENE	0.0083	0.0012 J	0.0054 U	0.0017 J
HIGH MOLECULAR WEIGHT PAHS	0.2025	0.0358	0.0089	0.0562
INDENO(1,2,3-CD)PYRENE	0.015	0.0028 J	0.0054 U	0.0032 J
LOW MOLECULAR WEIGHT PAHS	0.1442	0.0298	0.0043	0.0374
NAPHTHALENE	0.0044	0.0022 J	0.0054 U	0.0018 J
PENTACHLOROPHENOL	0.0082 U	0.0083 U	0.011 U	0.011 U
PHENANTHRENE	0.052	0.014	0.0018 J	0.012
PYRENE	0.035	0.0061	0.0022 J	0.014
TOTAL PAHS	0.036	0.0093	0.0017	0.0085
PESTICIDES (MG/KG)				
4,4'-DDD	0.004 U	0.0041 U	0.00027 J	0.00028 R
4,4'-DDE	0.00047 R	0.00046 J	0.0054 U	0.0056 U
4,4'-DDT	0.004 U	0.0005 R	0.0054 U	0.0013 J
ALDRIN	0.00038 J	0.0021 U	0.0028 U	0.00034 J
ALPHA-BHC	0.0021 U	0.0021 U	0.0028 U	0.0029 U
ALPHA-CHLORDANE	0.0021 U	0.0021 U	0.0028 U	0.0029 U
BETA-BHC	0.0021 U	0.0021 U	0.0028 U	0.0029 U
DELTA-BHC	0.0021 U	0.0021 U	0.0028 U	0.0029 U
DIELDRIN	0.004 U	0.0041 U	0.0054 U	0.0015 J
ENDOSULFAN I	0.00046 J	0.00037 J	0.0028 U	0.0029 U
ENDOSULFAN II	0.004 U	0.0041 U	0.0054 U	0.0056 U
ENDOSULFAN SULFATE	0.00056 R	0.00028 J	0.0054 U	0.0056 U
ENDRIN	0.00025 R	0.0041 U	0.0054 U	0.0012 J

TABLE 14

SEDIMENT ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-101	SD-102	SW/SD356	SW/SD356
SAMPLE ID	SEC-SD-101	SEC-SD-102	SD356-20200225	SD356-20200225-D
SAMPLE DATE	20180627	20180627	20200225	20200225
DUPLICATE				SD356-20200225
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP
MATRIX	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House (Possible Drainage)	NR&P Supply House (Possible Drainage)
SUBMATRIX	NA	NA	NA	NA
ENDRIN ALDEHYDE	0.00057 R	0.00024 R	0.0054 U	0.0056 U
ENDRIN KETONE	0.00061 R	0.00048 J	0.0054 U	0.0056 U
GAMMA-BHC (LINDANE)	0.0021 U	0.0021 U	0.0028 U	0.0029 U
GAMMA-CHLORDANE	0.0021 U	0.0021 U	0.0028 U	0.0029 U
HEPTACHLOR	0.0021 U	0.0021 U	0.0028 U	0.0005 J
HEPTACHLOR EPOXIDE	0.0021 U	0.00027 J	0.0028 U	0.0029 U
METHOXYCHLOR	0.021 U	0.021 U	0.028 U	0.029 U
TOXAPHENE	0.21 U	0.21 U	0.28 U	0.29 U
PCBS (MG/KG)				
AROCLOR-1016	0.04 U	0.041 U	0.055 U	0.056 U
AROCLOR-1221	0.04 U	0.041 U	0.055 U	0.056 U
AROCLOR-1232	0.04 U	0.041 U	0.055 U	0.056 U
AROCLOR-1242	0.04 U	0.041 U	0.055 U	0.056 U
AROCLOR-1248	0.04 U	0.041 U	0.055 U	0.056 U
AROCLOR-1254	0.04 U	0.041 U	0.055 U	0.056 U
AROCLOR-1260	0.04 U	0.041 U	0.055 U	0.056 U
AROCLOR-1262	0.04 U	0.041 U	0.055 U	0.056 U
AROCLOR-1268	0.04 U	0.041 U	0.055 U	0.056 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U
TOTAL AROCLOR HALFND	0.18	0.1845	0.2475	0.252
PCB CONGENERS (MG/KG)				
PCB-105	--	--	0.0000456	0.0000494
PCB-114	--	--	0.00000195 J	0.00000151 J
PCB-118	--	--	0.000109	0.000119
PCB-123	--	--	0.0000019 J	0.00000267 J
PCB-126	--	--	0.00000311 J	0.00000349 J
PCB-128/166	--	--	0.0000313	0.0000354
PCB-129/138/163	--	--	0.000321	0.00037
PCB-153/168	--	--	0.00028	0.000307
PCB-156	--	--	0.0000265	0.00003
PCB-167	--	--	0.0000113	0.0000116
PCB-169	--	--	0.0000109 U	0.00000977 U
PCB-170	--	--	0.0000972	0.000101
PCB-18/30	--	--	0.00000441 J	0.00000551 J
PCB-180/193	--	--	0.000262	0.000272
PCB-187	--	--	0.000168	0.000162
PCB-189	--	--	0.00000458 J	0.000005 J
PCB-195	--	--	0.0000271	0.0000307
PCB-20/28	--	--	0.0000198 J	0.00000989 J
PCB-206	--	--	0.00234	0.00272
PCB-209	--	--	0.00317	0.00361
PCB-44/47/65	--	--	0.0000153 J	0.0000156 J
PCB-52	--	--	0.0000271 J	0.0000294
PCB-66	--	--	0.0000234 J	0.0000182 J
PCB-77	--	--	0.0000074 J	0.00000821 J
PCB-8	--	--	0.00000491 Z	0.00000446 J
PCB-81	--	--	0.0000109 U	0.00000977 U
PCB-90/101/113	--	--	0.0000817	0.000103
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	6.89672E-07	7.68973E-07
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	1.24012E-06	1.26236E-06
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	1.7291E-08	1.9366E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	2.0288E-08	2.2052E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	3.17764E-07	3.56396E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	4.82899E-07	5.04411E-07
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	0.00021134	0.00023088
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	0.00687322	0.00779416
TOTAL PCB CONGENERS ZEROND	--	--	0.00708456	0.00802504
TOTAL PCB CONGENERS-NOAA	--	--	0.00702782	0.00796256
TOTAL PCB CONGENERS-NOAA HALFND	--	--	0.00709546	0.00803481
TOTAL PCB CONGENERS-NOAA X2	--	--	0.01405564	0.01592512
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	0.01405564	0.01592512
DIOXINS/FURANS (NG/KG)				
1,2,3,4,6,7,8,9-OCDD	--	--	123	236
1,2,3,4,6,7,8,9-OCDF	--	--	3.14 J	104 U
1,2,3,4,6,7,8-HPCDD	--	--	9.05	14.3 Z
1,2,3,4,6,7,8-HPCDF	--	--	4.73 J	8.94 J
1,2,3,4,7,8,9-HPCDF	--	--	4.76 U	51.9 U
1,2,3,4,7,8-HXCDD	--	--	4.76 U	51.9 U
1,2,3,4,7,8-HXCDF	--	--	1.55 Z	51.9 U
1,2,3,6,7,8-HXCDD	--	--	1.01 Z	51.9 U
1,2,3,6,7,8-HXCDF	--	--	0.84 Z	51.9 U
1,2,3,7,8,9-HXCDD	--	--	0.73 J	51.9 U
1,2,3,7,8,9-HXCDF	--	--	4.76 U	51.9 U
1,2,3,7,8-PECDD	--	--	4.76 U	51.9 U
1,2,3,7,8-PECDF	--	--	1.43 Z	51.9 U
2,3,4,6,7,8-HXCDF	--	--	1.28 J	51.9 U
2,3,4,7,8-PECDF	--	--	1.8 Z	51.9 U
2,3,7,8-TCDD	--	--	0.952 U	10.4 U
2,3,7,8-TCDF	--	--	1.52 Z	10.4 U
TEQ DIOXINS (BIRD)	--	--	3.982064	0.1273
TEQ DIOXINS (BIRD) HALFND	--	--	7.218864	79.819
TEQ DIOXINS (FISH)	--	--	1.500864	0.1273
TEQ DIOXINS (FISH) HALFND	--	--	5.808664	69.9485

TABLE 14

SEDIMENT ANALYTICAL DATA - NRP SUPPLY HOUSE
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-101	SD-102	SW/SD356	SW/SD356
SAMPLE ID	SEC-SD-101	SEC-SD-102	SD356-20200225	SD356-20200225-D
SAMPLE DATE	20180627	20180627	20200225	20200225
DUPLICATE				SD356-20200225
SAMPLE CODE	NORMAL	NORMAL	ORIG	DUP
MATRIX	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation 2019	Remedial Investigation 2019
AREA	NR&P Supply House	NR&P Supply House	NR&P Supply House (Possible Drainage)	NR&P Supply House (Possible Drainage)
SUBMATRIX	NA	NA	NA	NA
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	1.451542	0.3032
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	4.807342	58.9768
TOTAL HPCDD	--	--	17.5 J	13.4 J
TOTAL HPCDF	--	--	7.79 J	8.94 J
TOTAL HXCDD	--	--	0.73 J	51.9 U
TOTAL HXCDF	--	--	6.27 J	8.28 J
TOTAL PECDD	--	--	10.8 J	51.9 U
TOTAL PECDF	--	--	16.9 J	51.9 U
TOTAL TCDD	--	--	7.49 J	10.4 U
TOTAL TCDF	--	--	12.7 J	10.4 U
METALS (MG/KG)				
ALUMINUM	5160	5830	7130	5890
ANTIMONY	9.3 U	6.2 U	1.2 U	1.3 U
ARSENIC	3.3	3.6	12.8	16
BARIUM	47	56.3	121	103
BERYLLIUM	1.7	0.65	3.4	3.6
CADMIUM	0.26 J	0.52 U	0.71	0.75
CALCIUM	5280	1370	1530	1620
CHROMIUM	7.9	10.3	10.7	13.4
COBALT	26.2	11.2	69.9	67.8 J
COPPER	36.6	17.2	109	119
CYANIDE	--	--	0.19 J	0.31 J
IRON	10500	19100	32700	26300
LEAD	19.5	11.4	83.1	94
MAGNESIUM	1560	1110	1670	942
MANGANESE	504	307	3120	2710
MERCURY	--	--	0.15 U	0.15 U
NICKEL	53.4	23.6	134	144
POTASSIUM	939	990	813	616
SELENIUM	5.4 U	3.6 U	1.1 J	1.5 J
SILVER	1.6 U	1 U	0.58 U	0.63 U
SODIUM	777 U	519 U	613 UJ	606 UJ
THALLIUM	1.1 J	0.87 J	0.58 U	0.63 U
VANADIUM	7 J	9.4	9.8	13.8
ZINC	109	55.3	296	328
MISCELLANEOUS (%)				
TOTAL SOLIDS	--	--	67	64
MISCELLANEOUS (MG/KG)				
TOTAL ORGANIC CARBON	--	--	59100	63700

APPENDIX G.8

RESIDENTIAL ANALYTICAL DATA

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R01-S	R01-S	R01-S	R01-S	R02-S	R02-S	R02-S	R02-S	R02-S
SAMPLE ID	R1-S-0006-01	R1-S-0624	R1-S-2448	R1-S-0006	R2-S-0006	R2-S-0006-01	R2-S-0624	R2-S-0624-D	R2-S-2448
SAMPLE DATE	20191118	20191118	20191118	20191118	20191118	20191119	20191119	20191119	20191119
DUPLICATE								R2-S-0624	
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SS	SB
TOP DEPTH	0	0.5	2	0	0	0	0.5	0.5	2
BOTTOM DEPTH	0.5	2	4	0.5	0.5	0.5	2	2	4
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	0.0064 U	0.0057 U	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
2-BUTANONE	--	--	--	0.013 U	0.011 U	--	--	--	--
2-HEXANONE	--	--	--	0.013 UJ	0.011 U	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	0.013 UJ	0.011 U	--	--	--	--
ACETONE	--	--	--	0.013 U	0.011 U	--	--	--	--
BENZENE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	0.0064 U	0.0057 U	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
BROMOFORM	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
BROMOMETHANE	--	--	--	0.0064 U	0.0057 U	--	--	--	--
CARBON DISULFIDE	--	--	--	0.0064 U	0.0057 U	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
CHLOROBENZENE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
CHLOROETHANE	--	--	--	0.0064 U	0.0057 U	--	--	--	--
CHLOROFORM	--	--	--	0.0064 U	0.0057 U	--	--	--	--
CHLOROMETHANE	--	--	--	0.0064 U	0.0057 U	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
CYCLOHEXANE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	0.0064 U	0.0057 U	--	--	--	--
ETHYLBENZENE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
ISOPROPYLBENZENE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
M+P-XYLENES	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
METHYL ACETATE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
METHYLENE CHLORIDE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
O-XYLENE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
STYRENE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
TETRACHLOROETHENE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
TOLUENE	--	--	--	0.0064 U	0.0057 U	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
TRICHLOROETHENE	--	--	--	0.0064 UJ	0.0057 U	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	0.0064 UJ	0.0057 UJ	--	--	--	--
VINYL CHLORIDE	--	--	--	0.0064 U	0.0057 U	--	--	--	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.22 U	0.2 U	0.2 U	--	--	0.016 J	0.2 U	0.2 U	0.19 U
1,2,4,5-TETRACHLOROBENZENE	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
1,4-DIOXANE	0.085 U	0.079 U	0.079 U	--	--	0.08 R	0.079 U	0.079 U	0.074 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
2,3,4,6-TETRACHLOROPHENOL	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
2,4,5-TRICHLOROPHENOL	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
2,4,6-TRICHLOROPHENOL	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
2,4-DICHLOROPHENOL	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
2,4-DIMETHYLPHENOL	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
2,4-DINITROPHENOL	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
2,4-DINITROTOLUENE	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
2,6-DINITROTOLUENE	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
2-CHLORONAPHTHALENE	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
2-CHLOROPHENOL	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
2-METHYLNAPHTHALENE	0.22 U	0.2 U	0.2 U	--	--	0.058 J	0.2 U	0.2 U	0.19 U
2-METHYLPHENOL	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
2-NITROANILINE	0.22 UJ	0.2 UJ	0.2 UJ	--	--	0.2 U	0.2 U	0.2 U	0.19 U
2-NITROPHENOL	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
3&4-METHYLPHENOL	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
3,3'-DICHLOROBENZIDINE	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
3-NITROANILINE	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
4,6-DINITRO-2-METHYLPHENOL	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
4-BROMOPHENYL PHENYL ETHER	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
4-CHLORO-3-METHYLPHENOL	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
4-CHLOROANILINE	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
4-CHLOROPHENYL PHENYL ETHER	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
4-NITROANILINE	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
4-NITROPHENOL	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R01-S	R01-S	R01-S	R01-S	R02-S	R02-S	R02-S	R02-S	R02-S
SAMPLE ID	R1-S-0006-01	R1-S-0624	R1-S-2448	R1-S-0006	R2-S-0006	R2-S-0006-01	R2-S-0624	R2-S-0624-D	R2-S-2448
SAMPLE DATE	20191118	20191118	20191118	20191118	20191118	20191119	20191119	20191119	20191119
DUPLICATE								R2-S-0624	
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SS	SB
ACENAPHTHENE	0.22 U	0.2 U	0.2 U	--	--	0.032 J	0.2 U	0.2 U	0.19 U
ACENAPHTHYLENE	0.025 J	0.2 U	0.2 U	--	--	0.062 J	0.2 U	0.2 U	0.19 U
ACETOPHENONE	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
ANTHRACENE	0.027 J	0.2 U	0.2 U	--	--	0.13 J	0.2 U	0.2 U	0.19 U
ATRAZINE	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
BAP EQUIVALENT-HALFND	0.18972	0.19431	0.2 U	--	--	0.85814	0.18771	0.18839	0.19 U
BAP EQUIVALENT-POS	0.18972	0.09431	0.2 U	--	--	0.75814	0.08771	0.08839	0.19 U
BENZALDEHYDE	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
BENZO(A)ANTHRACENE	0.13 J	0.081 J	0.2 U	--	--	0.66	0.06 J	0.066 J	0.19 U
BENZO(A)PYRENE	0.12 J	0.069 J	0.2 U	--	--	0.56	0.064 J	0.064 J	0.19 U
BENZO(B)FLUORANTHENE	0.2 J	0.12 J	0.2 U	--	--	0.89	0.12 J	0.12 J	0.19 U
BENZO(G,H,I)PERYLENE	0.024 J	0.058 J	0.2 U	--	--	0.39	0.052 J	0.046 J	0.19 U
BENZO(K)FLUORANTHENE	0.072 J	0.041 J	0.2 U	--	--	0.33	0.04 J	0.039 J	0.19 U
BIS(2-CHLOROETHOXY)METHANE	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
BIS(2-CHLOROETHYL)ETHER	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
BIS(2-ETHYLHEXYL)PHTHALATE	1.7	0.2 U	0.2 U	--	--	0.53	0.04 J	0.042 J	0.19 U
BUTYL BENZYL PHTHALATE	0.39	0.2 U	0.2 U	--	--	0.024 J	0.2 U	0.2 U	0.19 U
CAPROLACTAM	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
CARBAZOLE	0.42 U	0.39 U	0.39 U	--	--	0.14 J	0.39 U	0.39 U	0.37 U
CHRYSENE	0.2 J	0.1 J	0.2 U	--	--	0.84	0.11 J	0.1 J	0.19 U
DIBENZO(A,H)ANTHRACENE	0.027 J	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
DIBENZOFURAN	0.22 U	0.2 U	0.2 U	--	--	0.068 J	0.2 U	0.2 U	0.19 U
DIETHYL PHTHALATE	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
DIMETHYL PHTHALATE	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
DI-N-BUTYL PHTHALATE	0.027 J	0.2 U	0.2 U	--	--	0.033 J	0.2 U	0.2 U	0.19 U
DI-N-OCTYL PHTHALATE	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
FLUORANTHENE	0.28 J	0.13 J	0.39 U	--	--	1.7	0.11 J	0.14 J	0.37 U
FLUORENE	0.22 U	0.2 U	0.2 U	--	--	0.03 J	0.2 U	0.2 U	0.19 U
HEXACHLOROBENZENE	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
HEXACHLOROBUTADIENE	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
HEXACHLOROCYCLOPENTADIENE	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
HEXACHLOROETHANE	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
HIGH MOLECULAR WEIGHT PAHS	1.061	0.636	0 U	--	--	5.46	0.598	0.608	0 U
INDENO(1,2,3-CD)PYRENE	0.088 J	0.047 J	0.2 U	--	--	0.39	0.052 J	0.053 J	0.19 U
ISOPHORONE	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
LOW MOLECULAR WEIGHT PAHS	0.462	0.19	0 U	--	--	3.236	0.175	0.222	0 U
NAPHTHALENE	0.22 U	0.2 U	0.2 U	--	--	0.082 J	0.2 U	0.2 U	0.19 U
NITROBENZENE	0.22 UJ	0.2 UJ	0.2 UJ	--	--	0.2 U	0.2 U	0.2 U	0.19 U
N-NITROSO-DI-N-PROPYLAMINE	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
N-NITROSODIPHENYLAMINE	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
PENTACHLOROPHENOL	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
PHENANTHRENE	0.13 J	0.06 J	0.2 U	--	--	1.2	0.065 J	0.082 J	0.19 U
PHENOL	0.42 U	0.39 U	0.39 U	--	--	0.4 U	0.39 U	0.39 U	0.37 U
PYRENE	0.2 J	0.12 J	0.2 U	--	--	1.4	0.1 J	0.12 J	0.19 U
TOTAL PAHS	1.523	0.826	0 U	--	--	8.696	0.773	0.83	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	0.0084 U	0.0078 U	0.008 U	--	--	0.0082 U	0.0079 U	0.008 U	0.0074 U
2-METHYLNAPHTHALENE	0.015	0.0047	0.0039 U	--	--	0.059	0.0073	0.0074	0.0037 U
ACENAPHTHENE	0.0038 J	0.0016 J	0.0039 U	--	--	0.028	0.0019 J	0.002 J	0.0037 U
ACENAPHTHYLENE	0.023	0.013	0.0039 U	--	--	0.053	0.0084	0.012	0.0037 U
ANTHRACENE	0.022 J-	0.011	0.0039 U	--	--	0.15	0.007	0.01	0.00052 J
BAP EQUIVALENT-HALFND	0.1664	0.08709	0.003893	--	--	0.85436	0.08459	0.086644	0.003395
BAP EQUIVALENT-POS	0.1643	0.08514	0.001943	--	--	0.85236	0.08264	0.084694	0.001545
BENZO(A)ANTHRACENE	0.14	0.092	0.0017 J	--	--	0.69 J	0.06	0.068	0.0012 J
BENZO(A)PYRENE	0.12	0.059	0.0014 J	--	--	0.64 J	0.061	0.062	0.0011 J
BENZO(B)FLUORANTHENE	0.23	0.13	0.0027 J	--	--	1 J	0.11	0.11	0.0022 J
BENZO(G,H,I)PERYLENE	0.02	0.0084	0.0039 U	--	--	0.4 J	0.042	0.046	0.0011 J
BENZO(K)FLUORANTHENE	0.062	0.033	0.00087 J	--	--	0.36 J	0.035	0.04	0.00074 J
CHRYSENE	0.18	0.11	0.0025 J	--	--	0.76 J	0.09	0.094	0.0018 J
DIBENZO(A,H)ANTHRACENE	0.0042 U	0.0039 U	0.0039 U	--	--	0.004 U	0.0039 U	0.0039 U	0.0037 U
FLUORANTHENE	0.26	0.15	0.0024 J	--	--	1.7 J	0.1	0.13	0.0018 J
FLUORENE	0.0049	0.0038 J	0.0039 U	--	--	0.031	0.0034 J	0.0038 J	0.0037 U
HIGH MOLECULAR WEIGHT PAHS	1.047	0.6074	0.0127	--	--	5.64	0.539	0.584	0.01111
INDENO(1,2,3-CD)PYRENE	0.065	0.035	0.00093 J	--	--	0.39 J	0.042	0.044	0.00097 J
LOW MOLECULAR WEIGHT PAHS	0.4528	0.2304	0.0041	--	--	3.357	0.1806	0.2409	0.00372
NAPHTHALENE	0.0091	0.0039 U	0.0039 U	--	--	0.095	0.0059	0.0061	0.0037 U
PENTACHLOROPHENOL	0.0085 U	0.0079 U	0.0079 U	--	--	0.008 U	0.0079 U	0.0079 U	0.0074 U
PHENANTHRENE	0.13	0.051	0.0017 J	--	--	1.3 J	0.054	0.077	0.0014 J
PYRENE	0.23	0.14	0.0026 J	--	--	1.4 J	0.099	0.12	0.002 J
TOTAL PAHS	0.18	0.11	0.0025	--	--	0.76	0.09	0.094	0.0018
PESTICIDES (MG/KG)									
4,4'-DDD	0.0017 J	0.00057 J	0.0039 U	--	--	0.0025 R	0.001 J	0.00077 J	0.0037 U
4,4'-DDE	0.061 J	0.032 J	0.0039 U	--	--	0.003 J	0.001 J	0.00076 J	0.0037 U
4,4'-DDT	0.065	0.029	0.0039 U	--	--	0.0061	0.0025 J	0.0018 J	0.0037 U
ALDRIN	0.0022 U	0.002 U	0.002 U	--	--	0.002 U	0.002 U	0.002 U	0.0019 U
ALPHA-BHC	0.0022 U	0.002 U	0.002 U	--	--	0.00075 J	0.002 U	0.002 U	0.0019 U
ALPHA-CHLORDANE	0.0014 J	0.00038 J	0.002 U	--	--	0.013	0.0013 J	0.001 J	0.0019 U
BETA-BHC	0.00038 J	0.002 U	0.00032 J	--	--	0.002 U	0.0004 J	0.00033 J	0.0019 U
DELTA-BHC	0.0022 U	0.002 U	0.002 U	--	--	0.002 U	0.002 U	0.002 U	0.0019 U
DIELDRIN	0.0042 U	0.0038 U	0.0039 U	--	--	0.0039 U	0.0039 U	0.0039 U	0.0037 U
ENDOSULFAN I	0.0014 J	0.002 U	0.002 U	--	--	0.0022 R	0.00044 R	0.00041 R	0.0019 U
ENDOSULFAN II	0.0042 U	0.0038 U	0.0039 U	--	--	0.0039 U	0.0039 U	0.0039 U	0.0037 U
ENDOSULFAN SULFATE	0.0042 U	0.0038 U	0.0039 U	--	--	0.00042 R	0.0039 U	0.0039 U	0.0037 U

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R01-S	R01-S	R01-S	R01-S	R02-S	R02-S	R02-S	R02-S	R02-S
SAMPLE ID	R1-S-0006-01	R1-S-0624	R1-S-2448	R1-S-0006	R2-S-0006	R2-S-0006-01	R2-S-0624	R2-S-0624-D	R2-S-2448
SAMPLE DATE	20191118	20191118	20191118	20191118	20191118	20191119	20191119	20191119	20191119
DUPLICATE								R2-S-0624	
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SS	SB
ENDRIN	0.0076	0.00055 J	0.0039 U	--	--	0.0015 J	0.0011 J	0.00085 J	0.0037 U
ENDRIN ALDEHYDE	0.0015 J	0.00025 J	0.0039 U	--	--	0.00076 R	0.0004 R	0.0039 U	0.0037 U
ENDRIN KETONE	0.0042 U	0.0038 U	0.0039 U	--	--	0.0011 R	0.0013 R	0.0013 J	0.0037 U
GAMMA-BHC (LINDANE)	0.0011 J	0.002 U	0.002 U	--	--	0.0014 J	0.002 U	0.002 U	0.0019 U
GAMMA-CHLORDANE	0.0015 J	0.002 U	0.002 U	--	--	0.0069 J	0.0021 J	0.0015 J	0.0019 U
HEPTACHLOR	0.0022 U	0.002 U	0.002 U	--	--	0.00026 R	0.002 U	0.002 U	0.0019 U
HEPTACHLOR EPOXIDE	0.0022 U	0.0002 J	0.00026 J	--	--	0.0013 J	0.002 U	0.002 U	0.0019 U
METHOXYCHLOR	0.022	0.0065 J	0.02 U	--	--	0.023	0.009 J	0.0062 J	0.019 U
TOXAPHENE	0.22 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.19 U
PCBS (MG/KG)									
AROCLOR-1016	0.042 U	--	--	--	--	--	0.039 U	--	0.037 U
AROCLOR-1221	0.042 U	--	--	--	--	--	0.039 U	--	0.037 U
AROCLOR-1232	0.042 U	--	--	--	--	--	0.039 U	--	0.037 U
AROCLOR-1242	0.042 U	--	--	--	--	--	0.039 U	--	0.037 U
AROCLOR-1248	0.042 U	--	--	--	--	--	0.039 U	--	0.037 U
AROCLOR-1254	0.042 U	--	--	--	--	--	0.039 U	--	0.037 U
AROCLOR-1260	0.042 U	--	--	--	--	--	0.039 U	--	0.037 U
AROCLOR-1262	0.042 U	--	--	--	--	--	0.039 U	--	0.037 U
AROCLOR-1268	0.042 U	--	--	--	--	--	0.039 U	--	0.037 U
TOTAL AROCLOR	0 U	--	--	--	--	--	0 U	--	0 U
TOTAL AROCLOR HALFND	0.189	--	--	--	--	--	0.1755	--	0.1665
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	0.294 U	0.294 U	0.321 U	0.305 U	--	0.294 U	--	0.284 U
AROCLOR-1221	--	0.588 U	0.588 U	0.641 U	0.61 U	--	0.588 U	--	0.568 U
AROCLOR-1232	--	0.294 U	0.294 U	0.321 U	0.305 U	--	0.294 U	--	0.284 U
AROCLOR-1242	--	0.294 U	0.294 U	0.321 U	0.305 U	--	0.294 U	--	0.284 U
AROCLOR-1248	--	0.294 U	0.294 U	0.321 U	0.305 U	--	0.294 U	--	0.284 U
AROCLOR-1254	--	0.294 U	0.294 U	0.321 U	0.305 U	--	0.294 U	--	0.284 U
AROCLOR-1260	--	0.294 U	0.294 U	0.321 U	0.305 U	--	0.294 U	--	0.284 U
AROCLOR-1262	--	0.294 U	0.294 U	0.321 U	0.305 U	--	0.294 U	--	0.284 U
AROCLOR-1268	--	0.294 U	0.294 U	0.321 U	0.305 U	--	0.294 U	--	0.284 U
TOTAL AROCLOR	--	0 U	0 U	0 U	0 U	--	0 U	--	0 U
TOTAL AROCLOR HALFND	--	1.47	1.47	1.6045	1.525	--	1.47	--	1.42
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	0.000024 J	0.0000024 J	0.00012 J	--	0.00034 J	0.000037 J	0.000028 J	0.0000092 J
HEPTACHLOROBIPHENYLS	--	0.00094 J	0.000042 J	0.0034 J	--	0.013 J	0.0031 J	0.0028 J	0.00038 J
HEXACHLOROBIPHENYLS	--	0.0014 J	0.000067 J	0.0059 J	--	0.013 J	0.0022 J	0.0021 J	0.00017 J
MONOCHLOROBIPHENYLS	--	0.000011 J	0.0000026 J	0.000046 J	--	0.000048 J	0.0000082 J	0.00001 J	0 UJ
NONACHLOROBIPHENYLS	--	0.002 J	0.000024 J	0.0039 J	--	0.0038 J	0.0014 J	0.0013 J	0.0002 J
OCTACHLOROBIPHENYLS	--	0.00098 J	0.000023 J	0.002 J	--	0.0078 J	0.003 J	0.0026 J	0.00042 J
PCB-1	--	0.0000015 J	0.000002 U	0.0000077	--	0.0000093	0.000002 U	0.0000019 J	0.000002 U
PCB-10	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-100	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000025	0.000002 U	0.000002 U	0.000002 U
PCB-101/90	--	0.000085	0.0000075	0.00053	--	0.00099	0.00018	0.00018	0.000012
PCB-103	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000029	0.000002 U	0.000002 U	0.000002 U
PCB-104	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-105	--	0.000099	0.0000033	0.00043	--	0.00051	0.000089	0.000084	0.0000073
PCB-106	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--
PCB-108/107	--	0.000019	0.000004 U	0.000077	--	0.000094	0.000017	0.000017	0.000004 U
PCB-108/124	--	--	--	--	--	--	--	--	--
PCB-109	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-11	--	0.000013	0.0000024	0.000038	--	0.00027	0.000027	0.000017	0.0000092
PCB-110	--	0.00027	0.000011	0.00096	--	0.0012	0.00023	0.00024	0.000017
PCB-110/115	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--
PCB-111/115	--	0.0000027 J	0.000004 U	0.000017	--	0.000018	0.0000027 J	0.0000024 J	0.000004 U
PCB-112	--	--	--	--	--	--	--	--	--
PCB-113	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-114	--	0.000004	0.000001 U	0.000015	--	0.000026	0.000004	0.0000042	0.0000015 U
PCB-118	--	--	--	--	--	--	--	--	--
PCB-118/106	--	0.0002	0.0000077	0.00091	--	0.0012	0.00021	0.0002	0.000015
PCB-119	--	0.0000047	0.000002 U	0.000015	--	0.000019	0.0000038	0.0000038	0.000002 U
PCB-12	--	0.0000016 J	0.000002 U	0.0000038	--	0.0000058	0.000002 U	0.000002 U	0.000002 U
PCB-12/13	--	--	--	--	--	--	--	--	--
PCB-120	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-121	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-122	--	0.000003	0.000002 U	0.000014	--	0.000017	0.0000043	0.0000039	0.000002 U
PCB-123	--	0.000006	0.00000092 U	0.00002	--	0.000027	0.0000049	0.0000052	0.0000012 U
PCB-124	--	0.00001	0.000002 U	0.00004	--	0.000061	0.000013	0.000011	0.000002 U
PCB-126	--	0.0000031	0.0000013 U	0.000012	--	0.00002	0.0000038	0.0000035	0.0000015 U
PCB-127	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-128/162	--	0.000072	0.0000033 J	0.00026	--	0.00034	0.000067	0.000069	0.0000054
PCB-128/166	--	--	--	--	--	--	--	--	--
PCB-129	--	0.000014	0.000002 U	0.000049	--	0.000081	0.000018	0.000017	0.000002 U
PCB-129/138/163	--	--	--	--	--	--	--	--	--
PCB-13	--	0.0000014 J	0.000002 U	0.0000078	--	0.0000074	0.000002 U	0.0000023	0.000002 U
PCB-130	--	0.000025	0.000002 U	0.000088	--	0.00016	0.000031	0.00003	0.000003
PCB-131	--	--	--	--	--	--	--	--	--
PCB-131/133	--	0.0000072	0.000004 U	0.000028	--	0.000055	0.0000084	0.0000097	0.000004 U
PCB-132	--	--	--	--	--	--	--	--	--
PCB-132/161	--	0.000055	0.0000035 J	0.00021	--	0.00044	0.000076	0.000074	0.0000054
PCB-133	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R01-S	R01-S	R01-S	R01-S	R02-S	R02-S	R02-S	R02-S	R02-S
SAMPLE ID	R1-S-0006-01	R1-S-0624	R1-S-2448	R1-S-0006	R2-S-0006	R2-S-0006-01	R2-S-0624	R2-S-0624-D	R2-S-2448
SAMPLE DATE	20191118	20191118	20191118	20191118	20191118	20191119	20191119	20191119	20191119
DUPLICATE								R2-S-0624	
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SS	SB
PCB-134	--	--	--	--	--	--	--	--	--
PCB-134/143	--	0.0000083	0.000004 U	0.00003	--	0.000073	0.000012	0.000011	0.000004 U
PCB-135	--	0.000028	0.0000023	0.00011	--	0.00028	0.000047	0.000045	0.000003
PCB-135/151	--	--	--	--	--	--	--	--	--
PCB-136	--	0.000018	0.000002 U	0.000055	--	0.00023	0.000035	0.000039	0.0000026
PCB-137	--	0.000027	0.000002 U	0.000096	--	0.000091	0.000016	0.000019	0.000002 U
PCB-138/163/164	--	0.00036	0.000017	0.0016	--	0.0027	0.00046	0.00045	0.000035
PCB-139/140	--	--	--	--	--	--	--	--	--
PCB-139/149	--	0.00019	0.0000094	0.00068	--	0.0022	0.00035	0.00034	0.000027
PCB-14	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-140	--	0.0000021	0.000002 U	0.0000063	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-141	--	0.000041	0.0000041	0.00023	--	0.00056	0.000094	0.000092	0.000007
PCB-142	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-143	--	--	--	--	--	--	--	--	--
PCB-144	--	0.0000046	0.000002 U	0.000017	--	0.000092	0.000014	0.000014	0.000002 U
PCB-145	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-146	--	--	--	--	--	--	--	--	--
PCB-146/165	--	0.00005	0.0000025 J	0.0002	--	0.00045	0.000073	0.000074	0.0000072
PCB-147	--	0.0000064	0.000002 U	0.000018	--	0.000027	0.0000063	0.0000065	0.000002 U
PCB-147/149	--	--	--	--	--	--	--	--	--
PCB-148	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-15	--	0.000005	0.000002 U	0.00004	--	0.00003	0.0000065	0.0000057	0.000002 U
PCB-150	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000023	0.000002 U	0.000002 U	0.000002 U
PCB-151	--	0.00004	0.0000026	0.0002	--	0.00071	0.00011	0.0001	0.0000096
PCB-152	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-153	--	0.00035	0.000019	0.0015	--	0.0034	0.00059	0.00058	0.000049
PCB-153/168	--	--	--	--	--	--	--	--	--
PCB-154	--	0.0000037	0.000002 U	0.000008	--	0.00002	0.000005	0.0000044	0.000002 U
PCB-155	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-156	--	0.00004	0.0000017 J	0.00017	--	0.00024	0.000042	0.00004	0.0000032
PCB-156/157	--	--	--	--	--	--	--	--	--
PCB-157	--	0.000012	0.0000009 U	0.000042	--	0.000053	0.000011	0.000011	0.00000098 U
PCB-158	--	--	--	--	--	--	--	--	--
PCB-158/160	--	0.000047	0.0000017 J	0.00019	--	0.00031	0.00005	0.000051	0.0000045
PCB-159	--	0.0000052	0.000002 U	0.000015	--	0.00006	0.000018	0.000016	0.0000022
PCB-16	--	0.000002 U	0.000002 U	0.0000031	--	0.0000031	0.000002 U	0.000002 U	0.000002 U
PCB-160	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--
PCB-166	--	0.000002 U	0.000002 U	0.0000063	--	0.0000062	0.000002 U	0.000002 U	0.000002 U
PCB-167	--	0.000019	0.00000087 U	0.000077	--	0.00012	0.000021	0.000023	0.0000024
PCB-168	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-169	--	0.00000091 U	0.00000077 U	0.0000018 J	--	0.000004	0.0000015 U	0.0000014 U	0.00000097 U
PCB-17	--	0.000002 U	0.000002 U	0.0000048	--	0.0000061	0.000002 U	0.000002 U	0.000002 U
PCB-170	--	0.000094	0.0000071	0.0004	--	0.0011	0.00021	0.00019	0.000023
PCB-171	--	0.000023	0.000002 U	0.000091	--	0.00029	0.000052	0.000049	0.0000068
PCB-171/173	--	--	--	--	--	--	--	--	--
PCB-172	--	0.000021	0.000002 U	0.000079	--	0.00026	0.000057	0.000051	0.0000062
PCB-173	--	0.000002 U	0.000002 U	0.0000065	--	0.000024	0.0000045	0.0000044	0.000002 U
PCB-174	--	0.0001	0.0000058	0.00034	--	0.0015	0.00032	0.00028	0.000036
PCB-175	--	0.0000035	0.000002 U	0.000015	--	0.000053	0.000011	0.000009	0.000002 U
PCB-176	--	0.0000084	0.000002 U	0.000026	--	0.00012	0.000025	0.000022	0.0000031
PCB-177	--	0.000059	0.0000046	0.00024	--	0.00088	0.00017	0.00015	0.00002
PCB-178	--	0.000032	0.000002 U	0.00014	--	0.00043	0.000099	0.000088	0.000012
PCB-179	--	0.000051	0.0000022	0.00016	--	0.00067	0.00017	0.00015	0.000019
PCB-18	--	0.0000036	0.000002 U	0.00001	--	0.000012	0.0000036	0.0000027	0.000002 U
PCB-18/30	--	--	--	--	--	--	--	--	--
PCB-180	--	0.00023	0.000011	0.00073	--	0.003	0.00081	0.00075	0.00011
PCB-180/193	--	--	--	--	--	--	--	--	--
PCB-181	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-182	--	--	--	--	--	--	--	--	--
PCB-182/187	--	0.0002	0.0000074	0.00073	--	0.0029	0.00076	0.00071	0.000096
PCB-183	--	0.00006	0.0000037	0.00019	--	0.00088	0.00023	0.00021	0.000031
PCB-183/185	--	--	--	--	--	--	--	--	--
PCB-184	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-185	--	0.0000082	0.000002 U	0.000031	--	0.00018	0.000042	0.000039	0.0000059
PCB-186	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-187	--	--	--	--	--	--	--	--	--
PCB-188	--	0.000002 U	0.000002 U	0.0000019 J	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-189	--	0.0000046	0.00000084 U	0.000018	--	0.000038	0.0000081	0.0000072	0.0000012 U
PCB-19	--	0.000002 U	0.000002 U	0.0000014 J	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-190	--	0.000023	0.000002 U	0.0001	--	0.00032	0.000066	0.000064	0.0000092
PCB-191	--	0.0000037	0.000002 U	0.000014	--	0.000045	0.0000096	0.000009	0.000002 U
PCB-192	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-193	--	0.000014	0.000002 U	0.00005	--	0.0002	0.000043	0.00005	0.0000058
PCB-194	--	0.00011	0.0000039	0.00025	--	0.0015	0.00057	0.00048	0.000084
PCB-195	--	0.000031	0.0000014 J	0.000077	--	0.00052	0.00017	0.00014	0.000025
PCB-196	--	--	--	--	--	--	--	--	--
PCB-196/203	--	0.00026	0.0000069	0.00051	--	0.0023	0.00099	0.00083	0.00014
PCB-197	--	0.0000052	0.000002 U	0.000009	--	0.000052	0.000018	0.000016	0.0000029
PCB-197/200	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R01-S	R01-S	R01-S	R01-S	R02-S	R02-S	R02-S	R02-S	R02-S
SAMPLE ID	R1-S-0006-01	R1-S-0624	R1-S-2448	R1-S-0006	R2-S-0006	R2-S-0006-01	R2-S-0624	R2-S-0624-D	R2-S-2448
SAMPLE DATE	20191118	20191118	20191118	20191118	20191118	20191119	20191119	20191119	20191119
DUPLICATE								R2-S-0624	
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SS	SB
PCB-198	--	0.000015	0.000002 U	0.000034	--	0.000098	0.00004	0.000033	0.000005
PCB-198/199	--	--	--	--	--	--	--	--	--
PCB-199	--	0.00038	0.0000084	0.00076	--	0.0022	0.00084	0.00075	0.00011
PCB-2	--	0.0000041	0.0000026	0.000013	--	0.000013	0.0000036	0.0000035	0.000002 U
PCB-20/21/33	--	0.0000031 J	0.000006 U	0.000019	--	0.000018	0.0000032 J	0.0000031 J	0.000006 U
PCB-20/28	--	--	--	--	--	--	--	--	--
PCB-200	--	0.000018	0.000002 U	0.000035	--	0.00023	0.000085	0.000075	0.000012
PCB-201	--	0.000031	0.000002 U	0.000051	--	0.00022	0.000084	0.000075	0.00001
PCB-202	--	0.00012	0.0000027	0.00027	--	0.00058	0.00022	0.00019	0.000027
PCB-203	--	--	--	--	--	--	--	--	--
PCB-204	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-205	--	0.0000056	0.000002 U	0.000018	--	0.000074	0.000024	0.000022	0.0000048
PCB-206	--	0.0013	0.000015	0.0026	--	0.0026	0.00095	0.00089	0.00014
PCB-207	--	0.0001	0.0000014 J	0.00018	--	0.0003	0.00013	0.00011	0.000019
PCB-208	--	0.00055	0.0000071	0.0011	--	0.00091	0.00031	0.00029	0.00004
PCB-209	--	0.0019	0.000022	0.0037	--	0.003	0.0011	0.00095	0.00015
PCB-21/33	--	--	--	--	--	--	--	--	--
PCB-22	--	0.0000022	0.000002 U	0.000013	--	0.000013	0.0000023	0.0000023	0.000002 U
PCB-23	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-24	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-25	--	0.000002 U	0.000002 U	0.0000035	--	0.0000025	0.000002 U	0.000002 U	0.000002 U
PCB-26	--	0.000002 U	0.000002 U	0.000006	--	0.0000059	0.000002 U	0.000002 U	0.000002 U
PCB-26/29	--	--	--	--	--	--	--	--	--
PCB-27	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-28	--	0.0000055	0.000002 U	0.000042	--	0.000032	0.0000058	0.0000055	0.000002 U
PCB-29	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-3	--	0.0000055	0.000002 U	0.000025	--	0.000026	0.0000046	0.000005	0.000002 U
PCB-30	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-31	--	0.0000071	0.000002 U	0.000042	--	0.000039	0.0000069	0.0000064	0.000002 U
PCB-32	--	0.000002 U	0.000002 U	0.0000036	--	0.000006	0.000002 U	0.000002 U	0.000002 U
PCB-34	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-35	--	0.000002 U	0.000002 U	0.0000041	--	0.0000072	0.000002 U	0.000002 U	0.000002 U
PCB-36	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-37	--	0.0000049	0.000002 U	0.000038	--	0.000034	0.000006	0.000006	0.000002 U
PCB-38	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-39	--	0.000002 U	0.000002 U	0.0000076	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-4	--	0.000002 U	0.000002 U	0.0000035	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-40	--	0.000002 U	0.000002 U	0.0000078	--	0.0000066	0.000002 U	0.000002 U	0.000002 U
PCB-40/71	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	0.000012	0.000008 U	0.000092	--	0.000068	0.0000099	0.0000091	0.000008 U
PCB-42	--	--	--	--	--	--	--	--	--
PCB-42/59	--	0.0000033 J	0.000004 U	0.000019	--	0.000016	0.0000045	0.0000032 J	0.000004 U
PCB-43	--	--	--	--	--	--	--	--	--
PCB-43/49	--	0.0000098	0.000004 U	0.000092	--	0.00007	0.000015	0.000016	0.000004 U
PCB-44	--	0.0000089	0.000002 U	0.00006	--	0.000052	0.000012	0.00001	0.000002 U
PCB-44/47/65	--	--	--	--	--	--	--	--	--
PCB-45	--	0.000002 U	0.000002 U	0.0000044	--	0.0000046	0.000002 U	0.000002 U	0.000002 U
PCB-45/51	--	--	--	--	--	--	--	--	--
PCB-46	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-47	--	0.0000051	0.000002 U	0.00003	--	0.000023	0.0000049	0.0000043	0.000002 U
PCB-48	--	--	--	--	--	--	--	--	--
PCB-48/75	--	0.000004 U	0.000004 U	0.0000091	--	0.0000077	0.0000018 J	0.000004 U	0.000004 U
PCB-49/69	--	--	--	--	--	--	--	--	--
PCB-5	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-50	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-50/53	--	--	--	--	--	--	--	--	--
PCB-51	--	0.000002 U	0.000002 U	0.000002 U	--	0.0000016 J	0.000002 U	0.000002 U	0.000002 U
PCB-52	--	--	--	--	--	--	--	--	--
PCB-52/69	--	0.000016	0.0000015 J	0.0001	--	0.0001	0.000018	0.000019	0.0000015 J
PCB-53	--	0.000002 U	0.000002 U	0.0000037	--	0.0000036	0.000002 U	0.000002 U	0.000002 U
PCB-54	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-55	--	0.000002 U	0.000002 U	0.0000041	--	0.0000048	0.000002 U	0.000002 U	0.000002 U
PCB-56	--	--	--	--	--	--	--	--	--
PCB-56/60	--	0.000012	0.0000018 J	0.000074	--	0.000077	0.000012	0.000013	0.000004 U
PCB-57	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-58	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-59/62/75	--	--	--	--	--	--	--	--	--
PCB-6	--	0.000002 U	0.000002 U	0.0000046	--	0.0000032	0.000002 U	0.000002 U	0.000002 U
PCB-60	--	--	--	--	--	--	--	--	--
PCB-61/70	--	0.000045	0.000002 J	0.00035	--	0.00028	0.000048	0.000044	0.0000022 J
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--
PCB-62	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-63	--	0.0000016 J	0.000002 U	0.00001	--	0.0000054	0.000002 U	0.000002 U	0.000002 U
PCB-64	--	--	--	--	--	--	--	--	--
PCB-65	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-66	--	--	--	--	--	--	--	--	--
PCB-66/76	--	0.000019	0.0000019 J	0.00016	--	0.00014	0.000023	0.000021	0.000004 U
PCB-67	--	0.000002 U	0.000002 U	0.0000031	--	0.0000034	0.000002 U	0.000002 U	0.000002 U
PCB-68	--	0.0000022	0.000002 U	0.000016	--	0.0000045	0.000002 U	0.000002 U	0.000002 U
PCB-7	--	0.000002 U	0.000002 U	0.0000018 J	--	0.0000017 J	0.000002 U	0.000002 U	0.000002 U
PCB-72	--	--	--	--	--	--	--	--	--
PCB-73	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R01-S	R01-S	R01-S	R01-S	R02-S	R02-S	R02-S	R02-S	R02-S
SAMPLE ID	R1-S-0006-01	R1-S-0624	R1-S-2448	R1-S-0006	R2-S-0006	R2-S-0006-01	R2-S-0624	R2-S-0624-D	R2-S-2448
SAMPLE DATE	20191118	20191118	20191118	20191118	20191118	20191119	20191119	20191119	20191119
DUPLICATE								R2-S-0624	
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SS	SB
PCB-74	--	0.000008	0.000002 U	0.00007	--	0.00005	0.0000091	0.0000069	0.000002 U
PCB-77	--	0.0000077	0.000001 U	0.000037	--	0.000061	0.0000098	0.0000086	0.0000012 U
PCB-78	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-79	--	0.0000018 J	0.000002 U	0.0000069	--	0.0000084	0.000002 U	0.000002	0.000002 U
PCB-8	--	0.0000026	0.000002 U	0.00002	--	0.000018	0.0000037	0.0000033	0.000002 U
PCB-80	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-81	--	0.0000017 J	0.00000092 U	0.000008	--	0.000012	0.0000023	0.0000024	0.0000011 U
PCB-82	--	0.000014	0.000002 U	0.000049	--	0.000075	0.000014	0.000015	0.000002 U
PCB-83	--	--	--	--	--	--	--	--	--
PCB-83/112	--	0.0000051	0.000004 U	0.000016	--	0.000024	0.000005	0.0000053	0.000004 U
PCB-84	--	--	--	--	--	--	--	--	--
PCB-84/92	--	0.000023	0.0000025 J	0.00011	--	0.00022	0.000037	0.00004	0.000004
PCB-85/116	--	0.000046	0.0000026 J	0.00016	--	0.0002	0.000039	0.000043	0.000004 U
PCB-85/116/117	--	--	--	--	--	--	--	--	--
PCB-86	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	0.000042	0.0000029 J	0.00021	--	0.00031	0.000061	0.000064	0.0000048 J
PCB-88/91	--	0.000015	0.000004 U	0.000045	--	0.00007	0.000015	0.000017	0.000004 U
PCB-89	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-9	--	0.000002 U	0.000002 U	0.0000012 J	--	0.0000025	0.000002 U	0.000002 U	0.000002 U
PCB-90/101/113	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--
PCB-93	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-93/100	--	--	--	--	--	--	--	--	--
PCB-94	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-95	--	0.000042	0.000004	0.00017	--	0.00039	0.000071	0.000069	0.000004
PCB-96	--	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-97	--	0.000028	0.000002	0.0001	--	0.00016	0.000031	0.000031	0.000002 U
PCB-98/102	--	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	0.000004 U	0.000004 U	0.000004 U
PCB-99	--	0.00008	0.0000045	0.00026	--	0.00035	0.000073	0.000077	0.000006
PENTACHLOROBIPHENYLS	--	0.001 J	0.000048 J	0.0042 J	--	0.006 J	0.0011 J	0.0011 J	0.00007 J
TEQ DIOXIN-LIKE PCBs (BIRD)	--	8.80796E-07	5E-10	3.91865E-06	--	6.33875E-06	1.11494E-06	1.03427E-06	1.074E-09
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	8.81251E-07	1.36992E-07	3.91865E-06	--	6.33875E-06	1.11569E-06	1.03497E-06	1.61695E-07
TEQ DIOXIN-LIKE PCBs (FISH)	--	1.8043E-08	2.4E-11	7.165E-08	--	1.1737E-07	2.2029E-08	2.0433E-08	6.4E-11
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	1.8065E-08	3.583E-09	7.165E-08	--	1.1737E-07	2.2066E-08	2.0468E-08	4.184E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	3.16818E-07	1.5E-10	1.28326E-06	--	2.16012E-06	3.8707E-07	3.56818E-07	3.87E-10
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	3.30468E-07	7.6954E-08	1.28326E-06	--	2.16012E-06	4.0957E-07	3.77818E-07	9.0234E-08
TETRACHLOROBIPHENYLS	--	0.00015 J	0.0000072 J	0.0012 J	--	0.001 J	0.00017 J	0.00016 J	0.0000037 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	0.0001971	0.000005	0.0008308	--	0.001111	0.0001959	0.0001891	0.0000129
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	0.0082064	0.0002329	0.0236946	--	0.0466192	0.011929	0.0109506	0.0013903
TOTAL PCB CONGENERS ZEROND	--	0.0084035	0.0002379	0.0245254	--	0.0477302	0.0121249	0.0111397	0.0014032
TOTAL PCB CONGENERS-NOAA	--	0.0049766	0.0001251	0.013859	--	0.022614	0.0056621	0.0052545	0.0006692
TOTAL PCB CONGENERS-NOAA HALFND	--	0.008474955	0.00038016	0.0245744	--	0.0477802	0.01220065	0.0112144	0.001539025
TOTAL PCB CONGENERS-NOAA X2	--	0.0099532	0.0002502	0.027718	--	0.045228	0.0113242	0.010509	0.0013384
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	0.0099532	0.0002582	0.027718	--	0.045228	0.0113242	0.010509	0.0013504
TRICHLOROBIPHENYLS	--	0.000026 J	0 UJ	0.0002 J	--	0.00018 J	0.000028 J	0.000026 J	0 UJ
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	420	130	120	--	--	330	160	130	330
1,2,3,4,6,7,8,9-OCDF	81	6.6 J	1.1 U	--	--	18	3.9 J	4.1 J	1.1 U
1,2,3,4,6,7,8-HPCDD	54	11	5.4	--	--	41	14	12	7
1,2,3,4,6,7,8-HPCDF	63	7.2	0.81 Z	--	--	18 Z	3.3 J	4 J	0.24 Z
1,2,3,4,7,8,9-HPCDF	2.6 J	0.29 J	0.16 U	--	--	0.89 J	0.16 U	0.17 J	0.16 U
1,2,3,4,7,8-HXCDD	1.6 J	0.32 J	0.18 U	--	--	0.96 Z	0.41 Z	0.29 J	0.18 U
1,2,3,4,7,8-HXCDF	4.4 J	0.78 J	0.14 U	--	--	2 J	0.54 J	0.63 J	0.14 U
1,2,3,6,7,8-HXCDD	3 J	0.54 J	0.15 U	--	--	2.5 J	1.1 J	0.85 Z	0.15 U
1,2,3,6,7,8-HXCDF	5.2	0.78 J	0.18 U	--	--	1.8 J	0.44 J	0.46 J	0.18 U
1,2,3,7,8,9-HXCDD	2.8 J	0.51 J	0.23 Z	--	--	1.6 J	0.63 Z	0.55 J	0.22 U
1,2,3,7,8,9-HXCDF	1.2 J	0.21 U	0.21 U	--	--	0.52 J	0.21 U	0.21 U	0.21 U
1,2,3,7,8-PECDD	2.2 J	0.53 J	0.18 U	--	--	1.4 J	0.45 J	0.47 J	0.18 U
1,2,3,7,8-PECDF	3.3 J	0.77 Z	0.15 U	--	--	2 J	0.51 Z	0.49 Z	0.15 U
2,3,4,6,7,8-HXCDF	5.5	0.81 J	0.11 U	--	--	2.1 J	0.6 J	0.61 J	0.11 U
2,3,4,7,8-PECDF	5.7	1.2 J	0.15 U	--	--	4.3 J	0.93 J	0.99 Z	0.18 U
2,3,7,8-TCDD	0.61 Z	0.14 U	0.14 U	--	--	0.6 Z	0.19 Z	0.17 Z	0.14 U
2,3,7,8-TCDF	5.2 J	1.1	0.08 U	--	--	2.2 J	0.83 J	0.76 Z	0.19 U
TEQ DIOXINS (BIRD)	16.8201	3.31596	0.0485	--	--	9.8397	2.76689	2.75411	0.0424
TEQ DIOXINS (BIRD) HALFND	16.8201	3.39646	0.369105	--	--	9.8397	2.77819	2.76461	0.444005
TEQ DIOXINS (FISH)	9.3331	1.73056	0.0278	--	--	5.7877	1.61569	1.59361	0.0424
TEQ DIOXINS (FISH) HALFND	9.3331	1.81106	0.309655	--	--	5.7877	1.62699	1.60411	0.335605
TEQ DIOXINS (HUMANS/MAMMALS)	8.8553	1.62298	0.1211	--	--	5.4213	1.61147	1.56863	0.1714
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	8.8553	1.70348	0.359315	--	--	5.4213	1.62277	1.57913	0.430615
TOTAL HPCDD	110 J	22 J	10 J	--	--	88 J	28 J	24 J	14 J
TOTAL HPCDF	110 J	12 J	0 UJ	--	--	11 J	3.3 J	6.4 J	0 UJ
TOTAL HXCDD	38 J	5.2 J	0.65 J	--	--	39 J	18 J	13 J	1.4 J
TOTAL HXCDF	78 J	8.8 J	0.16 J	--	--	28 J	7 J	7.4 J	0 UJ
TOTAL PECDD	22 J	3.5 J	0 UJ	--	--	18 J	7.7 J	5.4 J	0 UJ
TOTAL PECDF	94 J	8 J	0 UJ	--	--	49 J	11 J	5.5 J	0 UJ
TOTAL TCDD	26 J	2.9 J	0 UJ	--	--	26 J	10 J	5.6 J	1.8 J
TOTAL TCDF	92 J	11 J	0 UJ	--	--	44 J	10 J	4.9 J	0 UJ
METALS (MG/KG)									
ALUMINUM	8890	10000	11800	--	--	6860	11900	9910	8190
ANTIMONY	0.8 J	1.2 U	1.2 U	--	--	0.78 J	0.21 J	0.24 J	1.1 UJ
ARSENIC	8.9	3.4	4	--	--	10.8	5.4	5.9	1.7 J
BARIUM	180	64.3	35.8	--	--	176	82.1	99.6	17.2

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R01-S	R01-S	R01-S	R01-S	R02-S	R02-S	R02-S	R02-S	R02-S
SAMPLE ID	R1-S-0006-01	R1-S-0624	R1-S-2448	R1-S-0006	R2-S-0006	R2-S-0006-01	R2-S-0624	R2-S-0624-D	R2-S-2448
SAMPLE DATE	20191118	20191118	20191118	20191118	20191118	20191119	20191119	20191119	20191119
DUPLICATE								R2-S-0624	
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SS	SB
BERYLLIUM	1.1	0.4 J	0.44 J	--	--	0.97	0.47 J	0.72	0.56 U
CADMIUM	0.8	0.18 J	0.6 U	--	--	0.81	0.18 J	0.18 J	0.56 U
CALCIUM	1730	813	525 J	--	--	5810	678	923	357 J
CHROMIUM	12.6	6	9.7	--	--	12.8	9.5	12.8	3.9 J
COBALT	5.4	2.7	3.5	--	--	7.4	5.2	7	2
COPPER	44.6	15.8	5.5	--	--	56.4	15.7	18.2	2.4
CYANIDE	0.33 J	0.085 J	0.11 J	--	--	0.079 J	0.12 J	0.21 J	0.17 J
IRON	10700	14000	13600	--	--	12000	14700	13900	11900 J
LEAD	361	54.3	13.6	--	--	313	78.3	70.5	5.9 J
MAGNESIUM	607 J	562 J	735	--	--	970	763	694	486 J
MANGANESE	368	153	124	--	--	484	192	328	44.3 J
MERCURY	0.22	0.065 J	0.026 J	--	--	0.071 J	0.048 J	0.055 J	0.11 UJ
NICKEL	8.5	3.9	3.6	--	--	13.7	6.9	9.9	2.3
POTASSIUM	670	770	910	--	--	663	743	576 UJ	571
SELENIUM	3.4 UJ	3 UJ	3 UJ	--	--	2.9 UJ	2.7 UJ	3 UJ	2.8 UJ
SILVER	0.36 J	0.083 J	0.6 U	--	--	0.19 J	0.045 J	0.054 J	0.56 U
SODIUM	666 UJ	579 UJ	616 UJ	--	--	599 UJ	556 UJ	576 UJ	565 UJ
THALLIUM	0.68 UJ	0.59 UJ	0.6 UJ	--	--	0.58 UJ	0.55 UJ	0.6 UJ	0.56 UJ
VANADIUM	15.4	11.2	21	--	--	15.1	14.1	22.4	8.2
ZINC	285	69.4	22.9	--	--	227	57.3	69	11.3
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	82	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	82300	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	85	85	78	82	--	85	--	88

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R03-S	R03-S	R03-S	R03-S	R04-S	R04-S	R04-S	R04-S	R05-S
SAMPLE ID	R3-S-0006-01	R3-S-0624	R3-S-2448	R3-S-0006	R4-S-0006	R4-S-0006-01	R4-S-0624	R4-S-2448	R5-S-0006-01
SAMPLE DATE	20191119	20191119	20191119	20191119	20191119	20191119	20191119	20191119	20191119
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SB	SS
TOP DEPTH	0	0.5	2	0	0	0	0.5	2	0
BOTTOM DEPTH	0.5	2	4	0.5	0.5	0.5	2	4	0.5
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	0.0063 U	0.0055 UJ	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	0.0063 U	0.0055 U	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	0.0063 U	0.0055 U	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	0.0063 U	0.0055 UJ	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
2-BUTANONE	--	--	--	0.013 U	0.011 U	--	--	--	--
2-HEXANONE	--	--	--	0.013 UJ	0.011 UJ	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	0.013 UJ	0.011 UJ	--	--	--	--
ACETONE	--	--	--	0.013 U	0.011 U	--	--	--	--
BENZENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	0.0063 U	0.0055 U	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
BROMOFORM	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
BROMOMETHANE	--	--	--	0.0063 U	0.0055 U	--	--	--	--
CARBON DISULFIDE	--	--	--	0.0063 U	0.0055 U	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
CHLOROBENZENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
CHLOROETHANE	--	--	--	0.0063 U	0.0055 U	--	--	--	--
CHLOROFORM	--	--	--	0.0063 U	0.0055 U	--	--	--	--
CHLOROMETHANE	--	--	--	0.0063 U	0.0055 U	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	0.0063 U	0.0055 U	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
CYCLOHEXANE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	0.0063 U	0.0055 U	--	--	--	--
ETHYLBENZENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
ISOPROPYLBENZENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
M+P-XYLENES	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
METHYL ACETATE	--	--	--	0.0063 U	0.0055 UJ	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	0.0063 U	0.0055 UJ	--	--	--	--
METHYLENE CHLORIDE	--	--	--	0.0063 U	0.0055 UJ	--	--	--	--
O-XYLENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
STYRENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
TETRACHLOROETHENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
TOLUENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	0.0063 U	0.0055 U	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
TRICHLOROETHENE	--	--	--	0.0063 UJ	0.0055 UJ	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	0.0063 U	0.0055 UJ	--	--	--	--
VINYL CHLORIDE	--	--	--	0.0063 U	0.0055 U	--	--	--	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.018 J	0.025 J	0.2 U	--	--	0.023 J	0.22 U	0.21 U	0.1 J
1,2,4,5-TETRACHLOROBENZENE	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
1,4-DIOXANE	0.089 U	0.084 U	0.08 U	--	--	0.099 U	0.086 U	0.081 UJ	0.09 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U
2,3,4,6-TETRACHLOROPHENOL	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
2,4,5-TRICHLOROPHENOL	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
2,4,6-TRICHLOROPHENOL	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
2,4-DICHLOROPHENOL	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
2,4-DIMETHYLPHENOL	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
2,4-DINITROPHENOL	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U
2,4-DINITROTOLUENE	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
2,6-DINITROTOLUENE	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
2-CHLORONAPHTHALENE	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
2-CHLOROPHENOL	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
2-METHYLNAPHTHALENE	0.058 J	0.033 J	0.2 U	--	--	0.066 J	0.019 J	0.21 U	0.25
2-METHYLPHENOL	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U
2-NITROANILINE	0.23 UJ	0.21 UJ	0.2 UJ	--	--	0.25 UJ	0.22 UJ	0.21 U	0.23 U
2-NITROPHENOL	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
3&4-METHYLPHENOL	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.018 J
3,3'-DICHLOROBENZIDINE	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U
3-NITROANILINE	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U
4,6-DINITRO-2-METHYLPHENOL	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U
4-BROMOPHENYL PHENYL ETHER	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
4-CHLORO-3-METHYLPHENOL	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
4-CHLOROANILINE	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.07 J
4-CHLOROPHENYL PHENYL ETHER	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
4-NITROANILINE	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U
4-NITROPHENOL	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U

LOCATION	R03-S	R03-S	R03-S	R03-S	R04-S	R04-S	R04-S	R04-S	R05-S
SAMPLE ID	R3-S-0006-01	R3-S-0624	R3-S-2448	R3-S-0006	R4-S-0006	R4-S-0006-01	R4-S-0624	R4-S-2448	R5-S-0006-01
SAMPLE DATE	20191119	20191119	20191119	20191119	20191119	20191119	20191119	20191119	20191119
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SB	SS
ACENAPHTHENE	0.035 J	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
ACENAPHTHYLENE	0.069 J	0.21 U	0.2 U	--	--	0.18 J	0.046 J	0.21 U	0.099 J
ACETOPHENONE	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U
ANTHRACENE	0.16 J	0.21 U	0.2 U	--	--	0.15 J	0.052 J	0.21 U	0.089 J
ATRAZINE	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U
BAP EQUIVALENT-HALFND	0.55487	0.19563	0.2 U	--	--	1.18477	0.57031	0.234275	0.67782
BAP EQUIVALENT-POS	0.43987	0.09063	0.2 U	--	--	1.05977	0.46031	0.00317	0.56282
BENZALDEHYDE	0.036 J	0.032 J	0.39 U	--	--	0.027 J	0.42 U	0.4 U	0.44 U
BENZO(A)ANTHRACENE	0.38	0.077 J	0.2 U	--	--	0.78	0.28	0.21 U	0.39
BENZO(A)PYRENE	0.32	0.064 J	0.2 U	--	--	0.78	0.36	0.21 U	0.41
BENZO(B)FLUORANTHENE	0.6	0.13 J	0.2 U	--	--	1.4	0.45	0.029 J	0.73
BENZO(G,H,I)PERYLENE	0.2 J	0.042 J	0.2 U	--	--	0.48	0.25	0.21 U	0.43
BENZO(K)FLUORANTHENE	0.14 J	0.056 J	0.2 U	--	--	0.48	0.19 J	0.027 J	0.21 J
BIS(2-CHLOROETHOXY)METHANE	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
BIS(2-CHLOROETHYL)ETHER	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.42	0.21 U	0.2 U	--	--	0.18 J	0.22 U	0.21 U	0.12 J
BUTYL BENZYL PHTHALATE	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
CAPROLACTAM	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U
CARBAZOLE	0.058 J	0.41 U	0.39 U	--	--	0.057 J	0.032 J	0.4 U	0.11 J
CHRYSENE	0.47	0.17 J	0.2 U	--	--	0.97	0.41	0.21 U	0.72
DIBENZO(A,H)ANTHRACENE	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
DIBENZOFURAN	0.048 J	0.026 J	0.2 U	--	--	0.036 J	0.22 U	0.21 U	0.12 J
DIETHYL PHTHALATE	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
DIMETHYL PHTHALATE	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
DI-N-BUTYL PHTHALATE	0.032 J	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
DI-N-OCTYL PHTHALATE	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U
FLUORANTHENE	0.86	0.13 J	0.39 U	--	--	1.8	0.63	0.022 J	1
FLUORENE	0.054 J	0.21 U	0.2 U	--	--	0.031 J	0.22 U	0.21 U	0.024 J
HEXACHLOROBENZENE	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
HEXACHLOROBUTADIENE	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
HEXACHLOROCYCLOPENTADIENE	0.44 UJ	0.41 UJ	0.39 UJ	--	--	0.49 UJ	0.42 UJ	0.4 U	0.44 U
HEXACHLOROETHANE	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
HIGH MOLECULAR WEIGHT PAHS	2.9	0.685	0 U	--	--	6.75	2.69	0.056	4.05
INDENO(1,2,3-CD)PYRENE	0.2 J	0.052 J	0.2 U	--	--	0.56	0.25	0.21 U	0.38
ISOPHORONE	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
LOW MOLECULAR WEIGHT PAHS	1.896	0.343	0 U	--	--	2.836	1.008	0.022	2.472
NAPHTHALENE	0.058 J	0.053 J	0.2 U	--	--	0.045 J	0.22 U	0.21 U	0.28
NITROBENZENE	0.23 UJ	0.21 UJ	0.2 UJ	--	--	0.25 UJ	0.22 UJ	0.21 U	0.23 U
N-NITROSO-DI-N-PROPYLAMINE	0.23 U	0.21 U	0.2 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
N-NITROSODIPHENYLAMINE	0.23 U	0.21 U	0.2 U	--	--	0.029 J	0.22 U	0.21 U	0.23 U
PENTACHLOROPHENOL	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U
PHENANTHRENE	0.66	0.16 J	0.2 U	--	--	0.63	0.28	0.21 U	0.98
PHENOL	0.44 U	0.41 U	0.39 U	--	--	0.49 U	0.42 U	0.4 U	0.44 U
PYRENE	0.59	0.094 J	0.2 U	--	--	1.3	0.5	0.21 U	0.78
TOTAL PAHS	4.796	1.028	0 U	--	--	9.586	3.698	0.078	6.522
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	0.0089 U	0.0082 U	0.0079 U	--	--	0.0075 U	0.0074 U	0.0082 U	0.0091 U
2-METHYLNAPHTHALENE	0.06	0.037	0.0019 J	--	--	0.073	0.022	0.0014 J	0.3
ACENAPHTHENE	0.027	0.0048	0.0039 U	--	--	0.022	0.01	0.00078 J	0.018
ACENAPHTHYLENE	0.068	0.012	0.0012 J	--	--	0.14	0.056	0.0013 J	0.085
ANTHRACENE	0.16	0.016	0.0017 J	--	--	0.12	0.049	0.0018 J	0.083
BAP EQUIVALENT-HALFND	0.47185	0.09665	0.004091	--	--	0.94264	0.4802	0.014788	0.65687
BAP EQUIVALENT-POS	0.46965	0.0946	0.001946	--	--	0.94019	0.4781	0.012788	0.65467
BENZO(A)ANTHRACENE	0.42 J	0.058	0.0016 J	--	--	0.76 J	0.3	0.01	0.51 J
BENZO(A)PYRENE	0.34	0.071	0.0014 J	--	--	0.7 J	0.37 J	0.0095	0.48 J
BENZO(B)FLUORANTHENE	0.6 J	0.14	0.0037 J	--	--	1.1 J	0.51 J	0.016	0.79 J
BENZO(G,H,I)PERYLENE	0.059 J	0.025 J	0.0039 UJ	--	--	0.35	0.22	0.0071	0.46 J
BENZO(K)FLUORANTHENE	0.21	0.041	0.0013 J	--	--	0.42 J	0.17	0.0062	0.29
CHRYSENE	0.55 J	0.19	0.0034 J	--	--	0.99 J	0.4 J	0.016	0.77 J
DIBENZO(A,H)ANTHRACENE	0.0044 U	0.0041 U	0.0039 U	--	--	0.0049 U	0.0042 U	0.004 U	0.0044 U
FLUORANTHENE	0.82 J	0.13	0.0032 J	--	--	1.4 J	0.6 J	0.018	0.96 J
FLUORENE	0.057	0.0078	0.0039 U	--	--	0.043	0.014	0.0016 J	0.032
HIGH MOLECULAR WEIGHT PAHS	3.019	0.655	0.0114	--	--	5.91	2.65	0.0889	4.7
INDENO(1,2,3-CD)PYRENE	0.25	0.032	0.0039 U	--	--	0.49 J	0.25	0.0061	0.41 J
LOW MOLECULAR WEIGHT PAHS	1.905	0.4216	0.0147	--	--	2.396	1.05	0.03268	2.488
NAPHTHALENE	0.063	0.061	0.0032 J	--	--	0.061	0.021	0.004 U	0.31
PENTACHLOROPHENOL	0.0089 R	0.0084 R	0.008 R	--	--	0.0099 R	0.0086 R	0.0081 U	0.009 U
PHENANTHRENE	0.71 J	0.19	0.0054	--	--	0.61 J	0.3	0.0092	1 J
PYRENE	0.59 J	0.098	0.0039 U	--	--	1.1 J	0.43 J	0.018	0.99 J
TOTAL PAHS	0.55	0.19	0.0034	--	--	0.99	0.4	0.016	0.77
PESTICIDES (MG/KG)									
4,4'-DDD	0.0039 J	0.0021 J	0.004 U	--	--	0.0024 J	0.0042 U	0.0041 U	0.0081 R
4,4'-DDE	0.0084	0.002 J	0.004 U	--	--	0.0042 J	0.00043 R	0.0041 U	0.00063 R
4,4'-DDT	0.0079	0.0034 J	0.004 U	--	--	0.0062 J	0.0016 J	0.0041 U	0.099
ALDRIN	0.00036 J	0.0022 U	0.0021 U	--	--	0.0025 U	0.0022 U	0.0021 U	0.00032 R
ALPHA-BHC	0.0023 U	0.0022 U	0.0021 U	--	--	0.0025 U	0.0022 U	0.0021 U	0.0023 U
ALPHA-CHLORDANE	0.0089	0.0024 J	0.0021 U	--	--	0.002 J	0.00037 J	0.0021 U	0.00076 R
BETA-BHC	0.0023 U	0.00038 J	0.0021 U	--	--	0.00069 J	0.0022 U	0.0021 U	0.00042 J
DELTA-BHC	0.0023 U	0.0022 U	0.0021 U	--	--	0.0025 U	0.0022 U	0.0021 U	0.0023 U
DIELDRIN	0.0044 U	0.00034 R	0.004 U	--	--	0.00039 R	0.0042 U	0.0041 U	0.00058 R
ENDOSULFAN I	0.0014 R	0.0018 J	0.0021 U	--	--	0.0008 J	0.00094 J	0.0021 U	0.001 R
ENDOSULFAN II	0.0044 U	0.0042 U	0.004 U	--	--	0.0049 U	0.0042 U	0.0041 U	0.0033 R
ENDOSULFAN SULFATE	0.0044 U	0.0042 U	0.004 U	--	--	0.0049 U	0.00044 J	0.0041 U	0.0028 R

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R03-S	R03-S	R03-S	R03-S	R04-S	R04-S	R04-S	R04-S	R05-S
SAMPLE ID	R3-S-0006-01	R3-S-0624	R3-S-2448	R3-S-0006	R4-S-0006	R4-S-0006-01	R4-S-0624	R4-S-2448	R5-S-0006-01
SAMPLE DATE	20191119	20191119	20191119	20191119	20191119	20191119	20191119	20191119	20191119
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SB	SS
ENDRIN	0.0013 J	0.0012 J	0.004 U	--	--	0.0013 J	0.0007 J	0.0041 U	0.0015 R
ENDRIN ALDEHYDE	0.00082 J	0.00081 J	0.004 U	--	--	0.0024 J	0.00094 J	0.0041 U	0.001 J
ENDRIN KETONE	0.0044 U	0.0042 U	0.004 U	--	--	0.0049 U	0.0042 U	0.0041 U	0.0045 U
GAMMA-BHC (LINDANE)	0.0014 J	0.00074 J	0.0021 U	--	--	0.0025 U	0.0022 U	0.0021 U	0.0055 J
GAMMA-CHLORDANE	0.01 J	0.0019 J	0.0021 U	--	--	0.0012 J	0.00028 J	0.0021 U	0.0021 J
HEPTACHLOR	0.0028 J	0.0022 U	0.0021 U	--	--	0.0007 R	0.0022 U	0.0021 U	0.0012 R
HEPTACHLOR EPOXIDE	0.0089	0.0023	0.00023 J	--	--	0.0025 U	0.0022 U	0.00022 R	0.0011 J
METHOXYCHLOR	0.019 J	0.013 J	0.021 U	--	--	0.038	0.013 J	0.0018 J	0.022 J
TOXAPHENE	0.23 U	0.22 U	0.21 U	--	--	0.25 U	0.22 U	0.21 U	0.23 U
PCBS (MG/KG)									
AROCLOR-1016	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1221	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1232	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1242	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1248	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1254	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1260	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1262	--	--	0.04 U	--	--	--	--	--	--
AROCLOR-1268	--	--	0.04 U	--	--	--	--	--	--
TOTAL AROCLOR	--	--	0 U	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	0.18	--	--	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	0.321 U	0.301 U	0.347 U	0.362 U	--	0.329 U	0.305 U	--
AROCLOR-1221	--	0.641 U	0.602 U	0.694 U	0.725 U	--	0.658 U	0.61 U	--
AROCLOR-1232	--	0.321 U	0.301 U	0.347 U	0.362 U	--	0.329 U	0.305 U	--
AROCLOR-1242	--	0.321 U	0.301 U	0.347 U	0.362 U	--	0.329 U	0.305 U	--
AROCLOR-1248	--	0.321 U	0.301 U	0.347 U	0.362 U	--	0.329 U	0.305 U	--
AROCLOR-1254	--	0.321 U	0.301 U	0.347 U	0.362 U	--	0.329 U	0.305 U	--
AROCLOR-1260	--	0.321 U	0.301 U	0.347 U	0.362 U	--	0.329 U	0.305 U	--
AROCLOR-1262	--	0.321 U	0.301 U	0.347 U	0.362 U	--	0.329 U	0.305 U	--
AROCLOR-1268	--	0.321 U	0.301 U	0.347 U	0.362 U	--	0.329 U	0.305 U	--
TOTAL AROCLOR	--	0 U	0 U	0 U	0 U	--	0 U	0 U	--
TOTAL AROCLOR HALFND	--	1.6045	1.505	1.735	1.8105	--	1.645	1.525	--
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	0.00031 J	0.000037 J	0 UJ	--	--	0.00051 J	0.000031 J	0.0000059 J	0.00046 J
HEPTACHLOROBIPHENYLS	0.0056 J	0.00046 J	0.00006 J	--	--	0.0064 J	0.00066 J	0.000028 J	0.21 J
HEXACHLOROBIPHENYLS	0.0076 J	0.00066 J	0.000076 J	--	--	0.0092 J	0.001 J	0.00003 J	0.23 J
MONOCHLOROBIPHENYLS	0.000074 J	0.00004 J	0 UJ	--	--	0.00032 J	0.000022 J	0.0000042 J	0.00036 J
NONACHLOROBIPHENYLS	0.0034 J	0.00049 J	0.000019 J	--	--	0.0023 J	0.00033 J	0.000026 J	0.0039 J
OCTACHLOROBIPHENYLS	0.0023 J	0.00027 J	0.000029 J	--	--	0.0026 J	0.00027 J	0.000014 J	0.045 J
PCB-1	0.000013	0.0000058	0.000002 U	--	--	0.000048	0.0000032	0.000002 U	0.000056
PCB-10	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-100	0.000002 U	0.000002 U	0.000002 U	--	--	0.0000024	0.000002 U	0.000002 U	0.0000083
PCB-101/90	0.00073	0.000069	0.000007	--	--	0.0012	0.000096	0.0000076	0.014
PCB-103	0.000002 U	0.000002 U	0.000002 U	--	--	0.0000047	0.000002 U	0.000002 U	0.000018
PCB-104	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-105	0.00036	0.000034	0.0000039	--	--	0.00063	0.000067	0.000003	0.0022
PCB-106	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--
PCB-108/107	0.000073	0.0000073	0.000004 U	--	--	0.00011	0.000012	0.000004 U	0.00036
PCB-108/124	--	--	--	--	--	--	--	--	--
PCB-109	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-11	0.00017	0.000023	0.000002 U	--	--	0.00026	0.000011	0.0000059	0.000068
PCB-110	0.00089	0.000081	0.0000098	--	--	0.0015	0.00013	0.0000086	0.0093
PCB-110/115	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--
PCB-111/115	0.000004 U	0.0000015 J	0.000004 U	--	--	0.000024	0.0000027 J	0.000004 U	0.000072
PCB-112	--	--	--	--	--	--	--	--	--
PCB-113	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-114	0.000017	0.0000024	0.0000014 U	--	--	0.000032	0.0000034	0.0000015 U	0.000095
PCB-118	--	--	--	--	--	--	--	--	--
PCB-118/106	0.0009	0.000086	0.0000061	--	--	0.0014	0.00015	0.0000068	0.0072
PCB-119	0.000016	0.0000017 J	0.000002 U	--	--	0.000022	0.0000026	0.000002 U	0.000072
PCB-12	0.000011	0.000003	0.000002 U	--	--	0.000017	0.0000018 J	0.000002 U	0.000024
PCB-12/13	--	--	--	--	--	--	--	--	--
PCB-120	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000025
PCB-121	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-122	0.000011	0.0000015 J	0.000002 U	--	--	0.000019	0.0000029	0.000002 U	0.000071
PCB-123	0.000012	0.0000016 J	0.0000011 U	--	--	0.000022	0.0000032	0.0000012 U	0.000062
PCB-124	0.000035	0.0000045	0.000002 U	--	--	0.000061	0.0000064	0.000002 U	0.00034
PCB-126	0.000016	0.000002	0.0000017 U	--	--	0.000015	0.0000041	0.0000018 U	0.000066
PCB-127	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-128/162	0.00022	0.000021	0.0000031 J	--	--	0.00034	0.000038	0.000004 U	0.0037
PCB-128/166	--	--	--	--	--	--	--	--	--
PCB-129	0.000051	0.0000058	0.000002 U	--	--	0.00009	0.0000096	0.000002 U	0.00075
PCB-129/138/163	--	--	--	--	--	--	--	--	--
PCB-13	0.000012	0.0000024	0.000002 U	--	--	0.000028	0.0000029	0.000002 U	0.000021
PCB-130	0.000091	0.00001	0.000002 U	--	--	0.00014	0.000016	0.000002 U	0.0022
PCB-131	--	--	--	--	--	--	--	--	--
PCB-131/133	0.000043	0.0000036 J	0.000004 U	--	--	0.000048	0.0000059	0.000004 U	0.00077
PCB-132	--	--	--	--	--	--	--	--	--
PCB-132/161	0.00031	0.000022	0.0000032 J	--	--	0.00037	0.000038	0.000004 U	0.0082
PCB-133	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R03-S	R03-S	R03-S	R03-S	R04-S	R04-S	R04-S	R04-S	R04-S	R05-S
SAMPLE ID	R3-S-0006-01	R3-S-0624	R3-S-2448	R3-S-0006	R4-S-0006	R4-S-0006-01	R4-S-0624	R4-S-2448	R5-S-0006-01
SAMPLE DATE	20191119	20191119	20191119	20191119	20191119	20191119	20191119	20191119	20191119
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SB	SS
PCB-134	--	--	--	--	--	--	--	--	--
PCB-134/143	0.000049	0.000004	0.000004 U	--	--	0.000073	0.0000069	0.000004 U	0.0013
PCB-135	0.00019	0.000015	0.0000031	--	--	0.00021	0.000018	0.000002 U	0.0045
PCB-135/151	--	--	--	--	--	--	--	--	--
PCB-136	0.00013	0.000013	0.0000025	--	--	0.00025	0.000016	0.000002 U	0.0034
PCB-137	0.000091	0.0000071	0.000002 U	--	--	0.0001	0.000013	0.000002 U	0.00067
PCB-138/163/164	0.0017	0.00015	0.000018	--	--	0.002	0.00024	0.000011	0.05
PCB-139/140	--	--	--	--	--	--	--	--	--
PCB-139/149	0.0012	0.0001	0.000013	--	--	0.0014	0.00014	0.0000074	0.038
PCB-14	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-140	0.0000073	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-141	0.00034	0.00003	0.0000038	--	--	0.00043	0.000046	0.000002 U	0.015
PCB-142	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-143	--	--	--	--	--	--	--	--	--
PCB-144	0.00005	0.0000044	0.000002 U	--	--	0.000063	0.0000063	0.000002 U	0.0011
PCB-145	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000026
PCB-146	--	--	--	--	--	--	--	--	--
PCB-146/165	0.0003	0.000025	0.0000032 J	--	--	0.00029	0.000034	0.000004 U	0.0077
PCB-147	0.000014	0.0000023	0.000002 U	--	--	0.000028	0.0000041	0.000002 U	0.00017
PCB-147/149	--	--	--	--	--	--	--	--	--
PCB-148	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-15	0.000067	0.0000059	0.000002 U	--	--	0.00012	0.0000088	0.000002 U	0.00015
PCB-150	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.00001
PCB-151	0.00041	0.000028	0.0000045	--	--	0.00046	0.000041	0.000002 U	0.015
PCB-152	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000079
PCB-153	0.0019	0.00017	0.000018	--	--	0.0022	0.00027	0.000012	0.063 J
PCB-153/168	--	--	--	--	--	--	--	--	--
PCB-154	0.000015	0.000002 U	0.000002 U	--	--	0.000017	0.0000024	0.000002 U	0.00008
PCB-155	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-156	0.00015	0.000014	0.0000016 U	--	--	0.00024	0.000027	0.0000015 U	0.0038
PCB-156/157	--	--	--	--	--	--	--	--	--
PCB-157	0.000034	0.0000048	0.0000015 U	--	--	0.000053	0.0000065	0.0000016 U	0.00042
PCB-158	--	--	--	--	--	--	--	--	--
PCB-158/160	0.00018	0.000018	0.0000032 J	--	--	0.00026	0.000031	0.000004 U	0.005
PCB-159	0.000021	0.0000019 J	0.000002 U	--	--	0.000019	0.0000028	0.000002 U	0.00057
PCB-16	0.0000057	0.000002 U	0.000002 U	--	--	0.0000079	0.000002 U	0.000002 U	0.000016
PCB-160	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--
PCB-166	0.0000053	0.000002 U	0.000002 U	--	--	0.0000071	0.0000015 J	0.000002 U	0.000035
PCB-167	0.000077	0.0000077	0.0000015 U	--	--	0.0001	0.000013	0.0000016 U	0.0016
PCB-168	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-169	0.0000017 U	0.0000014 U	0.0000014 U	--	--	0.0000014 U	0.00000095 U	0.0000015 U	0.00001
PCB-17	0.0000091	0.000002 U	0.000002 U	--	--	0.000012	0.000002 U	0.000002 U	0.000017
PCB-170	0.0006	0.000047	0.0000071	--	--	0.00071	0.000075	0.0000051	0.026 J
PCB-171	0.00017	0.000014	0.000003	--	--	0.00019	0.000021	0.000002 U	0.0074
PCB-171/173	--	--	--	--	--	--	--	--	--
PCB-172	0.00013	0.000013	0.000002 U	--	--	0.00016	0.000016	0.000002 U	0.0042
PCB-173	0.000016	0.000002 U	0.000002 U	--	--	0.000013	0.000002 U	0.000002 U	0.00055
PCB-174	0.00064	0.000052	0.000009	--	--	0.0008	0.00008	0.0000038	0.022 J
PCB-175	0.0000079	0.0000023	0.000002 U	--	--	0.000023	0.0000031	0.000002 U	0.000002 U
PCB-176	0.000062	0.0000055	0.000002 U	--	--	0.000085	0.0000072	0.000002 U	0.0024
PCB-177	0.00045	0.000032	0.0000045	--	--	0.00046	0.000049	0.000002 U	0.019
PCB-178	0.0002	0.000016	0.000002 U	--	--	0.0002	0.00002	0.000002 U	0.0069
PCB-179	0.00028	0.000025	0.0000036	--	--	0.00031	0.000031	0.0000019 J	0.009
PCB-18	0.000017	0.000002 U	0.000002 U	--	--	0.000022	0.000002 U	0.000002 U	0.000025
PCB-18/30	--	--	--	--	--	--	--	--	--
PCB-180	0.0013	0.0001	0.000013	--	--	0.0015	0.00015	0.0000084	0.048 J
PCB-180/193	--	--	--	--	--	--	--	--	--
PCB-181	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-182	--	--	--	--	--	--	--	--	--
PCB-182/187	0.0011	0.000089	0.000013	--	--	0.0011	0.00012	0.0000052	0.036
PCB-183	0.00037	0.000032	0.000005	--	--	0.00041	0.000043	0.0000037	0.014
PCB-183/185	--	--	--	--	--	--	--	--	--
PCB-184	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-185	0.000064	0.0000079	0.000002 U	--	--	0.000084	0.0000094	0.000002 U	0.002
PCB-186	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-187	--	--	--	--	--	--	--	--	--
PCB-188	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-189	0.000025	0.0000031	0.0000021	--	--	0.000025	0.0000035	0.0000017 U	0.0009
PCB-19	0.0000022	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000006
PCB-190	0.00013	0.000012	0.000002 U	--	--	0.00016	0.000021	0.000002 U	0.0064
PCB-191	0.000023	0.0000028	0.000002 U	--	--	0.000031	0.0000034	0.000002 U	0.001
PCB-192	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-193	0.00008	0.0000074	0.000002 U	--	--	0.0001	0.000012	0.000002 U	0.0034
PCB-194	0.00035	0.000037	0.0000055	--	--	0.00048	0.000046	0.000003	0.01
PCB-195	0.00015	0.000013	0.000002	--	--	0.00019	0.000018	0.000002 U	0.0061
PCB-196	--	--	--	--	--	--	--	--	--
PCB-196/203	0.00057	0.000066	0.0000074	--	--	0.00068	0.000069	0.0000047	0.012
PCB-197	0.000015	0.0000023	0.000002 U	--	--	0.000021	0.0000018 J	0.000002 U	0.00032
PCB-197/200	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R03-S	R03-S	R03-S	R03-S	R04-S	R04-S	R04-S	R04-S	R05-S
SAMPLE ID	R3-S-0006-01	R3-S-0624	R3-S-2448	R3-S-0006	R4-S-0006	R4-S-0006-01	R4-S-0624	R4-S-2448	R5-S-0006-01
SAMPLE DATE	20191119	20191119	20191119	20191119	20191119	20191119	20191119	20191119	20191119
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SB	SS
PCB-198	0.00002	0.0000043	0.000002 U	--	--	0.000034	0.0000055	0.000002 U	0.00093
PCB-198/199	--	--	--	--	--	--	--	--	--
PCB-199	0.00078	0.000097	0.0000093	--	--	0.0008	0.000086	0.000006	0.01
PCB-2	0.000025	0.000016	0.000002 U	--	--	0.00011	0.0000077	0.000002 U	0.00015
PCB-20/21/33	0.000029	0.0000034 J	0.000006 U	--	--	0.000048	0.0000036 J	0.000006 U	0.000077
PCB-20/28	--	--	--	--	--	--	--	--	--
PCB-200	0.000049	0.0000055	0.000002 U	--	--	0.000066	0.0000072	0.000002 U	0.0016
PCB-201	0.000061	0.0000092	0.000002 U	--	--	0.000079	0.00001	0.000002 U	0.0012
PCB-202	0.00025	0.000033	0.000003	--	--	0.00021	0.000024	0.000002 U	0.0022
PCB-203	--	--	--	--	--	--	--	--	--
PCB-204	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-205	0.000021	0.0000024	0.0000017 J	--	--	0.000023	0.0000035	0.000002 U	0.00066
PCB-206	0.0022	0.00031	0.000012	--	--	0.0015	0.00021	0.000016	0.0028
PCB-207	0.0002	0.000033	0.0000015 J	--	--	0.00016	0.000022	0.0000019 J	0.00041
PCB-208	0.001	0.00015	0.0000051	--	--	0.00066	0.0001	0.0000079	0.00071
PCB-209	0.0035	0.00066	0.000018	--	--	0.0029	0.00041	0.000026	0.0014
PCB-21/33	--	--	--	--	--	--	--	--	--
PCB-22	0.000017	0.0000027	0.000002 U	--	--	0.000033	0.0000028	0.000002 U	0.000033
PCB-23	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-24	0.000002 U	0.000002 U	0.000002 U	--	--	0.0000021	0.000002 U	0.000002 U	0.0000038
PCB-25	0.0000037	0.000002 U	0.000002 U	--	--	0.000008	0.000002 U	0.000002 U	0.000011
PCB-26	0.0000091	0.000002 U	0.000002 U	--	--	0.000022	0.000002 U	0.000002 U	0.000022
PCB-26/29	--	--	--	--	--	--	--	--	--
PCB-27	0.000002 U	0.000002 U	0.000002 U	--	--	0.0000027	0.000002 U	0.000002 U	0.000002
PCB-28	0.000059	0.000006	0.000002 U	--	--	0.000092	0.0000078	0.000002 U	0.00015
PCB-29	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-3	0.000036	0.000018	0.000002 U	--	--	0.00016	0.000011	0.0000042	0.00015
PCB-30	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-31	0.0025	0.000042	0.000002 U	--	--	0.00014	0.000012	0.000002 U	0.00017
PCB-32	0.000008	0.000002 U	0.000002 U	--	--	0.00001	0.000002 U	0.000002 U	0.000021
PCB-34	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-35	0.000002 U	0.0000025	0.000002 U	--	--	0.00002	0.000002 U	0.000002 U	0.000011
PCB-36	0.000002 U	0.000002 U	0.000002 U	--	--	0.00001	0.000002 U	0.000002 U	0.000002 U
PCB-37	0.000073	0.0000071	0.000002 U	--	--	0.000091	0.0000097	0.000002 U	0.00015
PCB-38	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-39	0.000002 U	0.000002 U	0.000002 U	--	--	0.0000074	0.000002 U	0.000002 U	0.000002 U
PCB-4	0.0000035	0.000002 U	0.000002 U	--	--	0.0000064	0.000002 U	0.000002 U	0.000015
PCB-40	0.0000089	0.000002 U	0.000002 U	--	--	0.000012	0.000002 U	0.000002 U	0.000032
PCB-40/71	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	0.0001	0.0000098	0.000008 U	--	--	0.00016	0.000013	0.000008 U	0.00041
PCB-42	--	--	--	--	--	--	--	--	--
PCB-42/59	0.000021	0.0000034 J	0.000004 U	--	--	0.000034	0.0000024 J	0.000004 U	0.0001
PCB-43	--	--	--	--	--	--	--	--	--
PCB-43/49	0.00009	0.000012	0.000004 U	--	--	0.00017	0.000011	0.000004 U	0.00045
PCB-44	0.000061	0.0000084	0.000002 U	--	--	0.00016	0.0000089	0.000002 U	0.00044
PCB-44/47/65	--	--	--	--	--	--	--	--	--
PCB-45	0.000006	0.000002 U	0.000002 U	--	--	0.0000079	0.000002 U	0.000002 U	0.000029
PCB-45/51	--	--	--	--	--	--	--	--	--
PCB-46	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000094
PCB-47	0.00003	0.0000046	0.000002 U	--	--	0.000039	0.0000031	0.000002 U	0.00013
PCB-48	--	--	--	--	--	--	--	--	--
PCB-48/75	0.0000087	0.000004 U	0.000004 U	--	--	0.000016	0.0000014 J	0.000004 U	0.000032
PCB-49/69	--	--	--	--	--	--	--	--	--
PCB-5	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-50	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-50/53	--	--	--	--	--	--	--	--	--
PCB-51	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000052
PCB-52	--	--	--	--	--	--	--	--	--
PCB-52/69	0.00012	0.000016	0.000004 U	--	--	0.00035	0.000017	0.0000031 J	0.0012
PCB-53	0.0000046	0.000002 U	0.000002 U	--	--	0.000012	0.000002 U	0.000002 U	0.00003
PCB-54	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-55	0.0000047	0.000002 U	0.000002 U	--	--	0.0000071	0.000002 U	0.000002 U	0.000026
PCB-56	--	--	--	--	--	--	--	--	--
PCB-56/60	0.0001	0.000012	0.000004 U	--	--	0.00016	0.000015	0.000004 U	0.00034
PCB-57	0.000002 U	0.000002 U	0.000002 U	--	--	0.0000021	0.000002 U	0.000002 U	0.0000042
PCB-58	0.000002 U	0.000002 U	0.000002 U	--	--	0.0000021	0.000002 U	0.000002 U	0.0000036
PCB-59/62/75	--	--	--	--	--	--	--	--	--
PCB-6	0.0000068	0.000002 U	0.000002 U	--	--	0.000012	0.0000017 J	0.000002 U	0.000035
PCB-60	--	--	--	--	--	--	--	--	--
PCB-61/70	0.00033	0.000034	0.000004 U	--	--	0.00058	0.000051	0.0000035 J	0.0011
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--
PCB-62	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-63	0.000009	0.000002 U	0.000002 U	--	--	0.000012	0.000002 U	0.000002 U	0.000036
PCB-64	--	--	--	--	--	--	--	--	--
PCB-65	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-66	--	--	--	--	--	--	--	--	--
PCB-66/76	0.00019	0.00002	0.000004 U	--	--	0.00033	0.000029	0.0000021 J	0.0011
PCB-67	0.0000072	0.000002 U	0.000002 U	--	--	0.0000099	0.000002 U	0.000002 U	0.000013
PCB-68	0.0000083	0.0000018 J	0.000002 U	--	--	0.0000085	0.000002 U	0.000002 U	0.0000064
PCB-7	0.0000022	0.000002 U	0.000002 U	--	--	0.0000059	0.000002 U	0.000002 U	0.000011
PCB-72	--	--	--	--	--	--	--	--	--
PCB-73	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R03-S	R03-S	R03-S	R03-S	R04-S	R04-S	R04-S	R04-S	R05-S
SAMPLE ID	R3-S-0006-01	R3-S-0624	R3-S-2448	R3-S-0006	R4-S-0006	R4-S-0006-01	R4-S-0624	R4-S-2448	R5-S-0006-01
SAMPLE DATE	20191119	20191119	20191119	20191119	20191119	20191119	20191119	20191119	20191119
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SB	SS
PCB-74	0.00011	0.0000085	0.000002 U	--	--	0.00015	0.000012	0.000002 U	0.00029
PCB-77	0.000057	0.0000066	0.0000015 U	--	--	0.000071	0.0000096	0.0000017 U	0.00012
PCB-78	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000074
PCB-79	0.000007	0.000002 U	0.000002 U	--	--	0.0000095	0.0000019 J	0.000002 U	0.000019
PCB-8	0.00003	0.000003	0.000002 U	--	--	0.000058	0.0000045	0.000002 U	0.00012
PCB-80	0.0000038	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-81	0.0000087	0.00000091 U	0.0000013 U	--	--	0.000014	0.0000017 J	0.0000014 U	0.000059
PCB-82	0.000043	0.0000066	0.000002 U	--	--	0.00011	0.0000086	0.000002 U	0.00011
PCB-83	--	--	--	--	--	--	--	--	--
PCB-83/112	0.000019	0.0000023 J	0.000004 U	--	--	0.000039	0.0000039 J	0.000004 U	0.00016
PCB-84	--	--	--	--	--	--	--	--	--
PCB-84/92	0.00017	0.000018	0.000003 J	--	--	0.00036	0.000024	0.0000038 J	0.0023
PCB-85/116	0.00016	0.000015	0.000004 U	--	--	0.00024	0.000023	0.000004 U	0.00061
PCB-85/116/117	--	--	--	--	--	--	--	--	--
PCB-86	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--
PCB-87/117/125	0.00023	0.000024	0.000006 U	--	--	0.00045	0.000036	0.000006 U	0.002
PCB-88/91	0.000056	0.0000057	0.000004 U	--	--	0.00014	0.0000086	0.000004 U	0.00043
PCB-89	0.000002 U	0.000002 U	0.000002 U	--	--	0.0000058	0.000002 U	0.000002 U	0.000021
PCB-9	0.000003	0.000002 U	0.000002 U	--	--	0.0000045	0.000002 U	0.000002 U	0.000012
PCB-90/101/113	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--
PCB-93	0.000002 U	0.000002 U	0.000002 U	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-93/100	--	--	--	--	--	--	--	--	--
PCB-94	0.000002 U	0.000002 U	0.000002 U	--	--	0.000003	0.000002 U	0.000002 U	0.000013
PCB-95	0.00028	0.000031	0.0000037	--	--	0.0007	0.000038	0.0000056	0.0069
PCB-96	0.000002 U	0.000002 U	0.000002 U	--	--	0.0000033	0.000002 U	0.000002 U	0.000012
PCB-97	0.00012	0.000012	0.000002 U	--	--	0.00024	0.000017	0.000002 U	0.001
PCB-98/102	0.000004 U	0.000004 U	0.000004 U	--	--	0.000004 U	0.000004 U	0.000004 U	0.000004 U
PCB-99	0.00024	0.000028	0.0000035	--	--	0.0004	0.000043	0.0000033	0.0011
PENTACHLOROBIPHENYLS	0.0044 J	0.00044 J	0.000037 J	--	--	0.0077 J	0.00068 J	0.000039 J	0.049 J
TEQ DIOXIN-LIKE PCBs (BIRD)	5.37724E-06	5.35644E-07	4.11E-10	--	--	6.54697E-06	1.07059E-06	3E-10	1.91871E-05
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	5.37809E-06	5.81844E-07	1.88848E-07	--	--	6.54767E-06	1.07106E-06	2.03802E-07	1.91871E-05
TEQ DIOXIN-LIKE PCBs (FISH)	9.3425E-08	1.0997E-08	2.9E-11	--	--	9.461E-08	2.2927E-08	1.5E-11	4.17385E-07
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	9.3467E-08	1.1259E-08	4.729E-09	--	--	9.4645E-08	2.295E-08	5.008E-09	4.17385E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.62856E-06	2.02688E-07	1.8E-10	--	--	1.54436E-06	4.15178E-07	9E-11	7.20201E-06
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	1.65406E-06	2.23824E-07	1.06555E-07	--	--	1.56536E-06	4.29428E-07	1.1302E-07	7.20201E-06
TETRACHLOROBIPHENYLS	0.0013 J	0.00014 J	0 UJ	--	--	0.0023 J	0.00018 J	0.0000087 J	0.006 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0007567	0.0000762	0.000006	--	--	0.001202	0.000139	0.000003	0.009332
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.030412	0.0031781	0.0002324	--	--	0.0335583	0.0035135	0.0001785	0.5332078
TOTAL PCB CONGENERS ZEROND	0.0311687	0.0032543	0.0002384	--	--	0.0347603	0.0036525	0.0001815	0.5425398
TOTAL PCB CONGENERS-NOAA	0.015137	0.0018024	0.0001212	--	--	0.016682	0.0019112	0.0001063	0.263435
TOTAL PCB CONGENERS-NOAA HALFND	0.03122255	0.003330455	0.0003959	--	--	0.034803	0.003723975	0.00034925	0.5425768
TOTAL PCB CONGENERS-NOAA X2	0.030274	0.0036048	0.0002424	--	--	0.033364	0.0038224	0.0002126	0.52687
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.030274	0.0036068	0.0002584	--	--	0.033364	0.0038244	0.0002266	0.52687
TRICHLOROBIPHENYLS	0.0027 J	0.000064 J	0 UJ	--	--	0.00053 J	0.000036 J	0 UJ	0.00071 J
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	1200	700	4700	--	--	1300	1500	2400	970
1,2,3,4,6,7,8,9-OCDF	120	11	1.1 U	--	--	92	8.6 J	1.1 U	58
1,2,3,4,6,7,8-HPCDD	84	14	35	--	--	140	25	23	110
1,2,3,4,6,7,8-HPCDF	110	10	0.5 J	--	--	66	17	1.2 Z	34
1,2,3,4,7,8,9-HPCDF	4.4 J	0.43 Z	0.16 U	--	--	3.3 J	0.75 Z	0.16 U	2.6 J
1,2,3,4,7,8-HXCDD	1.7 J	0.33 Z	0.29 Z	--	--	2.6 J	0.9 J	0.24 J	2.7 J
1,2,3,4,7,8-HXCDF	5.1	1.1 J	0.14 U	--	--	6.4	3.2 J	0.4 J	9.4
1,2,3,6,7,8-HXCDD	3.3 J	0.7 J	0.37 Z	--	--	5.8	1.5 J	0.33 Z	10
1,2,3,6,7,8-HXCDF	7.1	1.2 J	0.18 U	--	--	6.4	3.1 J	0.35 Z	5.2
1,2,3,7,8,9-HXCDD	3.5 J	0.6 J	0.45 J	--	--	4.8 J	1.2 J	0.58 J	5.9
1,2,3,7,8,9-HXCDF	1.2 J	0.21 U	0.21 U	--	--	1.8 J	0.98 J	0.21 U	1.1 Z
1,2,3,7,8-PECDD	1.8 J	0.56 Z	0.18 U	--	--	2.8 J	1.7 J	0.18 U	3.8 J
1,2,3,7,8-PECDF	3 J	1.1 Z	0.15 U	--	--	8.3 J	2.8 J	0.24 U	2.3 Z
2,3,4,6,7,8-HXCDF	7.2	1 J	0.11 U	--	--	6.7	3.3 J	0.39 J	3.9 J
2,3,4,7,8-PECDF	5.4	1.4 Z	0.15 U	--	--	7.4	4.4 J	0.21 U	69 J
2,3,7,8-TCDD	1.4	0.14 U	0.14 U	--	--	1.5 Z	0.44 Z	0.14 U	2.1
2,3,7,8-TCDF	3.8 J	1.8 J	0.11 U	--	--	8.5 J	3.3 J	0.19 J	5.6 Z
TEQ DIOXINS (BIRD)	16.588	4.4729	0.5732	--	--	24.8002	11.71136	0.6523	84.0938
TEQ DIOXINS (BIRD) HALFND	16.588	4.5534	0.903555	--	--	24.8002	11.71136	0.940655	84.0938
TEQ DIOXINS (FISH)	10.578	2.1024	0.6632	--	--	13.3482	6.53336	0.5276	44.8428
TEQ DIOXINS (FISH) HALFND	10.578	2.1829	0.900055	--	--	13.3482	6.53336	0.757455	44.8428
TEQ DIOXINS (HUMANS/MAMMALS)	10.58	2.1436	1.876	--	--	13.5796	6.17208	1.21	32.8234
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	10.58	2.2241	2.099215	--	--	13.5796	6.17208	1.416565	32.8234
TOTAL HPCDD	150 J	27 J	59 J	--	--	240 J	46 J	42 J	180 J
TOTAL HPCDF	170 J	15 J	0.5 J	--	--	120 J	23 J	0.4 J	66 J
TOTAL HXCDD	41 J	6.5 J	2.5 J	--	--	68 J	28 J	3.8 J	96 J
TOTAL HXCDF	120 J	13 J	0 UJ	--	--	110 J	37 J	1.4 J	350 J
TOTAL PECDD	19 J	4.5 J	0 UJ	--	--	37 J	18 J	0.29 J	54 J
TOTAL PECDF	83 J	11 J	0 UJ	--	--	130 J	63 J	1.4 J	1700 J
TOTAL TCDD	23 J	9.3 J	0.33 J	--	--	43 J	18 J	0 UJ	69 J
TOTAL TCDF	64 J	18 J	0 UJ	--	--	140 J	60 J	1.4 J	530 J
METALS (MG/KG)									
ALUMINUM	9030	7490	11900	--	--	6660	7140	9780	9050
ANTIMONY	1.5	0.34 J	1.2 U	--	--	1.2 J	0.6 J	1.2 U	0.53 J
ARSENIC	14.6	7.3	6.6	--	--	16.9	13.7	5	22.5
BARIUM	533	133	89.5	--	--	251	143	59.9	124

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R03-S	R03-S	R03-S	R03-S	R04-S	R04-S	R04-S	R04-S	R05-S
SAMPLE ID	R3-S-0006-01	R3-S-0624	R3-S-2448	R3-S-0006	R4-S-0006	R4-S-0006-01	R4-S-0624	R4-S-2448	R5-S-0006-01
SAMPLE DATE	20191119	20191119	20191119	20191119	20191119	20191119	20191119	20191119	20191119
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SB	SS
BERYLLIUM	1.8	0.76	0.66	--	--	1.6	1.2	0.5 J	1.1
CADMIUM	1.9	0.27 J	0.59 U	--	--	6.6	8.1	0.92	0.68
CALCIUM	11200	2620	643	--	--	4480	1330	717	4110
CHROMIUM	22.7	6.9	33.5	--	--	19.7	13.9	10.6	17.4
COBALT	9	3.3	3.9	--	--	8.6	11.1	6.1	9.6
COPPER	209	52.3	10.2	--	--	90.5	60.3	19.7	50.5
CYANIDE	0.051 J	0.12 J	0.076 J	--	--	0.16 J	0.035 J	0.32 J	0.69 R
IRON	15300	16600	14300	--	--	15800	56800	15900	15800
LEAD	575	59.6	18.5	--	--	350	205	31.7	146
MAGNESIUM	1450	775	793	--	--	865	575 J	748	1340
MANGANESE	395	169	77.7	--	--	500	784	405	434
MERCURY	0.11 J	0.089 J	0.025 J	--	--	0.065 J	0.21	0.11	0.22
NICKEL	33.9	5.2	6	--	--	22.3	13.9	6.6	19.8
POTASSIUM	1090	801	1070	--	--	988	784	1080	2090
SELENIUM	3.1 UJ	3.1 UJ	2.9 UJ	--	--	3.6 UJ	2.9 UJ	2.9 UJ	3.4 UJ
SILVER	0.35 J	0.052 J	0.59 U	--	--	0.21 J	0.12 J	0.58 U	0.24 J
SODIUM	679 UJ	618 UJ	590 UJ	--	--	722 UJ	630 UJ	592 UJ	677 UJ
THALLIUM	0.63 UJ	0.62 UJ	0.59 UJ	--	--	0.72 UJ	0.58 UJ	0.58 UJ	0.67 UJ
VANADIUM	21.3	11.2	34.2	--	--	16.8	15.1	19.7	11.4
ZINC	736	97.4	34.1	--	--	435	509	109	150
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	78	83	72	69	--	76	82	--

LOCATION	R05-S	R05-S	R05-S	R06-S	R06-S	R06-S	R06-S	R06-S	R06-S
SAMPLE ID	R5-S-0624	R5-S-2448	R5-S-0006	R6-C-D-0006	R6-C-D-0624	R6-S-0006	R6-S-0006-01	R6-S-0624	R6-S-2448
SAMPLE DATE	20191119	20191119	20191119	20191120	20191120	20191120	20191120	20191120	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SB	SS	SS	SS	SS	SS	SS	SB
TOP DEPTH	0.5	2	0	0	0.5	0	0	0.5	2
BOTTOM DEPTH	2	4	0.5	0.5	2	0.5	0.5	2	4
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	0.0051 UJ	--	--	0.0046 UJ	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
1,1,2-TRICHLOROETHANE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	0.0051 UJ	--	--	0.0046 UJ	--	--	--
1,1-DICHLOROETHANE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
1,1-DICHLOROETHENE	--	--	0.0051 UJ	--	--	0.0046 UJ	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	0.0051 R	--	--	0.0046 UJ	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	0.0051 R	--	--	0.0046 UJ	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	0.0051 R	--	--	0.0046 UJ	--	--	--
1,2-DIBROMOETHANE	--	--	0.0051 UJ	--	--	0.0046 UJ	--	--	--
1,2-DICHLOROBENZENE	--	--	0.0051 R	--	--	0.0046 UJ	--	--	--
1,2-DICHLOROETHANE	--	--	0.0051 UJ	--	--	0.0046 UJ	--	--	--
1,2-DICHLOROPROPANE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
1,3-DICHLOROBENZENE	--	--	0.0051 R	--	--	0.0046 UJ	--	--	--
1,4-DICHLOROBENZENE	--	--	0.0051 R	--	--	0.0046 UJ	--	--	--
2-BUTANONE	--	--	0.01 UJ	--	--	0.0093 U	--	--	--
2-HEXANONE	--	--	0.01 UJ	--	--	0.0093 U	--	--	--
4-METHYL-2-PENTANONE	--	--	0.01 UJ	--	--	0.0093 U	--	--	--
ACETONE	--	--	0.01 UJ	--	--	0.0093 U	--	--	--
BENZENE	--	--	0.012 J+	--	--	0.0046 U	--	--	--
BROMOCHLOROMETHANE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
BROMODICHLOROMETHANE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
BROMOFORM	--	--	0.0051 R	--	--	0.0046 UJ	--	--	--
BROMOMETHANE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
CARBON DISULFIDE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
CARBON TETRACHLORIDE	--	--	0.0051 UJ	--	--	0.0046 UJ	--	--	--
CHLOROBENZENE	--	--	0.0051 UJ	--	--	0.0046 UJ	--	--	--
CHLORODIBROMOMETHANE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
CHLOROETHANE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
CHLOROFORM	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
CHLOROMETHANE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	0.0051 UJ	--	--	0.0046 UJ	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
CYCLOHEXANE	--	--	0.0055 J+	--	--	0.0046 U	--	--	--
DICHLORODIFLUOROMETHANE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
ETHYLBENZENE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
ISOPROPYLBENZENE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
M+P-XYLENES	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
METHYL ACETATE	--	--	0.0051 UJ	--	--	0.0046 UJ	--	--	--
METHYL CYCLOHEXANE	--	--	0.0095 J+	--	--	0.0046 U	--	--	--
METHYL TERT-BUTYL ETHER	--	--	0.0051 UJ	--	--	0.0046 UJ	--	--	--
METHYLENE CHLORIDE	--	--	0.0051 UJ	--	--	0.0046 UJ	--	--	--
O-XYLENE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
STYRENE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
TETRACHLOROETHENE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
TOLUENE	--	--	0.012 J+	--	--	0.0046 U	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	0.0051 UJ	--	--	0.0046 UJ	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
TRICHLOROETHENE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
TRICHLOROFLUOROMETHANE	--	--	0.0051 UJ	--	--	0.0046 UJ	--	--	--
VINYL CHLORIDE	--	--	0.0051 UJ	--	--	0.0046 U	--	--	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.12 J	0.039 J	--	--	--	--	0.03 J	0.021 J	0.21 U
1,2,4,5-TETRACHLOROBENZENE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
1,4-DIOXANE	0.078 U	0.089 U	--	--	--	--	0.091 U	0.084 U	0.081 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
2,3,4,6-TETRACHLOROPHENOL	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
2,4,5-TRICHLOROPHENOL	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
2,4,6-TRICHLOROPHENOL	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
2,4-DICHLOROPHENOL	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
2,4-DIMETHYLPHENOL	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
2,4-DINITROPHENOL	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
2,4-DINITROTOLUENE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
2,6-DINITROTOLUENE	0.2 U	0.22 U	--	--	--	--	0.23 UJ	0.21 U	0.21 U
2-CHLORONAPHTHALENE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
2-CHLOROPHENOL	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
2-METHYLNAPHTHALENE	0.29	0.14 J	--	--	--	--	0.086 J	0.052 J	0.21 U
2-METHYLPHENOL	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
2-NITROANILINE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
2-NITROPHENOL	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
3&4-METHYLPHENOL	0.029 J	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
3,3'-DICHLOROBENZIDINE	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
3-NITROANILINE	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
4,6-DINITRO-2-METHYLPHENOL	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
4-BROMOPHENYL PHENYL ETHER	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
4-CHLORO-3-METHYLPHENOL	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
4-CHLOROANILINE	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
4-CHLOROPHENYL PHENYL ETHER	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
4-NITROANILINE	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
4-NITROPHENOL	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U

LOCATION	R05-S	R05-S	R05-S	R06-S	R06-S	R06-S	R06-S	R06-S	R06-S
SAMPLE ID	R5-S-0624	R5-S-2448	R5-S-0006	R6-C-D-0006	R6-C-D-0624	R6-S-0006	R6-S-0006-01	R6-S-0624	R6-S-2448
SAMPLE DATE	20191119	20191119	20191119	20191120	20191120	20191120	20191120	20191120	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SB	SS	SS	SS	SS	SS	SS	SB
ACENAPHTHENE	0.2 U	0.22 U	--	--	--	--	0.025 J	0.21 U	0.21 U
ACENAPHTHYLENE	0.2 U	0.024 J	--	--	--	--	0.19 J	0.12 J	0.21 U
ACETOPHENONE	0.048 J	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
ANTHRACENE	0.032 J	0.061 J	--	--	--	--	0.16 J	0.13 J	0.21 U
ATRAZINE	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
BAP EQUIVALENT-HALFND	0.18835	0.30209	--	--	--	--	1.1676	1.0771	0.180854
BAP EQUIVALENT-POS	0.08835	0.19209	--	--	--	--	1.0526	0.9721	0.075854
BENZALDEHYDE	0.38 U	0.44 U	--	--	--	--	0.025 J	0.42 U	0.4 U
BENZO(A)ANTHRACENE	0.098 J	0.17 J	--	--	--	--	0.76	0.79	0.058 J
BENZO(A)PYRENE	0.058 J	0.14 J	--	--	--	--	0.78	0.73	0.056 J
BENZO(B)FLUORANTHENE	0.16 J	0.24	--	--	--	--	1.3	1.1	0.097 J
BENZO(G,H,I)PERYLENE	0.054 J	0.11 J	--	--	--	--	0.62	0.49	0.043 J
BENZO(K)FLUORANTHENE	0.033 J	0.079 J	--	--	--	--	0.45	0.42	0.027 J
BIS(2-CHLOROETHOXY)METHANE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
BIS(2-CHLOROETHYL)ETHER	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.057 J	0.047 J	--	--	--	--	0.24	0.15 J	0.047 J
BUTYL BENZYL PHTHALATE	0.2 U	0.22 U	--	--	--	--	0.074 J	0.038 J	0.21 U
CAPROLACTAM	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
CARBAZOLE	0.38 U	0.02 J	--	--	--	--	0.088 J	0.035 J	0.4 U
CHRYSENE	0.22	0.3	--	--	--	--	1.1	0.9	0.084 J
DIBENZO(A,H)ANTHRACENE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
DIBENZOFURAN	0.14 J	0.055 J	--	--	--	--	0.054 J	0.035 J	0.21 U
DIETHYL PHTHALATE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
DIMETHYL PHTHALATE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
DI-N-BUTYL PHTHALATE	0.025 J	0.22 U	--	--	--	--	0.092 J	0.21 U	0.21 U
DI-N-OCTYL PHTHALATE	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
FLUORANTHENE	0.18 J	0.38 J	--	--	--	--	1.7	1.5	0.11 J
FLUORENE	0.2 U	0.036 J	--	--	--	--	0.036 J	0.028 J	0.21 U
HEXACHLOROBENZENE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
HEXACHLOROBUTADIENE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
HEXACHLOROCYCLOPENTADIENE	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
HEXACHLOROETHANE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
HIGH MOLECULAR WEIGHT PAHS	0.833	1.449	--	--	--	--	6.92	6.11	0.498
INDENO(1,2,3-CD)PYRENE	0.04 J	0.1 J	--	--	--	--	0.61	0.48	0.04 J
ISOPHORONE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
LOW MOLECULAR WEIGHT PAHS	1.232	1.01	--	--	--	--	2.972	2.346	0.172
NAPHTHALENE	0.31	0.079 J	--	--	--	--	0.071 J	0.048 J	0.21 U
NITROBENZENE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
N-NITROSO-DI-N-PROPYLAMINE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
N-NITROSODIPHENYLAMINE	0.2 U	0.22 U	--	--	--	--	0.23 U	0.21 U	0.21 U
PENTACHLOROPHENOL	0.38 U	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
PHENANTHRENE	0.71	0.43	--	--	--	--	0.79	0.52	0.062 J
PHENOL	0.024 J	0.44 U	--	--	--	--	0.45 U	0.42 U	0.4 U
PYRENE	0.17 J	0.31	--	--	--	--	1.3	1.2	0.093 J
TOTAL PAHS	2.065	2.459	--	--	--	--	9.892	8.456	0.67
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	0.0077 U	0.0091 U	--	--	--	--	0.0078 U	0.009 U	0.008 U
2-METHYLNAPHTHALENE	0.32 J	0.21	--	--	--	--	0.064	0.047	0.0061
ACENAPHTHENE	0.013	0.013	--	--	--	--	0.015	0.01	0.0023 J
ACENAPHTHYLENE	0.01	0.019	--	--	--	--	0.1	0.055	0.0058
ANTHRACENE	0.031	0.042	--	--	--	--	0.085	0.063	0.0075
BAP EQUIVALENT-HALFND	0.08066	0.19615	--	--	--	--	0.68861	0.57218	0.051463
BAP EQUIVALENT-POS	0.07876	0.19395	--	--	--	--	0.68636	0.57008	0.049463
BENZO(A)ANTHRACENE	0.1	0.21	--	--	--	--	0.52 J	0.45 J	0.041
BENZO(A)PYRENE	0.05	0.14	--	--	--	--	0.51 J	0.43 J	0.036
BENZO(B)FLUORANTHENE	0.15	0.25	--	--	--	--	0.86 J	0.66 J	0.067
BENZO(G,H,I)PERYLENE	0.041	0.093	--	--	--	--	0.35	0.26	0.024
BENZO(K)FLUORANTHENE	0.031	0.064	--	--	--	--	0.27	0.26	0.021
CHRYSENE	0.25	0.31	--	--	--	--	0.66 J	0.48 J	0.053
DIBENZO(A,H)ANTHRACENE	0.0038 U	0.0044 U	--	--	--	--	0.0045 U	0.0042 U	0.004 U
FLUORANTHENE	0.18	0.42	--	--	--	--	1 J	0.83 J	0.061
FLUORENE	0.021	0.042	--	--	--	--	0.032	0.024	0.0044
HIGH MOLECULAR WEIGHT PAHS	0.804	1.487	--	--	--	--	4.47	3.54	0.342
INDENO(1,2,3-CD)PYRENE	0.032	0.07	--	--	--	--	0.35	0.26	0.024
LOW MOLECULAR WEIGHT PAHS	1.225	1.106	--	--	--	--	1.789	1.319	0.1242
NAPHTHALENE	0.32 J	0.12	--	--	--	--	0.057	0.037	0.0042
PENTACHLOROPHENOL	0.0078 U	0.0089 U	--	--	--	--	0.0091 U	0.0084 U	0.0081 U
PHENANTHRENE	0.65 J	0.45	--	--	--	--	0.5 J	0.3	0.039
PYRENE	0.15	0.35	--	--	--	--	0.95 J	0.74 J	0.076
TOTAL PAHS	0.25	0.31	--	--	--	--	0.66	0.48	0.053
PESTICIDES (MG/KG)									
4,4'-DDD	0.0046 J	0.0015 R	--	--	--	--	0.0095 R	0.011 J	0.00099 J
4,4'-DDE	0.00035 R	0.00046 R	--	--	--	--	0.052	0.13	0.008
4,4'-DDT	0.011	0.0028 J	--	--	--	--	0.045	0.15	0.0062
ALDRIN	0.00025 R	0.00026 R	--	--	--	--	0.0022 R	0.0022 U	0.0021 U
ALPHA-BHC	0.002 U	0.0023 U	--	--	--	--	0.0024 U	0.0022 U	0.0021 U
ALPHA-CHLORDANE	0.00086 R	0.0023 J	--	--	--	--	0.21	0.00093 J	0.0004 J
BETA-BHC	0.00057 J	0.0023 U	--	--	--	--	0.00063 J	0.0022 U	0.00049 J
DELTA-BHC	0.002 U	0.0023 U	--	--	--	--	0.0024 U	0.0022 U	0.0021 U
DIELDRIN	0.00057 R	0.00065 R	--	--	--	--	0.0022 R	0.0042 U	0.00047 R
ENDOSULFAN I	0.0003 R	0.00061 R	--	--	--	--	0.024 R	0.00088 J	0.0021 U
ENDOSULFAN II	0.0011 J	0.0044 U	--	--	--	--	0.0031 R	0.0042 U	0.004 U
ENDOSULFAN SULFATE	0.0014 J	0.0044 U	--	--	--	--	0.007 J	0.00073 R	0.004 U

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R05-S	R05-S	R05-S	R06-S	R06-S	R06-S	R06-S	R06-S	R06-S
SAMPLE ID	R5-S-0624	R5-S-2448	R5-S-0006	R6-C-D-0006	R6-C-D-0624	R6-S-0006	R6-S-0006-01	R6-S-0624	R6-S-2448
SAMPLE DATE	20191119	20191119	20191119	20191120	20191120	20191120	20191120	20191120	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SB	SS	SS	SS	SS	SS	SS	SB
ENDRIN	0.0028 R	0.0024 J	--	--	--	--	0.011 J	0.015 J	0.00049 J
ENDRIN ALDEHYDE	0.0003 R	0.002 J	--	--	--	--	0.0017 R	0.00066 R	0.004 U
ENDRIN KETONE	0.0039 U	0.0011 R	--	--	--	--	0.001 R	0.0042 U	0.004 U
GAMMA-BHC (LINDANE)	0.0029 J	0.0023 U	--	--	--	--	0.00055 R	0.00079 J	0.0021 U
GAMMA-CHLORDANE	0.002 U	0.0006 R	--	--	--	--	0.27	0.0012 J	0.0021 U
HEPTACHLOR	0.00078 R	0.00066 R	--	--	--	--	0.012 J	0.0022 U	0.0021 U
HEPTACHLOR EPOXIDE	0.0003 J	0.00053 J	--	--	--	--	0.065	0.00053 J	0.0021 U
METHOXYCHLOR	0.0022 R	0.019 J	--	--	--	--	0.0038 R	0.0011 R	0.0027 J
TOXAPHENE	0.2 U	0.23 U	--	--	--	--	0.24 U	0.22 U	0.21 U
PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	0.294 U	0.321 U	0.325 U	0.281 U	0.357 U	0.333 U	--	0.313 U	0.313 U
AROCLOR-1221	0.588 U	0.641 U	0.649 U	0.562 U	0.714 U	0.667 U	--	0.625 U	0.625 U
AROCLOR-1232	0.294 U	0.321 U	0.325 U	0.281 U	0.357 U	0.333 U	--	0.313 U	0.313 U
AROCLOR-1242	0.294 U	0.321 U	0.325 U	0.281 U	0.357 U	0.333 U	--	0.313 U	0.313 U
AROCLOR-1248	0.294 U	0.321 U	0.325 U	0.281 U	0.357 U	0.333 U	--	0.313 U	0.313 U
AROCLOR-1254	0.294 U	0.321 U	0.325 U	0.281 U	0.357 U	0.333 U	--	0.313 U	0.313 U
AROCLOR-1260	0.588	0.321 U	1.29	0.605	1.67	0.332 J	--	0.338	0.313 U
AROCLOR-1262	0.294 U	0.321 U	0.325 U	0.281 U	0.357 U	0.333 U	--	0.313 U	0.313 U
AROCLOR-1268	0.294 U	0.321 U	0.325 U	0.281 U	0.357 U	0.333 U	--	0.313 U	0.313 U
TOTAL AROCLOR	0.588	0 U	1.29	0.605	1.67	0.332	--	0.338	0 U
TOTAL AROCLOR HALFND	1.911	1.6045	2.752	1.8695	3.2765	1.831	--	1.746	1.5645
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	0.00047 J	0.00043 J	--	--	--	--	0.00066 J	0.00022 J	0.00052 J
HEPTACHLOROBIPHENYLS	0.19 J	0.0049 J	--	--	--	--	0.13 J	0.06 J	0.0018 J
HEXACHLOROBIPHENYLS	0.21 J	0.0068 J	--	--	--	--	0.14 J	0.078 J	0.0032 J
MONOCHLOROBIPHENYLS	0.00048 J	0.00028 J	--	--	--	--	0.00018 J	0.000071 J	0.00023 J
NONACHLOROBIPHENYLS	0.0029 J	0.00076 J	--	--	--	--	0.012 J	0.0096 J	0.00062 J
OCTACHLOROBIPHENYLS	0.039 J	0.0017 J	--	--	--	--	0.03 J	0.017 J	0.0012 J
PCB-1	0.000081	0.000072	--	--	--	--	0.000049	0.000015	0.00011
PCB-10	0.000002 U	0.0000032	--	--	--	--	0.0000022	0.000002 U	0.0000036
PCB-100	0.0000032	0.0000034	--	--	--	--	0.000019	0.0000043	0.000002
PCB-101/90	0.012	0.0008	--	--	--	--	0.0098	0.004	0.0007
PCB-103	0.000005	0.0000039	--	--	--	--	0.000032	0.0000098	0.0000038
PCB-104	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-105	0.0011	0.00027	--	--	--	--	0.0021	0.00061	0.00028
PCB-106	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--
PCB-108/107	0.00017	0.00004	--	--	--	--	0.00033	0.00011	0.000039
PCB-108/124	--	--	--	--	--	--	--	--	--
PCB-109	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-11	0.000037	0.000016	--	--	--	--	0.000078	0.000021	0.000011
PCB-110	0.0062	0.00082	--	--	--	--	0.007	0.0027	0.00073
PCB-110/115	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--
PCB-111/115	0.000028	0.0000091	--	--	--	--	0.000073	0.00002	0.000011
PCB-112	--	--	--	--	--	--	--	--	--
PCB-113	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-114	0.000081	0.000017	--	--	--	--	0.000098	0.00004	0.000017
PCB-118	--	--	--	--	--	--	--	--	--
PCB-118/106	0.0041	0.00068	--	--	--	--	0.0059	0.0019	0.00071
PCB-119	0.000034	0.000011	--	--	--	--	0.000097	0.00003	0.000011
PCB-12	0.000041	0.0000082	--	--	--	--	0.0000099	0.0000066	0.000011
PCB-12/13	--	--	--	--	--	--	--	--	--
PCB-120	0.000031	0.000002 U	--	--	--	--	0.000032	0.000021	0.000002 U
PCB-121	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-122	0.000046	0.0000096	--	--	--	--	0.00006	0.000023	0.0000089
PCB-123	0.000023	0.0000098	--	--	--	--	0.000066	0.000018	0.000011
PCB-124	0.00023	0.000031	--	--	--	--	0.00026	0.00011	0.000029
PCB-126	0.000038	0.0000051	--	--	--	--	0.000055	0.00002	0.0000039
PCB-127	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-128/162	0.0027	0.00017	--	--	--	--	0.0029	0.00095	0.00014
PCB-128/166	--	--	--	--	--	--	--	--	--
PCB-129	0.00057	0.00005	--	--	--	--	0.00062	0.00026	0.000047
PCB-129/138/163	--	--	--	--	--	--	--	--	--
PCB-13	0.000019	0.000027	--	--	--	--	0.000039	0.000015	0.000024
PCB-130	0.0018	0.000095	--	--	--	--	0.0013	0.00046	0.000051
PCB-131	--	--	--	--	--	--	--	--	--
PCB-131/133	0.0007	0.000029	--	--	--	--	0.0005	0.00026	0.000021
PCB-132	--	--	--	--	--	--	--	--	--
PCB-132/161	0.0093	0.00037	--	--	--	--	0.0056	0.0035	0.00024
PCB-133	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R05-S	R05-S	R05-S	R06-S	R06-S	R06-S	R06-S	R06-S	R06-S
SAMPLE ID	R5-S-0624	R5-S-2448	R5-S-0006	R6-C-D-0006	R6-C-D-0624	R6-S-0006	R6-S-0006-01	R6-S-0624	R6-S-2448
SAMPLE DATE	20191119	20191119	20191119	20191120	20191120	20191120	20191120	20191120	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SB	SS	SS	SS	SS	SS	SS	SB
PCB-134	--	--	--	--	--	--	--	--	--
PCB-134/143	0.0012	0.000056	--	--	--	--	0.00083	0.00054	0.00004
PCB-135	0.0043	0.00016	--	--	--	--	0.0035	0.0022	0.000073
PCB-135/151	--	--	--	--	--	--	--	--	--
PCB-136	0.0035	0.00014	--	--	--	--	0.0025	0.0024	0.000092
PCB-137	0.00035	0.000046	--	--	--	--	0.00054	0.00017	0.000047
PCB-138/163/164	0.043	0.0014	--	--	--	--	0.033	0.016	0.00071
PCB-139/140	--	--	--	--	--	--	--	--	--
PCB-139/149	0.039	0.0012	--	--	--	--	0.022	0.015	0.00038
PCB-14	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-140	0.000002 U	0.000005	--	--	--	--	0.000002 U	0.000002 U	0.0000034
PCB-141	0.015	0.00039	--	--	--	--	0.0087	0.0044	0.00015
PCB-142	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-143	--	--	--	--	--	--	--	--	--
PCB-144	0.0014	0.000063	--	--	--	--	0.0011	0.00058	0.000032
PCB-145	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-146	--	--	--	--	--	--	--	--	--
PCB-146/165	0.0069	0.00021	--	--	--	--	0.0045	0.0022	0.000099
PCB-147	0.000081	0.000016	--	--	--	--	0.00015	0.000055	0.000011
PCB-147/149	--	--	--	--	--	--	--	--	--
PCB-148	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-15	0.00013	0.00015	--	--	--	--	0.00024	0.000077	0.00011
PCB-150	0.0000056	0.000002 U	--	--	--	--	0.000014	0.000006	0.000002 U
PCB-151	0.015	0.0004	--	--	--	--	0.01	0.0072	0.00015
PCB-152	0.0000028	0.000002 U	--	--	--	--	0.0000057	0.000002 U	0.000002 U
PCB-153	0.056 J	0.0016	--	--	--	--	0.038 J	0.019	0.00061
PCB-153/168	--	--	--	--	--	--	--	--	--
PCB-154	0.000035	0.0000097	--	--	--	--	0.00012	0.000038	0.0000065
PCB-155	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-156	0.0028	0.00012	--	--	--	--	0.0023	0.0009	0.000089
PCB-156/157	--	--	--	--	--	--	--	--	--
PCB-157	0.00023	0.000023	--	--	--	--	0.00028	0.000073	0.000019
PCB-158	--	--	--	--	--	--	--	--	--
PCB-158/160	0.0042	0.00016	--	--	--	--	0.0034	0.0016	0.000098
PCB-159	0.00063	0.000019	--	--	--	--	0.00039	0.00016	0.0000093
PCB-16	0.000022	0.000028	--	--	--	--	0.000032	0.000014	0.000038
PCB-160	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--
PCB-166	0.000012	0.0000038	--	--	--	--	0.000034	0.0000072	0.0000039
PCB-167	0.0013	0.000054	--	--	--	--	0.001	0.00044	0.000037
PCB-168	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-169	0.0000058	0.0000012 U	--	--	--	--	0.0000062	0.0000037	0.0000012 U
PCB-17	0.000015	0.000034	--	--	--	--	0.000043	0.000015	0.000055
PCB-170	0.02	0.00052	--	--	--	--	0.014	0.0067	0.00013
PCB-171	0.0067	0.00016	--	--	--	--	0.0036	0.0017	0.000046
PCB-171/173	--	--	--	--	--	--	--	--	--
PCB-172	0.0037	0.00011	--	--	--	--	0.0023	0.0013	0.000026
PCB-173	0.0005	0.000012	--	--	--	--	0.00033	0.00015	0.0000045
PCB-174	0.021 J	0.00057	--	--	--	--	0.016	0.0088	0.0002
PCB-175	0.00072	0.000029	--	--	--	--	0.00051	0.00032	0.0000087
PCB-176	0.0025	0.000071	--	--	--	--	0.0016	0.001	0.000028
PCB-177	0.017	0.0004	--	--	--	--	0.011	0.0047	0.00012
PCB-178	0.0068	0.00016	--	--	--	--	0.0039	0.0016	0.000053
PCB-179	0.0092	0.00026	--	--	--	--	0.007	0.0038	0.0001
PCB-18	0.000021	0.000052	--	--	--	--	0.000066	0.000022	0.00011
PCB-18/30	--	--	--	--	--	--	--	--	--
PCB-180	0.043 J	0.0011	--	--	--	--	0.03 J	0.013	0.00044
PCB-180/193	--	--	--	--	--	--	--	--	--
PCB-181	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-182	--	--	--	--	--	--	--	--	--
PCB-182/187	0.036	0.00089	--	--	--	--	0.02	0.0085	0.00044
PCB-183	0.014	0.00036	--	--	--	--	0.0076	0.005	0.00014
PCB-183/185	--	--	--	--	--	--	--	--	--
PCB-184	0.0000038	0.000002 U	--	--	--	--	0.000004	0.0000024	0.000002 U
PCB-185	0.0023	0.000074	--	--	--	--	0.0017	0.0008	0.000028
PCB-186	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-187	--	--	--	--	--	--	--	--	--
PCB-188	0.0000057	0.000002 U	--	--	--	--	0.0000086	0.0000041	0.000002 U
PCB-189	0.00075	0.00002	--	--	--	--	0.00052	0.00027	0.0000071
PCB-19	0.000007	0.00001	--	--	--	--	0.0000074	0.0000026	0.000009
PCB-190	0.0047	0.00012	--	--	--	--	0.0032	0.0016	0.000034
PCB-191	0.0009	0.000021	--	--	--	--	0.00049	0.00029	0.0000064
PCB-192	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-193	0.0029	0.000069	--	--	--	--	0.0019	0.0009	0.00002
PCB-194	0.0095	0.0004	--	--	--	--	0.0076	0.0043	0.00024
PCB-195	0.0057	0.00016	--	--	--	--	0.0036	0.0018	0.000066
PCB-196	--	--	--	--	--	--	--	--	--
PCB-196/203	0.0099	0.00043	--	--	--	--	0.0071	0.0044	0.00033
PCB-197	0.0003	0.000012	--	--	--	--	0.00019	0.00014	0.0000058
PCB-197/200	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R05-S	R05-S	R05-S	R06-S	R06-S	R06-S	R06-S	R06-S	R06-S
SAMPLE ID	R5-S-0624	R5-S-2448	R5-S-0006	R6-C-D-0006	R6-C-D-0624	R6-S-0006	R6-S-0006-01	R6-S-0624	R6-S-2448
SAMPLE DATE	20191119	20191119	20191119	20191120	20191120	20191120	20191120	20191120	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SB	SS	SS	SS	SS	SS	SS	SB
PCB-198	0.0003	0.000033	--	--	--	--	0.0005	0.00025	0.0000093
PCB-198/199	--	--	--	--	--	--	--	--	--
PCB-199	0.0081	0.00038	--	--	--	--	0.0078	0.0042	0.00033
PCB-2	0.00018	0.000066	--	--	--	--	0.00003	0.000018	0.000023
PCB-20/21/33	0.000093	0.00013	--	--	--	--	0.00014	0.000052	0.00017
PCB-20/28	--	--	--	--	--	--	--	--	--
PCB-200	0.0014	0.000058	--	--	--	--	0.00094	0.00053	0.000032
PCB-201	0.0011	0.000049	--	--	--	--	0.00068	0.00049	0.000043
PCB-202	0.0019	0.00012	--	--	--	--	0.0016	0.00088	0.000092
PCB-203	--	--	--	--	--	--	--	--	--
PCB-204	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-205	0.00061	0.000019	--	--	--	--	0.00044	0.00021	0.0000081
PCB-206	0.0021	0.00052	--	--	--	--	0.0082	0.0066	0.00043
PCB-207	0.0003	0.000064	--	--	--	--	0.00047	0.00026	0.000045
PCB-208	0.00047	0.00018	--	--	--	--	0.0032	0.0027	0.00014
PCB-209	0.00036	0.00041	--	--	--	--	0.0071	0.0059	0.00025
PCB-21/33	--	--	--	--	--	--	--	--	--
PCB-22	0.000039	0.000072	--	--	--	--	0.000099	0.000028	0.000093
PCB-23	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-24	0.0000047	0.0000055	--	--	--	--	0.0000052	0.0000022	0.0000046
PCB-25	0.000016	0.000018	--	--	--	--	0.000023	0.0000081	0.000021
PCB-26	0.000027	0.00004	--	--	--	--	0.000051	0.000017	0.000051
PCB-26/29	--	--	--	--	--	--	--	--	--
PCB-27	0.0000024	0.0000053	--	--	--	--	0.0000064	0.000002	0.0000058
PCB-28	0.00015	0.0002	--	--	--	--	0.00033	0.00011	0.00026
PCB-29	0.000002 U	0.0000028	--	--	--	--	0.000002	0.000002 U	0.0000034
PCB-3	0.00022	0.00014	--	--	--	--	0.0001	0.000038	0.000096
PCB-30	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-31	0.00018	0.0002	--	--	--	--	0.00032	0.00011	0.00027
PCB-32	0.00002	0.000028	--	--	--	--	0.000046	0.000013	0.00004
PCB-34	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-35	0.0000096	0.000002 U	--	--	--	--	0.000016	0.0000064	0.0000084
PCB-36	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-37	0.00011	0.000082	--	--	--	--	0.00022	0.000073	0.000077
PCB-38	0.000002 U	0.000002 U	--	--	--	--	0.0000048	0.000002 U	0.000002 U
PCB-39	0.000002 U	0.000002 U	--	--	--	--	0.0000028	0.000002 U	0.000002 U
PCB-4	0.00002	0.000026	--	--	--	--	0.000035	0.000012	0.000051
PCB-40	0.000012	0.000017	--	--	--	--	0.000029	0.000014	0.00002
PCB-40/71	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	0.00014	0.000087	--	--	--	--	0.00033	0.00014	0.000086
PCB-42	--	--	--	--	--	--	--	--	--
PCB-42/59	0.000043	0.000034	--	--	--	--	0.000081	0.000034	0.000035
PCB-43	--	--	--	--	--	--	--	--	--
PCB-43/49	0.00016	0.0001	--	--	--	--	0.0004	0.00013	0.00013
PCB-44	0.00013	0.00012	--	--	--	--	0.00027	0.00011	0.00014
PCB-44/47/65	--	--	--	--	--	--	--	--	--
PCB-45	0.000015	0.000021	--	--	--	--	0.000016	0.0000085	0.000019
PCB-45/51	--	--	--	--	--	--	--	--	--
PCB-46	0.0000045	0.0000085	--	--	--	--	0.0000066	0.0000031	0.0000076
PCB-47	0.000035	0.000025	--	--	--	--	0.00018	0.000041	0.000035
PCB-48	--	--	--	--	--	--	--	--	--
PCB-48/75	0.000012	0.000017	--	--	--	--	0.000032	0.000014	0.000018
PCB-49/69	--	--	--	--	--	--	--	--	--
PCB-5	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-50	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-50/53	--	--	--	--	--	--	--	--	--
PCB-51	0.0000032	0.0000055	--	--	--	--	0.000011	0.000003	0.0000052
PCB-52	--	--	--	--	--	--	--	--	--
PCB-52/69	0.00052	0.00022	--	--	--	--	0.00069	0.00031	0.00026
PCB-53	0.000013	0.000021	--	--	--	--	0.000024	0.0000091	0.000018
PCB-54	0.000002 U	0.000002 U	--	--	--	--	0.0000012 J	0.000002 U	0.000002 U
PCB-55	0.000004	0.0000055	--	--	--	--	0.000018	0.0000064	0.0000056
PCB-56	--	--	--	--	--	--	--	--	--
PCB-56/60	0.00019	0.00014	--	--	--	--	0.00038	0.00015	0.00015
PCB-57	0.000002 U	0.000002 U	--	--	--	--	0.0000039	0.0000017 J	0.000002 U
PCB-58	0.000002 U	0.000002 U	--	--	--	--	0.0000023	0.000002 U	0.000002 U
PCB-59/62/75	--	--	--	--	--	--	--	--	--
PCB-6	0.000041	0.000034	--	--	--	--	0.000041	0.000014	0.000048
PCB-60	--	--	--	--	--	--	--	--	--
PCB-61/70	0.00046	0.00031	--	--	--	--	0.0011	0.00043	0.00039
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--
PCB-62	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-63	0.000011	0.0000077	--	--	--	--	0.000027	0.00001	0.0000097
PCB-64	--	--	--	--	--	--	--	--	--
PCB-65	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-66	--	--	--	--	--	--	--	--	--
PCB-66/76	0.00052	0.00024	--	--	--	--	0.00074	0.00033	0.00024
PCB-67	0.0000076	0.0000065	--	--	--	--	0.000015	0.0000067	0.0000072
PCB-68	0.000002 U	0.000002 U	--	--	--	--	0.0000086	0.000002	0.000002 U
PCB-7	0.000018	0.000013	--	--	--	--	0.000013	0.0000042	0.000022
PCB-72	--	--	--	--	--	--	--	--	--
PCB-73	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R05-S	R05-S	R05-S	R06-S	R06-S	R06-S	R06-S	R06-S	R06-S
SAMPLE ID	R5-S-0624	R5-S-2448	R5-S-0006	R6-C-D-0006	R6-C-D-0624	R6-S-0006	R6-S-0006-01	R6-S-0624	R6-S-2448
SAMPLE DATE	20191119	20191119	20191119	20191120	20191120	20191120	20191120	20191120	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SB	SS	SS	SS	SS	SS	SS	SB
PCB-74	0.00012	0.0001	--	--	--	--	0.00028	0.00011	0.00013
PCB-77	0.000092	0.000035	--	--	--	--	0.00016	0.00005	0.000028
PCB-78	0.000002 U	0.0000026	--	--	--	--	0.0000063	0.000002 U	0.0000016 J
PCB-79	0.0000072	0.0000046	--	--	--	--	0.000026	0.0000079	0.0000042
PCB-8	0.00015	0.00014	--	--	--	--	0.00019	0.000067	0.00022
PCB-80	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-81	0.000034	0.0000094	--	--	--	--	0.000053	0.000023	0.0000086
PCB-82	0.0000056	0.000033	--	--	--	--	0.00026	0.000079	0.000077
PCB-83	--	--	--	--	--	--	--	--	--
PCB-83/112	0.000049	0.000029	--	--	--	--	0.00011	0.00004	0.000032
PCB-84	--	--	--	--	--	--	--	--	--
PCB-84/92	0.0015	0.00029	--	--	--	--	0.0017	0.00073	0.00026
PCB-85/116	0.0002	0.000099	--	--	--	--	0.0006	0.00016	0.00012
PCB-85/116/117	--	--	--	--	--	--	--	--	--
PCB-86	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--
PCB-87/117/125	0.0011	0.00023	--	--	--	--	0.0017	0.00065	0.00028
PCB-88/91	0.00012	0.00011	--	--	--	--	0.00032	0.00012	0.000098
PCB-89	0.000002 U	0.0000058	--	--	--	--	0.0000083	0.0000033	0.0000052
PCB-9	0.000011	0.000012	--	--	--	--	0.000013	0.0000039	0.000018
PCB-90/101/113	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--
PCB-93	0.000002 U	0.000002 U	--	--	--	--	0.000002 U	0.000002 U	0.000002 U
PCB-93/100	--	--	--	--	--	--	--	--	--
PCB-94	0.0000056	0.0000049	--	--	--	--	0.00001	0.0000032	0.0000032
PCB-95	0.0063	0.00073	--	--	--	--	0.0039	0.0022	0.00063
PCB-96	0.0000031	0.000002 U	--	--	--	--	0.0000062	0.0000024	0.000002 U
PCB-97	0.00041	0.00016	--	--	--	--	0.00069	0.00026	0.00019
PCB-98/102	0.000004 U	0.000004 U	--	--	--	--	0.000004 U	0.000004 U	0.000004 U
PCB-99	0.00039	0.00022	--	--	--	--	0.0013	0.00039	0.00024
PENTACHLOROBIPHENYLS	0.034 J	0.0046 J	--	--	--	--	0.037 J	0.014 J	0.0045 J
TEQ DIOXIN-LIKE PCBs (BIRD)	1.22476E-05	3.24384E-06	--	--	--	--	1.92999E-05	6.97328E-06	2.69105E-06
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.22476E-05	3.24444E-06	--	--	--	--	1.92999E-05	6.97328E-06	2.69165E-06
TEQ DIOXIN-LIKE PCBs (FISH)	2.4791E-07	3.6269E-08	--	--	--	--	3.4963E-07	1.2844E-07	2.89E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	2.4791E-07	3.6299E-08	--	--	--	--	3.4963E-07	1.2844E-07	2.893E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	4.18192E-06	5.31734E-07	--	--	--	--	5.90882E-06	2.19343E-06	4.09183E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	4.18192E-06	5.49734E-07	--	--	--	--	5.90882E-06	2.19343E-06	4.27183E-07
TETRACHLOROBIPHENYLS	0.0025 J	0.0015 J	--	--	--	--	0.0049 J	0.0019 J	0.0017 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0064538	0.0005633	--	--	--	--	0.0066382	0.0024477	0.0005006
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.4766586	0.0217811	--	--	--	--	0.3554064	0.1860171	0.0147159
TOTAL PCB CONGENERS ZEROND	0.4831124	0.0223444	--	--	--	--	0.3620446	0.1884648	0.0152165
TOTAL PCB CONGENERS-NOAA	0.227551	0.009492	--	--	--	--	0.176886	0.085909	0.006136
TOTAL PCB CONGENERS-NOAA HALFND	0.4831524	0.022387	--	--	--	--	0.3620746	0.1885028	0.0152581
TOTAL PCB CONGENERS-NOAA X2	0.455102	0.018984	--	--	--	--	0.353772	0.171818	0.012272
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.455102	0.018984	--	--	--	--	0.353772	0.171818	0.012272
TRICHLOROBIPHENYLS	0.00072 J	0.00091 J	--	--	--	--	0.0014 J	0.00048 J	0.0012 J
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	230	630	--	--	--	--	1500	2400	2500
1,2,3,4,6,7,8,9-OCDF	23	27	--	--	--	--	56	16	3.2 J
1,2,3,4,6,7,8-HPCDD	48	44	--	--	--	--	76	37	22
1,2,3,4,6,7,8-HPCDF	17	19	--	--	--	--	23	11	2.8 Z
1,2,3,4,7,8,9-HPCDF	1.1 J	0.99 J	--	--	--	--	1.8 Z	0.6 Z	0.18 Z
1,2,3,4,7,8-HXCDD	2.4 Z	2.4 J	--	--	--	--	1.5 J	0.79 J	0.37 Z
1,2,3,4,7,8-HXCDF	6.7	5.4	--	--	--	--	4.4 J	2.1 J	0.58 J
1,2,3,6,7,8-HXCDD	9.3	4.8 J	--	--	--	--	4.4 J	1.9 J	0.58 J
1,2,3,6,7,8-HXCDF	3 J	2.6 J	--	--	--	--	3.4 J	1.5 J	0.45 Z
1,2,3,7,8,9-HXCDD	6.9	3 J	--	--	--	--	3.3 J	1.3 J	0.62 J
1,2,3,7,8,9-HXCDF	0.57 J	0.55 J	--	--	--	--	1.3 J	0.62 J	0.21 U
1,2,3,7,8-PECDD	3.7 J	4 J	--	--	--	--	2 J	1.1 J	0.34 J
1,2,3,7,8-PECDF	4.7 J	3.4 J	--	--	--	--	4.6 Z	1.4 Z	0.5 J
2,3,4,6,7,8-HXCDF	1.7 J	1.9 J	--	--	--	--	5.5	2.1 J	0.45 Z
2,3,4,7,8-PECDF	4.6 J	2.9 J	--	--	--	--	12	3.2 Z	0.63 J
2,3,7,8-TCDD	1.5	2	--	--	--	--	0.73 J	0.32 J	0.14 U
2,3,7,8-TCDF	4.8 J	4.1 J	--	--	--	--	6.8 J	2.5 J	0.6 Z
TEQ DIOXINS (BIRD)	17.4243	15.1626	--	--	--	--	24.3786	8.4751	2.15642
TEQ DIOXINS (BIRD) HALFND	17.4243	15.1626	--	--	--	--	24.3786	8.4751	2.23692
TEQ DIOXINS (FISH)	10.7883	10.4576	--	--	--	--	12.0666	4.6686	1.35712
TEQ DIOXINS (FISH) HALFND	10.7883	10.4576	--	--	--	--	12.0666	4.6686	1.43762
TEQ DIOXINS (HUMANS/MAMMALS)	10.9949	10.284	--	--	--	--	11.0028	4.9138	1.90976
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	10.9949	10.284	--	--	--	--	11.0028	4.9138	1.99026
TOTAL HPCDD	76 J	78 J	--	--	--	--	140 J	68 J	38 J
TOTAL HPCDF	25 J	29 J	--	--	--	--	52 J	20 J	1.9 J
TOTAL HXCDD	99 J	70 J	--	--	--	--	53 J	23 J	4.8 J
TOTAL HXCDF	32 J	31 J	--	--	--	--	110 J	35 J	4.6 J
TOTAL PECDD	57 J	57 J	--	--	--	--	25 J	13 J	2.4 J
TOTAL PECDF	65 J	40 J	--	--	--	--	270 J	63 J	6.3 J
TOTAL TCDD	63 J	72 J	--	--	--	--	80 J	13 J	0.23 J
TOTAL TCDF	78 J	66 J	--	--	--	--	130 J	49 J	3.2 J
METALS (MG/KG)									
ALUMINUM	6060	7820	--	--	--	--	10400	12200	15300
ANTIMONY	0.2 J	1.2 U	--	--	--	--	0.22 J	0.23 J	0.21 J
ARSENIC	20.6	11.5	--	--	--	--	6.1	9.4	10
BARIUM	121	87.8	--	--	--	--	85.5	117	132

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R05-S	R05-S	R05-S	R06-S	R06-S	R06-S	R06-S	R06-S	R06-S
SAMPLE ID	R5-S-0624	R5-S-2448	R5-S-0006	R6-C-D-0006	R6-C-D-0624	R6-S-0006	R6-S-0006-01	R6-S-0624	R6-S-2448
SAMPLE DATE	20191119	20191119	20191119	20191120	20191120	20191120	20191120	20191120	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SB	SS	SS	SS	SS	SS	SS	SB
BERYLLIUM	0.83	0.66	--	--	--	--	0.55 J	0.66	0.87
CADMIUM	0.26 J	0.23 J	--	--	--	--	0.51 J	0.37 J	0.3 J
CALCIUM	15200	2050	--	--	--	--	3080	2320	1930
CHROMIUM	18.7	9.2	--	--	--	--	8.3	7.8	14.4
COBALT	6.3	7	--	--	--	--	6.4	7.2	16.1
COPPER	38.6	31	--	--	--	--	32.9	40.1	28
CYANIDE	0.059 J	0.027 J	--	--	--	--	0.65 R	0.65 R	0.63 R
IRON	11300	23600	--	--	--	--	29600	17200	18900
LEAD	55.6	64	--	--	--	--	141	105	64.7
MAGNESIUM	1230	798	--	--	--	--	1160	957	1080
MANGANESE	243	254	--	--	--	--	302	361	689
MERCURY	0.11 UJ	0.13	--	--	--	--	0.13 UJ	0.13 UJ	0.12 UJ
NICKEL	13.7	13.4	--	--	--	--	9.6	8.7	11.6
POTASSIUM	1720	1270	--	--	--	--	1360	1090	1290
SELENIUM	2.9 UJ	3.1 UJ	--	--	--	--	3.2 UJ	3 UJ	3 UJ
SILVER	0.091 J	0.14 J	--	--	--	--	0.14 J	0.14 J	0.21 J
SODIUM	563 UJ	611 UJ	--	--	--	--	609 UJ	613 UJ	596 UJ
THALLIUM	0.57 UJ	0.62 UJ	--	--	--	--	0.65 UJ	0.61 UJ	0.61 UJ
VANADIUM	8.9	10.4	--	--	--	--	9.8	13.1	23.4
ZINC	64.2	71.3	--	--	--	--	134	108	99.6
MISCELLANEOUS (%)									
TOTAL SOLIDS	88	--	--	--	--	--	75	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	251000	--	--	--	--	--	79300	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	85	78	77	89	70	75	--	80	80

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R07-S	R07-S	R07-S	R07-S	R08-S	R08-S	R08-S	R08-S	R09-S
SAMPLE ID	R7-S-0006	R7-S-0006-01	R7-S-0624	R7-S-2448	R8-S-0006-01	R8-S-0624	R8-S-2448	R8-S-0006	R9-S-0006
SAMPLE DATE	20191120	20191120	20191120	20191120	20191120	20191120	20191120	20191120	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SB	SS	SS	SB	SS	SS
TOP DEPTH	0	0	0.5	2	0	0.5	2	0	0
BOTTOM DEPTH	0.5	0.5	2	4	0.5	2	4	0.5	0.5
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
1,1,2,2-TETRACHLOROETHANE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
1,1,2-TRICHLOROETHANE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
1,1-DICHLOROETHANE	0.0045 U	--	--	--	--	--	--	0.0051 U	0.0049 U
1,1-DICHLOROETHENE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
1,2,3-TRICHLOROBENZENE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
1,2,4-TRICHLOROBENZENE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
1,2-DIBROMO-3-CHLOROPROPANE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
1,2-DIBROMOETHANE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
1,2-DICHLOROBENZENE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
1,2-DICHLOROETHANE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
1,2-DICHLOROPROPANE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
1,3-DICHLOROBENZENE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
1,4-DICHLOROBENZENE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
2-BUTANONE	0.0091 U	--	--	--	--	--	--	0.01 U	0.0098 U
2-HEXANONE	0.0091 U	--	--	--	--	--	--	0.01 UJ	0.0098 U
4-METHYL-2-PENTANONE	0.0091 U	--	--	--	--	--	--	0.01 UJ	0.0098 U
ACETONE	0.0091 U	--	--	--	--	--	--	0.01 U	0.0098 U
BENZENE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
BROMOCHLOROMETHANE	0.0045 U	--	--	--	--	--	--	0.0051 U	0.0049 U
BROMODICHLOROMETHANE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
BROMOFORM	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
BROMOMETHANE	0.0045 U	--	--	--	--	--	--	0.0051 U	0.0049 U
CARBON DISULFIDE	0.0045 U	--	--	--	--	--	--	0.0051 U	0.0049 U
CARBON TETRACHLORIDE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
CHLOROBENZENE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
CHLORODIBROMOMETHANE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
CHLOROETHANE	0.0045 U	--	--	--	--	--	--	0.0051 U	0.0049 U
CHLOROFORM	0.0045 U	--	--	--	--	--	--	0.0051 U	0.0049 U
CHLOROMETHANE	0.0045 U	--	--	--	--	--	--	0.0051 U	0.0049 U
CIS-1,2-DICHLOROETHENE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
CIS-1,3-DICHLOROPROPENE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
CYCLOHEXANE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
DICHLORODIFLUOROMETHANE	0.0045 U	--	--	--	--	--	--	0.0051 U	0.0049 U
ETHYLBENZENE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
ISOPROPYLBENZENE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
M+P-XYLENES	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
METHYL ACETATE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
METHYL CYCLOHEXANE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
METHYL TERT-BUTYL ETHER	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
METHYLENE CHLORIDE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0036 J
O-XYLENE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
STYRENE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
TETRACHLOROETHENE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
TOLUENE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
TRANS-1,2-DICHLOROETHENE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
TRANS-1,3-DICHLOROPROPENE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
TRICHLOROETHENE	0.0045 U	--	--	--	--	--	--	0.0051 UJ	0.0049 U
TRICHLOROFLUOROMETHANE	0.0045 UJ	--	--	--	--	--	--	0.0051 UJ	0.0049 U
VINYL CHLORIDE	0.0045 U	--	--	--	--	--	--	0.0051 U	0.0049 U
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	0.022 J	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
1,2,4,5-TETRACHLOROBENZENE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
1,4-DIOXANE	--	0.087 U	0.08 U	0.084 U	0.092 U	0.087 U	0.084 U	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
2,3,4,6-TETRACHLOROPHENOL	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
2,4,5-TRICHLOROPHENOL	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
2,4,6-TRICHLOROPHENOL	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
2,4-DICHLOROPHENOL	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
2,4-DIMETHYLPHENOL	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
2,4-DINITROPHENOL	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
2,4-DINITROTOLUENE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
2,6-DINITROTOLUENE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
2-CHLORONAPHTHALENE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
2-CHLOROPHENOL	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
2-METHYLNAPHTHALENE	--	0.047 J	0.016 J	0.21 U	0.036 J	0.043 J	0.017 J	--	--
2-METHYLPHENOL	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
2-NITROANILINE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
2-NITROPHENOL	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
3&4-METHYLPHENOL	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
3,3'-DICHLOROBENZIDINE	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
3-NITROANILINE	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
4,6-DINITRO-2-METHYLPHENOL	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
4-BROMOPHENYL PHENYL ETHER	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
4-CHLORO-3-METHYLPHENOL	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
4-CHLOROANILINE	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
4-CHLOROPHENYL PHENYL ETHER	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
4-NITROANILINE	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
4-NITROPHENOL	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--

LOCATION	R07-S	R07-S	R07-S	R07-S	R08-S	R08-S	R08-S	R08-S	R09-S
SAMPLE ID	R7-S-0006	R7-S-0006-01	R7-S-0624	R7-S-2448	R8-S-0006-01	R8-S-0624	R8-S-2448	R8-S-0006	R9-S-0006
SAMPLE DATE	20191120	20191120	20191120	20191120	20191120	20191120	20191120	20191120	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SB	SS	SS	SB	SS	SS
ACENAPHTHENE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
ACENAPHTHYLENE	--	0.038 J	0.058 J	0.21 U	0.081 J	0.057 J	0.21 U	--	--
ACETOPHENONE	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
ANTHRACENE	--	0.04 J	0.046 J	0.056 J	0.079 J	0.16 J	0.21 U	--	--
ATRAZINE	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
BAP EQUIVALENT-HALFND	--	0.43264	0.44988	0.31897	0.6506	1.08128	0.18798	--	--
BAP EQUIVALENT-POS	--	0.32264	0.34988	0.21397	0.5356	0.97128	0.08298	--	--
BENZALDEHYDE	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
BENZO(A)ANTHRACENE	--	0.24	0.26	0.2 J	0.41	0.79	0.069 J	--	--
BENZO(A)PYRENE	--	0.24	0.26	0.16 J	0.4	0.73	0.061 J	--	--
BENZO(B)FLUORANTHENE	--	0.4	0.45	0.22	0.64	1.1	0.098 J	--	--
BENZO(G,H,I)PERYLENE	--	0.19 J	0.16 J	0.11 J	0.29	0.5	0.046 J	--	--
BENZO(K)FLUORANTHENE	--	0.13 J	0.16 J	0.075 J	0.21 J	0.35	0.037 J	--	--
BIS(2-CHLOROETHOXY)METHANE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
BIS(2-CHLOROETHYL)ETHER	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	0.09 J	0.027 J	0.21 U	0.26	0.078 J	0.018 J	--	--
BUTYL BENZYL PHTHALATE	--	0.066 J	0.2 U	0.21 U	0.032 J	0.22 U	0.21 U	--	--
CAPROLACTAM	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
CARBAZOLE	--	0.43 U	0.39 U	0.023 J	0.04 J	0.03 J	0.42 U	--	--
CHRYSENE	--	0.34	0.28	0.22	0.5	0.78	0.11 J	--	--
DIBENZO(A,H)ANTHRACENE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
DIBENZOFURAN	--	0.027 J	0.2 U	0.21 U	0.23 U	0.026 J	0.21 U	--	--
DIETHYL PHTHALATE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
DIMETHYL PHTHALATE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
DI-N-BUTYL PHTHALATE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
DI-N-OCTYL PHTHALATE	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
FLUORANTHENE	--	0.5	0.32 J	0.4 J	0.89	2.1	0.13 J	--	--
FLUORENE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.039 J	0.21 U	--	--
HEXACHLOROBENZENE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
HEXACHLOROBUTADIENE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
HEXACHLOROCYCLOPENTADIENE	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
HEXACHLOROETHANE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
HIGH MOLECULAR WEIGHT PAHS	--	2.13	2.06	1.505	3.48	6.33	0.579	--	--
INDENO(1,2,3-CD)PYRENE	--	0.17 J	0.17 J	0.11 J	0.28	0.48	0.048 J	--	--
ISOPHORONE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
LOW MOLECULAR WEIGHT PAHS	--	0.905	0.548	0.716	1.428	3.125	0.217	--	--
NAPHTHALENE	--	0.047 J	0.014 J	0.21 U	0.028 J	0.029 J	0.21 U	--	--
NITROBENZENE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
N-NITROSODIPHENYLAMINE	--	0.22 U	0.2 U	0.21 U	0.23 U	0.22 U	0.21 U	--	--
PENTACHLOROPHENOL	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
PHENANTHRENE	--	0.28	0.11 J	0.26	0.35	0.74	0.087 J	--	--
PHENOL	--	0.43 U	0.39 U	0.41 U	0.45 U	0.43 U	0.42 U	--	--
PYRENE	--	0.42	0.32	0.41	0.75	1.6	0.11 J	--	--
TOTAL PAHS	--	3.035	2.608	2.221	4.908	9.455	0.796	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	0.0086 U	0.008 U	0.0084 U	0.0091 U	0.0087 U	0.0084 U	--	--
2-METHYLNAPHTHALENE	--	0.063	0.02	0.0049	0.041	0.051	0.019	--	--
ACENAPHTHENE	--	0.0073	0.0032 J	0.0086	0.0082	0.016	0.0038 J	--	--
ACENAPHTHYLENE	--	0.04	0.05	0.013	0.068	0.044	0.012	--	--
ANTHRACENE	--	0.035	0.034	0.042	0.059	0.14	0.013	--	--
BAP EQUIVALENT-HALFND	--	0.29463	0.36292	0.22728	0.531	0.82048	0.07933	--	--
BAP EQUIVALENT-POS	--	0.29248	0.36097	0.22523	0.52875	0.81833	0.07723	--	--
BENZO(A)ANTHRACENE	--	0.21	0.27	0.22	0.4 J	0.73 J	0.066	--	--
BENZO(A)PYRENE	--	0.22	0.27	0.17	0.4 J	0.62 J	0.057	--	--
BENZO(B)FLUORANTHENE	--	0.36 J	0.46 J	0.22	0.61 J	0.84 J	0.1	--	--
BENZO(G,H,I)PERYLENE	--	0.15	0.16	0.12	0.26	0.38 J	0.031	--	--
BENZO(K)FLUORANTHENE	--	0.12	0.17	0.1	0.23	0.37 J	0.033	--	--
CHRYSENE	--	0.28	0.27	0.23	0.45 J	0.63 J	0.1	--	--
DIBENZO(A,H)ANTHRACENE	--	0.0043 U	0.0039 U	0.0041 U	0.0045 U	0.0043 U	0.0042 U	--	--
FLUORANTHENE	--	0.42 J	0.32	0.45	0.83 J	1.7 J	0.13	--	--
FLUORENE	--	0.015	0.0073	0.014	0.019	0.039	0.0099	--	--
HIGH MOLECULAR WEIGHT PAHS	--	1.85	2.11	1.62	3.32	5.44	0.549	--	--
INDENO(1,2,3-CD)PYRENE	--	0.14	0.16	0.1	0.25	0.37 J	0.032	--	--
LOW MOLECULAR WEIGHT PAHS	--	0.8163	0.5395	0.8327	1.3522	2.621	0.2601	--	--
NAPHTHALENE	--	0.059	0.015	0.0051	0.028	0.032	0.0094	--	--
PENTACHLOROPHENOL	--	0.0087 U	0.008 U	0.0084 U	0.0092 U	0.0087 U	0.0084 U	--	--
PHENANTHRENE	--	0.24	0.11	0.3	0.34	0.65 J	0.082	--	--
PYRENE	--	0.37 J	0.35 J	0.46	0.72 J	1.5 J	0.13	--	--
TOTAL PAHS	--	0.28	0.27	0.23	0.45	0.63	0.1	--	--
PESTICIDES (MG/KG)									
4,4'-DDD	--	0.0012 J	0.00075 J	0.00038 J	0.0012 J	0.00077 R	0.00066 J	--	--
4,4'-DDE	--	0.0013 J	0.00095 R	0.0042 U	0.0031 J	0.0011 R	0.0041 U	--	--
4,4'-DDT	--	0.03	0.048	0.00062 J	0.014	0.0075	0.0041 U	--	--
ALDRIN	--	0.0022 U	0.0021 U	0.0022 U	0.0023 U	0.0022 U	0.0021 U	--	--
ALPHA-BHC	--	0.0022 U	0.0021 U	0.0022 U	0.0023 U	0.0022 U	0.0021 U	--	--
ALPHA-CHLORDANE	--	0.0011 J	0.0015 J	0.0022 U	0.0016 J	0.00068 J	0.0021 U	--	--
BETA-BHC	--	0.0005 J	0.00093 J	0.0022 U	0.0023 U	0.00055 J	0.0021 U	--	--
DELTA-BHC	--	0.0022 U	0.0021 U	0.0022 U	0.0023 U	0.0022 U	0.0021 U	--	--
DIELDRIN	--	0.0043 U	0.00057 R	0.0042 U	0.0044 U	0.00054 R	0.0041 U	--	--
ENDOSULFAN I	--	0.0025 J	0.00074 R	0.0022 U	0.00094 J	0.0011 J	0.0021 U	--	--
ENDOSULFAN II	--	0.0043 U	0.004 U	0.0042 U	0.0013 J	0.0043 U	0.0041 U	--	--
ENDOSULFAN SULFATE	--	0.00085 R	0.00056 R	0.0042 U	0.00092 R	0.0012 J	0.0041 U	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R07-S	R07-S	R07-S	R07-S	R08-S	R08-S	R08-S	R08-S	R09-S
SAMPLE ID	R7-S-0006	R7-S-0006-01	R7-S-0624	R7-S-2448	R8-S-0006-01	R8-S-0624	R8-S-2448	R8-S-0006	R9-S-0006
SAMPLE DATE	20191120	20191120	20191120	20191120	20191120	20191120	20191120	20191120	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SB	SS	SS	SB	SS	SS
ENDRIN	--	0.0023 R	0.00045 R	0.0042 U	0.0011 R	0.0027 J	0.00036 J	--	--
ENDRIN ALDEHYDE	--	0.00031 J	0.004 U	0.0042 U	0.00088 R	0.0015 J	0.00039 J	--	--
ENDRIN KETONE	--	0.0043 U	0.057	0.0042 U	0.0044 U	0.0043 U	0.0041 U	--	--
GAMMA-BHC (LINDANE)	--	0.0022 U	0.00052 J	0.0022 U	0.0023 U	0.0022 U	0.0021 U	--	--
GAMMA-CHLORDANE	--	0.002 J	0.00064 R	0.0022 U	0.00033 R	0.0022 U	0.0021 U	--	--
HEPTACHLOR	--	0.0022 U	0.0021 U	0.0022 U	0.00036 R	0.00042 R	0.0021 U	--	--
HEPTACHLOR EPOXIDE	--	0.00037 J	0.00046 J	0.00032 J	0.00027 R	0.0022 U	0.0021 U	--	--
METHOXYCHLOR	--	0.011 J	0.011 J	0.0054 J	0.0037 J	0.00067 R	0.0054 J	--	--
TOXAPHENE	--	0.22 U	0.21 U	0.22 U	0.23 U	0.22 U	0.21 U	--	--
PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	0.329 U	--	0.309 U	0.325 U	--	0.321 U	0.316 U	0.352 U	0.329 U
AROCLOR-1221	0.658 U	--	0.617 U	0.649 U	--	0.641 U	0.633 U	0.704 U	0.658 U
AROCLOR-1232	0.329 U	--	0.309 U	0.325 U	--	0.321 U	0.316 U	0.352 U	0.329 U
AROCLOR-1242	0.329 U	--	0.309 U	0.325 U	--	0.321 U	0.316 U	0.352 U	0.329 U
AROCLOR-1248	0.329 U	--	0.309 U	0.325 U	--	0.321 U	0.316 U	0.352 U	0.329 U
AROCLOR-1254	0.329 U	--	0.309 U	0.325 U	--	0.321 U	0.316 U	0.352 U	0.329 U
AROCLOR-1260	0.329 U	--	0.525	0.325 U	--	0.092 J	0.316 U	0.177 J	0.341
AROCLOR-1262	0.329 U	--	0.309 U	0.325 U	--	0.321 U	0.316 U	0.352 U	0.329 U
AROCLOR-1268	0.329 U	--	0.309 U	0.325 U	--	0.321 U	0.316 U	0.352 U	0.329 U
TOTAL AROCLOR	0 U	--	0.525	0 U	--	0.092	0 U	0.177	0.341
TOTAL AROCLOR HALFND	1.645	--	1.915	1.6245	--	1.536	1.5805	1.761	1.8215
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	0.00044 J	0.00023 J	0.000018 J	0.00042 J	0.0002 J	0.000018 J	--	--
HEPTACHLOROBIPHENYLS	--	0.19 J	0.18 J	0.0044 J	0.06 J	0.025 J	0.0023 J	--	--
HEXACHLOROBIPHENYLS	--	0.2 J	0.21 J	0.0047 J	0.07 J	0.027 J	0.0025 J	--	--
MONOCHLOROBIPHENYLS	--	0.00014 J	0.00004 J	0.0000093 J	0.000091 J	0.000056 J	0.000012 J	--	--
NONACHLOROBIPHENYLS	--	0.0037 J	0.0028 J	0.00026 J	0.0019 J	0.0019 J	0.00057 J	--	--
OCTACHLOROBIPHENYLS	--	0.042 J	0.042 J	0.0011 J	0.013 J	0.0056 J	0.00069 J	--	--
PCB-1	--	0.000034	0.000009	0.0000021	0.000028	0.000012	0.0000021	--	--
PCB-10	--	0.0000015 J	0.000002 U	0.000002 U	0.0000013 J	0.000002 U	0.000002 U	--	--
PCB-100	--	0.000016	0.0000066	0.000002 U	0.000007	0.0000026	0.000002 U	--	--
PCB-101/90	--	0.011	0.013	0.00023	0.0045	0.0018	0.00016	--	--
PCB-103	--	0.000038	0.000018	0.000002 U	0.000014	0.0000056	0.000002 U	--	--
PCB-104	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-105	--	0.0011	0.0011	0.000037	0.00073	0.00034	0.000033	--	--
PCB-106	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--
PCB-108/107	--	0.00022	0.00019	0.0000053	0.00014	0.000063	0.0000055	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--
PCB-109	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-11	--	0.000038	0.000013	0.0000049	0.000099	0.000023	0.0000045	--	--
PCB-110	--	0.0062	0.0071	0.00018	0.0032	0.0015	0.00012	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--
PCB-111/115	--	0.000034	0.000036	0.0000011 J	0.00002	0.000012	0.000004 U	--	--
PCB-112	--	--	--	--	--	--	--	--	--
PCB-113	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-114	--	0.000063	0.000041	0.0000014 J	0.00002	0.000019	0.000002	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-118/106	--	0.004	0.0041	0.00012	0.0023	0.001	0.000088	--	--
PCB-119	--	0.00011	0.000037	0.0000019 J	0.000045	0.000021	0.0000019 J	--	--
PCB-12	--	0.0000096	0.0000036	0.000002 U	0.0000058	0.0000043	0.0000014 J	--	--
PCB-12/13	--	--	--	--	--	--	--	--	--
PCB-120	--	0.000036	0.000055	0.0000012 J	0.000013	0.000005	0.000002 U	--	--
PCB-121	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-122	--	0.000052	0.000056	0.000002 U	0.000019	0.000012	0.00000094 J	--	--
PCB-123	--	0.000034	0.00005	0.0000015 J	0.000014	0.000015	0.00000099 J	--	--
PCB-124	--	0.00023	0.00027	0.0000078	0.00011	0.000043	0.0000054	--	--
PCB-126	--	0.000045	0.000049	0.0000016 J	0.000022	0.000011	0.0000013 J	--	--
PCB-127	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-128/162	--	0.0029	0.0026	0.000064	0.00095	0.00044	0.000035	--	--
PCB-128/166	--	--	--	--	--	--	--	--	--
PCB-129	--	0.00052	0.00067	0.000017	0.00025	0.00011	0.00001	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--
PCB-13	--	0.000024	0.0000093	0.000002 U	0.000016	0.000011	0.0000012 J	--	--
PCB-130	--	0.0016	0.0017	0.000042	0.00055	0.00024	0.000023	--	--
PCB-131	--	--	--	--	--	--	--	--	--
PCB-131/133	--	0.00064	0.00074	0.000017	0.00027	0.00011	0.0000082	--	--
PCB-132	--	--	--	--	--	--	--	--	--
PCB-132/161	--	0.0064	0.0086	0.0002	0.003	0.0011	0.0001	--	--
PCB-133	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R07-S	R07-S	R07-S	R07-S	R08-S	R08-S	R08-S	R08-S	R08-S	R09-S
SAMPLE ID	R7-S-0006	R7-S-0006-01	R7-S-0624	R7-S-2448	R8-S-0006-01	R8-S-0624	R8-S-2448	R8-S-0006	R9-S-0006
SAMPLE DATE	20191120	20191120	20191120	20191120	20191120	20191120	20191120	20191120	20191120
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SB	SS	SS	SB	SS	SS
PCB-134	--	--	--	--	--	--	--	--	--
PCB-134/143	--	0.001	0.0014	0.000033	0.00046	0.00018	0.000016	--	--
PCB-135	--	0.0045	0.0056	0.00012	0.0019	0.00061	0.000067	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--
PCB-136	--	0.0031	0.0052	0.00013	0.0012	0.00059	0.000054	--	--
PCB-137	--	0.00033	0.00027	0.0000093	0.00024	0.00011	0.0000068	--	--
PCB-138/163/164	--	0.043	0.043	0.00092	0.014	0.0056	0.0005	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--
PCB-139/149	--	0.032	0.037	0.00089	0.013	0.005	0.00049	--	--
PCB-14	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-140	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-141	--	0.012	0.014	0.00028	0.004	0.0016	0.00014	--	--
PCB-142	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-143	--	--	--	--	--	--	--	--	--
PCB-144	--	0.0011	0.0013	0.000048	0.0006	0.00022	0.000021	--	--
PCB-145	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-146	--	--	--	--	--	--	--	--	--
PCB-146/165	--	0.006	0.0065	0.00014	0.0021	0.00081	0.000077	--	--
PCB-147	--	0.00012	0.0001	0.0000041	0.000061	0.000026	0.0000019 J	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--
PCB-148	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-15	--	0.00017	0.00012	0.0000079	0.00014	0.000079	0.0000059	--	--
PCB-150	--	0.000013	0.000011	0.000002 U	0.0000056	0.0000026	0.000002 U	--	--
PCB-151	--	0.015	0.018	0.00037	0.0055	0.0019	0.00019	--	--
PCB-152	--	0.0000032	0.0000048	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-153	--	0.056 J	0.056 J	0.0012	0.019	0.0069	0.00062	--	--
PCB-153/168	--	--	--	--	--	--	--	--	--
PCB-154	--	0.00012	0.00007	0.0000025	0.000047	0.000017	0.0000029	--	--
PCB-155	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-156	--	0.0029	0.0027	0.000056	0.00085	0.00035	0.000035	--	--
PCB-156/157	--	--	--	--	--	--	--	--	--
PCB-157	--	0.00022	0.00019	0.0000066	0.000095	0.000042	0.0000038	--	--
PCB-158	--	--	--	--	--	--	--	--	--
PCB-158/160	--	0.0042	0.0044	0.000086	0.0014	0.00055	0.000045	--	--
PCB-159	--	0.00051	0.00058	0.000019	0.00019	0.000083	0.0000082	--	--
PCB-16	--	0.000031	0.000022	0.000002 U	0.000017	0.000011	0.000002 U	--	--
PCB-160	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--
PCB-166	--	0.000012	0.000013	0.000002 U	0.0000046	0.0000022	0.000002 U	--	--
PCB-167	--	0.0013	0.0013	0.000026	0.00038	0.00016	0.000016	--	--
PCB-168	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-169	--	0.0000063	0.0000089	0.0000013 U	0.0000016 U	0.0000014 U	0.0000011 U	--	--
PCB-17	--	0.000031	0.000022	0.000002 U	0.000021	0.000014	0.000002 U	--	--
PCB-170	--	0.023 J	0.021 J	0.00043	0.0059	0.0023	0.00023	--	--
PCB-171	--	0.0053	0.0059	0.00014	0.0019	0.00082	0.000069	--	--
PCB-171/173	--	--	--	--	--	--	--	--	--
PCB-172	--	0.0043	0.0042	0.000092	0.0013	0.00052	0.00005	--	--
PCB-173	--	0.0005	0.00052	0.000011	0.00013	0.000054	0.0000061	--	--
PCB-174	--	0.025 J	0.024 J	0.00059	0.0085	0.0034	0.0003	--	--
PCB-175	--	0.00076	0.00097	0.00002	0.00023	0.00011	0.00001	--	--
PCB-176	--	0.0022	0.0029	0.000063	0.00084	0.00036	0.000029	--	--
PCB-177	--	0.017	0.015	0.00036	0.0052	0.0022	0.00019	--	--
PCB-178	--	0.0065	0.0057	0.00013	0.002	0.0008	0.000067	--	--
PCB-179	--	0.0094	0.0099	0.00025	0.0035	0.0014	0.00013	--	--
PCB-18	--	0.000041	0.000045	0.0000028	0.000037	0.00002	0.0000023	--	--
PCB-18/30	--	--	--	--	--	--	--	--	--
PCB-180	--	0.043 J	0.04 J	0.00094	0.013	0.0057	0.0005	--	--
PCB-180/193	--	--	--	--	--	--	--	--	--
PCB-181	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-182	--	--	--	--	--	--	--	--	--
PCB-182/187	--	0.029	0.028	0.00081	0.01	0.0043	0.00038	--	--
PCB-183	--	0.012	0.014	0.00029	0.0041	0.0017	0.00015	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--
PCB-184	--	0.0000042	0.0000061	0.000002 U	0.0000038	0.000002 U	0.000002 U	--	--
PCB-185	--	0.0022	0.0022	0.000067	0.00091	0.00031	0.000032	--	--
PCB-186	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-187	--	--	--	--	--	--	--	--	--
PCB-188	--	0.0000081	0.000008	0.000002 U	0.0000054	0.000002 U	0.000002 U	--	--
PCB-189	--	0.00082	0.00074	0.000017	0.00024	0.00009	0.0000088	--	--
PCB-19	--	0.0000049	0.0000053	0.000002 U	0.0000039	0.0000022	0.000002 U	--	--
PCB-190	--	0.0056	0.005	0.0001	0.0013	0.00058	0.000057	--	--
PCB-191	--	0.00088	0.00092	0.000018	0.00026	0.0001	0.00001	--	--
PCB-192	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-193	--	0.0032	0.0026	0.000062	0.00076	0.00032	0.000035	--	--
PCB-194	--	0.01	0.0099	0.00023	0.0036	0.0014	0.00015	--	--
PCB-195	--	0.0052	0.0049	0.00012	0.0018	0.00071	0.000078	--	--
PCB-196	--	--	--	--	--	--	--	--	--
PCB-196/203	--	0.011	0.011	0.00027	0.0029	0.0013	0.00017	--	--
PCB-197	--	0.00026	0.00037	0.0000084	0.000094	0.000043	0.0000045	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R07-S	R07-S	R07-S	R07-S	R08-S	R08-S	R08-S	R08-S	R08-S	R09-S
SAMPLE ID	R7-S-0006	R7-S-0006-01	R7-S-0624	R7-S-2448	R8-S-0006-01	R8-S-0624	R8-S-2448	R8-S-0006	R9-S-0006
SAMPLE DATE	20191120	20191120	20191120	20191120	20191120	20191120	20191120	20191120	20191120
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SB	SS	SS	SB	SS	SS
PCB-198	--	0.00056	0.00061	0.000017	0.000091	0.000033	0.000011	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--
PCB-199	--	0.01	0.01	0.00026	0.0028	0.0013	0.00018	--	--
PCB-2	--	0.000038	0.000011	0.0000025	0.000019	0.000014	0.0000039	--	--
PCB-20/21/33	--	0.0001	0.000075	0.0000058 J	0.000068	0.000068	0.0000045 J	--	--
PCB-20/28	--	--	--	--	--	--	--	--	--
PCB-200	--	0.0013	0.0015	0.000036	0.00041	0.00018	0.000019	--	--
PCB-201	--	0.00091	0.0012	0.000034	0.00037	0.00018	0.000019	--	--
PCB-202	--	0.002	0.0018	0.000064	0.0007	0.00036	0.000052	--	--
PCB-203	--	--	--	--	--	--	--	--	--
PCB-204	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-205	--	0.00064	0.00056	0.000013	0.0002	0.000077	0.000008	--	--
PCB-206	--	0.0027	0.0021	0.00018	0.0014	0.0013	0.00039	--	--
PCB-207	--	0.0003	0.00025	0.000022	0.00015	0.00013	0.000027	--	--
PCB-208	--	0.00065	0.00048	0.00006	0.00037	0.00048	0.00015	--	--
PCB-209	--	0.00086	0.00068	0.00027	0.00083	0.0011	0.00052	--	--
PCB-21/33	--	--	--	--	--	--	--	--	--
PCB-22	--	0.000064	0.000045	0.0000038	0.000052	0.00004	0.0000031	--	--
PCB-23	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-24	--	0.000004	0.000003	0.000002 U	0.0000025	0.0000022	0.000002 U	--	--
PCB-25	--	0.000015	0.000011	0.000002 U	0.000012	0.000011	0.000002 U	--	--
PCB-26	--	0.000031	0.000023	0.000002 U	0.000025	0.00002	0.0000021	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--
PCB-27	--	0.0000046	0.0000026	0.000002 U	0.0000031	0.000002	0.000002 U	--	--
PCB-28	--	0.00023	0.00015	0.0000099	0.00016	0.00014	0.0000098	--	--
PCB-29	--	0.0000018 J	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-3	--	0.000064	0.00002	0.0000047	0.000044	0.00003	0.0000055	--	--
PCB-30	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-31	--	0.00018	0.00013	0.00001	0.00019	0.00012	0.0000084	--	--
PCB-32	--	0.000027	0.00002	0.000002 U	0.000017	0.000015	0.000002 U	--	--
PCB-34	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-35	--	0.000013	0.0000083	0.000002 U	0.0000092	0.0000053	0.000002 U	--	--
PCB-36	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-37	--	0.00015	0.00015	0.0000077	0.00011	0.000075	0.0000066	--	--
PCB-38	--	0.0000053	0.0000024	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-39	--	0.000002 U	0.000002 U	0.000002 U	0.0000028	0.000004	0.000002 U	--	--
PCB-4	--	0.000023	0.00001	0.000002 U	0.000019	0.0000062	0.000002 U	--	--
PCB-40	--	0.000019	0.000052	0.000002 U	0.000013	0.0000074	0.000002 U	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	0.00021	0.00025	0.0000044 J	0.00014	0.000078	0.0000061 J	--	--
PCB-42	--	--	--	--	--	--	--	--	--
PCB-42/59	--	0.000052	0.00011	0.0000017 J	0.000032	0.00002	0.0000019 J	--	--
PCB-43	--	--	--	--	--	--	--	--	--
PCB-43/49	--	0.00032	0.00045	0.0000063	0.00014	0.000071	0.0000073	--	--
PCB-44	--	0.00015	0.00029	0.0000059	0.00012	0.000061	0.0000058	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--
PCB-45	--	0.000012	0.000039	0.000002 U	0.0000085	0.0000058	0.000002 U	--	--
PCB-45/51	--	--	--	--	--	--	--	--	--
PCB-46	--	0.0000044	0.000013	0.000002 U	0.0000033	0.0000024	0.000002 U	--	--
PCB-47	--	0.00015	0.000097	0.0000024	0.000059	0.000025	0.0000026	--	--
PCB-48	--	--	--	--	--	--	--	--	--
PCB-48/75	--	0.000027	0.000022	0.000004 U	0.000011	0.000007	0.000004 U	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--
PCB-5	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-50	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--
PCB-51	--	0.0000062	0.000013	0.000002 U	0.000004	0.0000018 J	0.000002 U	--	--
PCB-52	--	--	--	--	--	--	--	--	--
PCB-52/69	--	0.00049	0.00064	0.000017	0.0003	0.00016	0.000015	--	--
PCB-53	--	0.000015	0.000038	0.0000014 J	0.00001	0.0000055	0.000002 U	--	--
PCB-54	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-55	--	0.0000094	0.000011	0.000002 U	0.0000056	0.0000031	0.000002 U	--	--
PCB-56	--	--	--	--	--	--	--	--	--
PCB-56/60	--	0.00019	0.00018	0.0000073	0.0002	0.00012	0.0000088	--	--
PCB-57	--	0.0000028	0.0000024	0.000002 U	0.0000015 J	0.000002 U	0.000002 U	--	--
PCB-58	--	0.000002	0.0000032	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--
PCB-6	--	0.000026	0.000011	0.000002 U	0.000015	0.000012	0.0000012 J	--	--
PCB-60	--	--	--	--	--	--	--	--	--
PCB-61/70	--	0.00058	0.00066	0.00002	0.00042	0.00026	0.000024	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--
PCB-62	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-63	--	0.000016	0.0000096	0.000002 U	0.0000094	0.0000063	0.000002 U	--	--
PCB-64	--	--	--	--	--	--	--	--	--
PCB-65	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-66	--	--	--	--	--	--	--	--	--
PCB-66/76	--	0.00046	0.00059	0.000016	0.00029	0.00019	0.000018	--	--
PCB-67	--	0.0000089	0.0000066	0.000002 U	0.0000059	0.0000038	0.000002 U	--	--
PCB-68	--	0.0000074	0.0000071	0.000002 U	0.0000033	0.0000033	0.000002 U	--	--
PCB-7	--	0.0000073	0.0000022	0.000002 U	0.0000056	0.0000035	0.000002 U	--	--
PCB-72	--	--	--	--	--	--	--	--	--
PCB-73	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R07-S	R07-S	R07-S	R07-S	R08-S	R08-S	R08-S	R08-S	R09-S
SAMPLE ID	R7-S-0006	R7-S-0006-01	R7-S-0624	R7-S-2448	R8-S-0006-01	R8-S-0624	R8-S-2448	R8-S-0006	R9-S-0006
SAMPLE DATE	20191120	20191120	20191120	20191120	20191120	20191120	20191120	20191120	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SB	SS	SS	SB	SS	SS
PCB-74	--	0.00013	0.000096	0.000006	0.00011	0.000072	0.000007	--	--
PCB-77	--	0.000078	0.00018	0.0000032	0.000076	0.000043	0.0000037	--	--
PCB-78	--	0.0000035	0.0000043	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-79	--	0.000017	0.000015	0.000002 U	0.000011	0.0000048	0.000002 U	--	--
PCB-8	--	0.00013	0.000058	0.0000047	0.00011	0.00006	0.0000039	--	--
PCB-80	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-81	--	0.00004	0.000052	0.0000015 J	0.00002	0.000011	0.0000011 J	--	--
PCB-82	--	0.0001	0.00026	0.0000059	0.000098	0.000053	0.0000052	--	--
PCB-83	--	--	--	--	--	--	--	--	--
PCB-83/112	--	0.000052	0.000082	0.0000027 J	0.000053	0.000027	0.0000024 J	--	--
PCB-84	--	--	--	--	--	--	--	--	--
PCB-84/92	--	0.0015	0.0019	0.000046	0.00084	0.00033	0.000029	--	--
PCB-85/116	--	0.00033	0.00053	0.000013	0.00029	0.00012	0.000013	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--
PCB-86	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	0.0012	0.0017	0.000036	0.00072	0.00032	0.000028	--	--
PCB-88/91	--	0.00016	0.00026	0.000011	0.00014	0.000083	0.0000073	--	--
PCB-89	--	0.0000029	0.00002	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-9	--	0.0000084	0.000002	0.000002 U	0.0000049	0.0000041	0.000002 U	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--
PCB-93	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--
PCB-94	--	0.0000058	0.000011	0.000002 U	0.000003	0.000002 U	0.000002 U	--	--
PCB-95	--	0.0044	0.0063	0.00019	0.0018	0.00092	0.0001	--	--
PCB-96	--	0.0000027	0.000012	0.000002 U	0.0000023	0.000002 U	0.000002 U	--	--
PCB-97	--	0.00037	0.0006	0.000015	0.00033	0.00016	0.000013	--	--
PCB-98/102	--	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U	--	--
PCB-99	--	0.00077	0.00083	0.000031	0.00067	0.00026	0.000022	--	--
PENTACHLOROBIPHENYLS	--	0.032 J	0.039 J	0.00094 J	0.016 J	0.0071 J	0.00064 J	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	1.28561E-05	1.95329E-05	4.80545E-07	8.17584E-06	4.42775E-06	4.32637E-07	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	1.28561E-05	1.95329E-05	4.81195E-07	8.17664E-06	4.42845E-06	4.33187E-07	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	2.853E-07	3.2005E-07	9.797E-09	1.39245E-07	6.988E-08	7.917E-09	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	2.853E-07	3.2005E-07	9.829E-09	1.39285E-07	6.9915E-08	7.944E-09	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	4.90191E-06	5.38423E-06	1.65135E-07	2.28347E-06	1.13808E-06	1.33687E-07	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	4.90191E-06	5.38423E-06	1.84635E-07	2.30747E-06	1.15908E-06	1.50187E-07	--	--
TETRACHLOROBIPHENYLS	--	0.003 J	0.0038 J	0.000093 J	0.002 J	0.0012 J	0.0001 J	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	0.0066063	0.0064109	0.0001518	0.002447	0.001081	0.00010569	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	0.4625199	0.4778894	0.0116024	0.1627323	0.068422	0.00720414	--	--
TOTAL PCB CONGENERS ZEROND	--	0.4691262	0.4843003	0.0117542	0.1651793	0.069503	0.00730983	--	--
TOTAL PCB CONGENERS-NOAA	--	0.223261	0.218253	0.0053773	0.075427	0.032121	0.0035888	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	0.4691582	0.4843343	0.01182985	0.1652171	0.0695467	0.00738438	--	--
TOTAL PCB CONGENERS-NOAA X2	--	0.446522	0.436506	0.0107546	0.150854	0.064242	0.0071776	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	0.446522	0.436506	0.0107546	0.150854	0.064242	0.0071776	--	--
TRICHLOROBIPHENYLS	--	0.00093 J	0.00071 J	0.00004 J	0.00073 J	0.00055 J	0.000037 J	--	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	770	210	290	2200	1100	1300	--	--
1,2,3,4,6,7,8,9-OCDF	--	65	12	4.2 J	84	25	2.7 J	--	--
1,2,3,4,6,7,8-HPCDD	--	82	22	16	140	43	14	--	--
1,2,3,4,6,7,8-HPCDF	--	41	20	11	41	15	2.4 J	--	--
1,2,3,4,7,8,9-HPCDF	--	2.7 J	1.9 J	0.2 Z	2.6 J	0.85 J	0.16 U	--	--
1,2,3,4,7,8-HXCDD	--	1.8 J	1.4 J	0.25 Z	2 J	0.92 J	0.25 Z	--	--
1,2,3,4,7,8-HXCDF	--	7.7	5.5	0.53 J	5.3	2.9 J	0.47 Z	--	--
1,2,3,6,7,8-HXCDD	--	4.9 J	2.2 J	0.82 J	6.2	2.4 J	0.39 Z	--	--
1,2,3,6,7,8-HXCDF	--	5.3	4.5 J	0.37 Z	3.8 J	2.1 J	0.38 J	--	--
1,2,3,7,8,9-HXCDD	--	3.9 J	1.7 J	0.59 J	3.3 J	1.7 J	0.36 J	--	--
1,2,3,7,8,9-HXCDF	--	1.7 Z	1.8 J	0.21 U	1.5 J	0.57 J	0.21 U	--	--
1,2,3,7,8-PECDD	--	2.4 J	1.9 J	0.18 U	2.4 J	1 Z	0.26 J	--	--
1,2,3,7,8-PECDF	--	5.8 Z	5.4	0.22 U	3.2 J	2 J	0.31 Z	--	--
2,3,4,6,7,8-HXCDF	--	6.5	6.2	0.46 J	4.8 J	2.1 J	0.43 J	--	--
2,3,4,7,8-PECDF	--	28 J	14	0.53 J	8.2 Z	3.4 J	0.66 J	--	--
2,3,7,8-TCDD	--	0.86 J	0.44 Z	0.14 U	0.61 Z	0.46 Z	0.14 U	--	--
2,3,7,8-TCDF	--	6.6	2.6	0.14 U	4.8 J	2.5 J	0.67 Z	--	--
TEQ DIOXINS (BIRD)	--	41.6915	21.8052	0.90312	19.1664	8.881	1.96967	--	--
TEQ DIOXINS (BIRD) HALFND	--	41.6915	21.8052	1.15462	19.1664	8.881	2.05097	--	--
TEQ DIOXINS (FISH)	--	21.5905	12.5422	0.69752	10.9494	4.967	1.06777	--	--
TEQ DIOXINS (FISH) HALFND	--	21.5905	12.5422	0.87702	10.9494	4.967	1.14907	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	17.1815	9.7976	0.82126	11.2572	4.985	1.31711	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	17.1815	9.7976	1.00206	11.2572	4.985	1.39841	--	--
TOTAL HPCDD	--	150 J	38 J	27 J	300 J	83 J	24 J	--	--
TOTAL HPCDF	--	77 J	29 J	19 J	94 J	29 J	3.8 J	--	--
TOTAL HXCDD	--	67 J	18 J	6.3 J	59 J	30 J	2.4 J	--	--
TOTAL HXCDF	--	150 J	76 J	7.5 J	80 J	29 J	2 J	--	--
TOTAL PECDD	--	25 J	6.1 J	0.48 J	25 J	17 J	1.2 J	--	--
TOTAL PECDF	--	400 J	250 J	6.5 J	160 J	62 J	4 J	--	--
TOTAL TCDD	--	150 J	6.9 J	1.6 J	22 J	17 J	1.3 J	--	--
TOTAL TCDF	--	330 J	82 J	2.6 J	84 J	35 J	1.1 J	--	--
METALS (MG/KG)									
ALUMINUM	--	8960	9500	12800	8970	10100	10100	--	--
ANTIMONY	--	0.22 J	1.2 U	1.2 U	0.36 J	0.22 J	1.3 U	--	--
ARSENIC	--	9.1	5.7	3.9	9.1	7.3	6.3	--	--
BARIUM	--	135	129	61.4	107	72.2	58.7	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R07-S	R07-S	R07-S	R07-S	R08-S	R08-S	R08-S	R08-S	R09-S
SAMPLE ID	R7-S-0006	R7-S-0006-01	R7-S-0624	R7-S-2448	R8-S-0006-01	R8-S-0624	R8-S-2448	R8-S-0006	R9-S-0006
SAMPLE DATE	20191120	20191120	20191120	20191120	20191120	20191120	20191120	20191120	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SB	SS	SS	SB	SS	SS
BERYLLIUM	--	0.82	0.73	0.46 J	0.73	0.46 J	0.5 J	--	--
CADMIUM	--	0.53 J	1.2	0.16 J	0.72	0.46 J	0.16 J	--	--
CALCIUM	--	2250	1170	1890	7430	1480	1070	--	--
CHROMIUM	--	8.6	6.7	8.1	12.9	7.5	7.4	--	--
COBALT	--	10.7	9.3	3.8	18.5	6.4	6.7	--	--
COPPER	--	48.5	23.8	10	38.3	26.2	28.7	--	--
CYANIDE	--	0.63 R	0.57 R	0.63 R	0.69 R	0.6 R	0.6 R	--	--
IRON	--	16400	12800	13700	36000	12900	20300	--	--
LEAD	--	96.2	124	70.2	152	85.8	48.1	--	--
MAGNESIUM	--	814	710	958	1760	778	622	--	--
MANGANESE	--	687	722	227	354	171	156	--	--
MERCURY	--	0.12 UJ	0.12 UJ	0.13	0.13 UJ	0.13 UJ	0.2	--	--
NICKEL	--	16.2	8.6	4.9	15.7	7.2	6.6	--	--
POTASSIUM	--	1150	926	1030	1410	1050	982	--	--
SELENIUM	--	3.1 UJ	0.37 J	0.19 J	0.65 J	0.21 J	0.57 J	--	--
SILVER	--	0.22 J	0.096 J	0.057 J	0.19 J	0.15 J	0.2 J	--	--
SODIUM	--	659 UJ	53.4 J	46.6 J	82.3 J	56.9 J	43.7 J	--	--
THALLIUM	--	0.63 UJ	0.59 UJ	0.6 UJ	0.7 UJ	0.6 UJ	0.63 UJ	--	--
VANADIUM	--	10.9	12.2	13.2	12.7	8.8	11.8	--	--
ZINC	--	127	95.3	57.9	193	110	80.8	--	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	82	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	37900	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	76	--	81	77	--	78	79	71	76

LOCATION	R09-S	R09-S	R09-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-2-S
SAMPLE ID	R9-S-0006-01	R9-S-0624	R9-S-2448	R10-1-S-0006	R10-1-S-0006-01	R10-1-S-0006-D	R10-1-S-0624	R10-1-S-2448	R10-2-S-0006
SAMPLE DATE	20191120	20191120	20191120	20191121	20191121	20191121	20191121	20191121	20191121
DUPLICATE						R10-1-S-0006			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SB	SS
TOP DEPTH	0	0.5	2	0	0	0	0.5	2	0
BOTTOM DEPTH	0.5	2	4	0.5	0.5	0.5	2	4	0.5
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
1,1,2,2-TETRACHLOROETHANE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
1,1,2-TRICHLOROETHANE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
1,1-DICHLOROETHANE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
1,1-DICHLOROETHENE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
1,2,3-TRICHLOROBENZENE	--	--	--	0.0048 UJ	--	0.0051 R	--	--	0.0045 UJ
1,2,4-TRICHLOROBENZENE	--	--	--	0.0048 UJ	--	0.0051 R	--	--	0.0045 UJ
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	0.0048 UJ	--	0.0051 R	--	--	0.0045 UJ
1,2-DIBROMOETHANE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
1,2-DICHLOROBENZENE	--	--	--	0.0048 UJ	--	0.0051 R	--	--	0.0045 UJ
1,2-DICHLOROETHANE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
1,2-DICHLOROPROPANE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
1,3-DICHLOROBENZENE	--	--	--	0.0048 UJ	--	0.0051 R	--	--	0.0045 UJ
1,4-DICHLOROBENZENE	--	--	--	0.0048 UJ	--	0.0051 R	--	--	0.0045 UJ
2-BUTANONE	--	--	--	0.0096 U	--	0.01 U	--	--	0.0089 U
2-HEXANONE	--	--	--	0.0096 U	--	0.01 UJ	--	--	0.0089 U
4-METHYL-2-PENTANONE	--	--	--	0.0096 U	--	0.01 UJ	--	--	0.0089 U
ACETONE	--	--	--	0.0096 U	--	0.0064 J	--	--	0.0089 U
BENZENE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
BROMOCHLOROMETHANE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
BROMODICHLOROMETHANE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
BROMOFORM	--	--	--	0.0048 UJ	--	0.0051 R	--	--	0.0045 UJ
BROMOMETHANE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
CARBON DISULFIDE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
CARBON TETRACHLORIDE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
CHLOROBENZENE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
CHLORODIBROMOMETHANE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
CHLOROETHANE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
CHLOROFORM	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
CHLOROMETHANE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
CIS-1,2-DICHLOROETHENE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
CIS-1,3-DICHLOROPROPENE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
CYCLOHEXANE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
DICHLORODIFLUOROMETHANE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
ETHYLBENZENE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
ISOPROPYLBENZENE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
M+P-XYLENES	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
METHYL ACETATE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
METHYL CYCLOHEXANE	--	--	--	0.0048 U	--	0.002 J	--	--	0.0045 U
METHYL TERT-BUTYL ETHER	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
METHYLENE CHLORIDE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
O-XYLENE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
STYRENE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
TETRACHLOROETHENE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
TOLUENE	--	--	--	0.0048 U	--	0.001 J	--	--	0.026
TRANS-1,2-DICHLOROETHENE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
TRANS-1,3-DICHLOROPROPENE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
TRICHLOROETHENE	--	--	--	0.0048 U	--	0.0051 UJ	--	--	0.0045 U
TRICHLOROFLUOROMETHANE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
VINYL CHLORIDE	--	--	--	0.0048 U	--	0.0051 U	--	--	0.0045 U
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.017 J	--
1,2,4,5-TETRACHLOROBENZENE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
1,4-DIOXANE	0.087 U	0.08 U	0.079 U	--	0.081 U	--	0.077 U	0.077 U	--
2,2'-OXYBIS(1-CHLOROPROPANE)	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
2,3,4,6-TETRACHLOROPHENOL	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
2,4,5-TRICHLOROPHENOL	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
2,4,6-TRICHLOROPHENOL	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
2,4-DICHLOROPHENOL	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
2,4-DIMETHYLPHENOL	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
2,4-DINITROPHENOL	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
2,4-DINITROTOLUENE	0.22 U	0.2 UJ	0.2 UJ	--	0.21 U	--	0.19 U	0.2 U	--
2,6-DINITROTOLUENE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
2-CHLORONAPHTHALENE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
2-CHLOROPHENOL	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
2-METHYLNAPHTHALENE	0.032 J	0.2 U	0.2 U	--	0.032 J	--	0.03 J	0.05 J	--
2-METHYLPHENOL	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
2-NITROANILINE	0.22 U	0.2 U	0.2 U	--	0.21 UJ	--	0.19 UJ	0.2 UJ	--
2-NITROPHENOL	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
3&4-METHYLPHENOL	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
3,3'-DICHLOROBENZIDINE	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
3-NITROANILINE	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
4,6-DINITRO-2-METHYLPHENOL	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
4-BROMOPHENYL PHENYL ETHER	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
4-CHLORO-3-METHYLPHENOL	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
4-CHLOROANILINE	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
4-CHLOROPHENYL PHENYL ETHER	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
4-NITROANILINE	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
4-NITROPHENOL	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--

LOCATION	R09-S	R09-S	R09-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-2-S
SAMPLE ID	R9-S-0006-01	R9-S-0624	R9-S-2448	R10-1-S-0006	R10-1-S-0006-01	R10-1-S-0006-D	R10-1-S-0624	R10-1-S-2448	R10-2-S-0006
SAMPLE DATE	20191120	20191120	20191120	20191121	20191121	20191121	20191121	20191121	20191121
DUPLICATE						R10-1-S-0006			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SB	SS
ACENAPHTHENE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.021 J	0.048 J	--
ACENAPHTHYLENE	0.037 J	0.2 U	0.2 U	--	0.14 J	--	0.27	0.071 J	--
ACETOPHENONE	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
ANTHRACENE	0.039 J	0.2 U	0.2 U	--	0.12 J	--	0.24	0.13 J	--
ATRAZINE	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
BAP EQUIVALENT-HALFND	0.36539	0.175148	0.14045	--	1.08142	--	1.6872	0.77034	--
BAP EQUIVALENT-POS	0.25539	0.075148	0.04045	--	0.97642	--	1.5922	0.67034	--
BENZALDEHYDE	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.024 J	0.38 U	--
BENZO(A)ANTHRACENE	0.2 J	0.057 J	0.031 J	--	0.63	--	1.2	0.52	--
BENZO(A)PYRENE	0.19 J	0.055 J	0.03 J	--	0.73	--	1.2	0.5	--
BENZO(B)FLUORANTHENE	0.31	0.1 J	0.051 J	--	1.3	--	1.9	0.83	--
BENZO(G,H,I)PERYLENE	0.11 J	0.035 J	0.021 J	--	0.31	--	0.4	0.18 J	--
BENZO(K)FLUORANTHENE	0.11 J	0.026 J	0.021 J	--	0.37	--	0.7	0.27	--
BIS(2-CHLOROETHOXY)METHANE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
BIS(2-CHLOROETHYL)ETHER	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	0.041 J	0.2 U	0.2 U	--	0.054 J	--	0.07 J	0.065 J	--
BUTYL BENZYL PHTHALATE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
CAPROLACTAM	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
CARBAZOLE	0.43 U	0.4 U	0.39 U	--	0.023 J	--	0.053 J	0.066 J	--
CHRYSENE	0.29	0.088 J	0.04 J	--	0.72	--	1.2	0.64	--
DIBENZO(A,H)ANTHRACENE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
DIBENZOFURAN	0.22 U	0.2 U	0.2 U	--	0.017 J	--	0.025 J	0.044 J	--
DIETHYL PHTHALATE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
DIMETHYL PHTHALATE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.022 J	0.11 J	--
DI-N-BUTYL PHTHALATE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.021 J	0.12 J	--
DI-N-OCTYL PHTHALATE	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
FLUORANTHENE	0.35 J	0.11 J	0.053 J	--	1.3	--	3.8	1.1	--
FLUORENE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.045 J	0.065 J	--
HEXACHLOROBENZENE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
HEXACHLOROBUTADIENE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
HEXACHLOROCYCLOPENTADIENE	0.43 U	0.4 U	0.39 U	--	0.4 UJ	--	0.38 UJ	0.38 UJ	--
HEXACHLOROETHANE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
HIGH MOLECULAR WEIGHT PAHS	1.64	0.497	0.264	--	5.65	--	9.74	4.07	--
INDENO(1,2,3-CD)PYRENE	0.13 J	0.041 J	0.02 J	--	0.49	--	0.74	0.32	--
ISOPHORONE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
LOW MOLECULAR WEIGHT PAHS	0.634	0.193	0.093	--	1.886	--	5.216	2.063	--
NAPHTHALENE	0.028 J	0.013 J	0.2 U	--	0.026 J	--	0.03 J	0.039 J	--
NITROBENZENE	0.22 U	0.2 U	0.2 U	--	0.21 UJ	--	0.19 UJ	0.2 UJ	--
N-NITROSO-DI-N-PROPYLAMINE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
N-NITROSODIPHENYLAMINE	0.22 U	0.2 U	0.2 U	--	0.21 U	--	0.19 U	0.2 U	--
PENTACHLOROPHENOL	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
PHENANTHRENE	0.18 J	0.07 J	0.04 J	--	0.3	--	0.81	0.61	--
PHENOL	0.43 U	0.4 U	0.39 U	--	0.4 U	--	0.38 U	0.38 U	--
PYRENE	0.3	0.095 J	0.05 J	--	1.1	--	2.4	0.81	--
TOTAL PAHS	2.274	0.69	0.357	--	7.536	--	14.956	6.133	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	0.0088 U	0.0081 U	0.008 U	--	0.008 U	--	0.0077 U	0.0076 U	--
2-METHYLNAPHTHALENE	0.04	0.019	0.0084	--	0.036	--	--	0.047	--
ACENAPHTHENE	0.0052	0.0023 J	0.0018 J	--	0.012	--	--	0.055	--
ACENAPHTHYLENE	0.033	0.012	0.007	--	0.092	--	--	0.049	--
ANTHRACENE	0.031	0.01	0.0072	--	0.088	--	--	0.11	--
BAP EQUIVALENT-HALFND	0.24751	0.080899	0.040552	--	0.79961	--	--	0.58038	--
BAP EQUIVALENT-POS	0.24536	0.078899	0.038602	--	0.79761	--	--	0.57848	--
BENZO(A)ANTHRACENE	0.21	0.056	0.028	--	0.54 J	--	--	0.5 J	--
BENZO(A)PYRENE	0.18	0.06	0.029	--	0.6 J	--	--	0.43 J	--
BENZO(B)FLUORANTHENE	0.32	0.095	0.05	--	0.96 J	--	--	0.67 J	--
BENZO(G,H,I)PERYLENE	0.1	0.029	0.015	--	0.23	--	--	0.14	--
BENZO(K)FLUORANTHENE	0.11	0.032	0.016	--	0.4 J	--	--	0.29	--
CHRYSENE	0.26	0.079	0.042	--	0.61 J	--	--	0.58 J	--
DIBENZO(A,H)ANTHRACENE	0.0043 U	0.004 U	0.0039 U	--	0.004 UJ	--	--	0.0038 UJ	--
FLUORANTHENE	0.34	0.11	0.046	--	1.1 J	--	--	0.93 J	--
FLUORENE	0.011	0.0048	0.0044	--	0.021	--	--	0.061	--
HIGH MOLECULAR WEIGHT PAHS	1.62	0.485	0.241	--	4.54	--	--	3.58	--
INDENO(1,2,3-CD)PYRENE	0.11	0.034	0.016	--	0.43 J	--	--	0.28	--
LOW MOLECULAR WEIGHT PAHS	0.6202	0.2161	0.1054	--	1.641	--	--	1.781	--
NAPHTHALENE	0.03	0.016	0.005	--	0.028	--	--	0.036	--
PENTACHLOROPHENOL	0.0087 U	0.008 U	0.0079 U	--	0.0081 R	--	--	0.0077 R	--
PHENANTHRENE	0.17	0.061	0.034	--	0.3	--	--	0.54 J	--
PYRENE	0.33	0.1	0.045	--	0.77 J	--	--	0.69 J	--
TOTAL PAHS	0.26	0.079	0.042	--	0.61	--	--	0.58	--
PESTICIDES (MG/KG)									
4,4'-DDD	0.0013 J	0.00043 J	0.00033 J	--	0.00055 R	--	0.0038 U	0.0038 U	--
4,4'-DDE	0.015	0.0074	0.00031 J	--	0.00087 J	--	0.00043 R	0.00028 R	--
4,4'-DDT	0.031	0.013	0.00091 J	--	0.0049	--	0.004	0.0015 J	--
ALDRIN	0.0022 U	0.002 U	0.0021 U	--	0.0021 U	--	0.0019 U	0.0019 U	--
ALPHA-BHC	0.0022 U	0.002 U	0.0021 U	--	0.0021 U	--	0.0019 U	0.0019 U	--
ALPHA-CHLORDANE	0.0017 J	0.00033 J	0.00059 J	--	0.00082 J	--	0.0013 J	0.00092 R	--
BETA-BHC	0.00053 J	0.002 U	0.00042 J	--	0.0005 J	--	0.00069 J	0.0011 J	--
DELTA-BHC	0.0022 U	0.002 U	0.0021 U	--	0.0021 U	--	0.0019 U	0.0019 U	--
DIELDRIN	0.0043 U	0.0012 J	0.00033 R	--	0.00096 R	--	0.0038 U	0.0038 U	--
ENDOSULFAN I	0.0011 J	0.00039 J	0.0021 U	--	0.00049 R	--	0.0011 J	0.001 J	--
ENDOSULFAN II	0.0016 J	0.004 U	0.004 U	--	0.004 U	--	0.0038 U	0.0038 U	--
ENDOSULFAN SULFATE	0.00069 R	0.00044 R	0.004 U	--	0.004 U	--	0.00081 J	0.0038 U	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R09-S	R09-S	R09-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-2-S
SAMPLE ID	R9-S-0006-01	R9-S-0624	R9-S-2448	R10-1-S-0006	R10-1-S-0006-01	R10-1-S-0006-D	R10-1-S-0624	R10-1-S-2448	R10-2-S-0006
SAMPLE DATE	20191120	20191120	20191120	20191121	20191121	20191121	20191121	20191121	20191121
DUPLICATE						R10-1-S-0006			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SB	SS
ENDRIN	0.0043 U	0.004 U	0.004 U	--	0.00051 R	--	0.0017 J	0.0004 R	--
ENDRIN ALDEHYDE	0.00029 J	0.004 U	0.004 U	--	0.004 U	--	0.0012 J	0.00092 J	--
ENDRIN KETONE	0.0043 U	0.004 U	0.004 U	--	0.004 U	--	0.00076 R	0.0038 U	--
GAMMA-BHC (LINDANE)	0.0022 U	0.002 U	0.0021 U	--	0.00052 J	--	0.0019 U	0.0019 U	--
GAMMA-CHLORDANE	0.0017 J	0.00062 J	0.00035 J	--	0.00026 J	--	0.00045 R	0.00044 R	--
HEPTACHLOR	0.0022 U	0.002 U	0.0021 U	--	0.0021 U	--	0.0019 U	0.0019 U	--
HEPTACHLOR EPOXIDE	0.0022 U	0.002 U	0.0021 U	--	0.0003 R	--	0.0019 U	0.0019 U	--
METHOXYCHLOR	0.0061 J	0.0034 J	0.0038 J	--	0.018 J	--	0.041	0.019	--
TOXAPHENE	0.22 U	0.2 U	0.21 U	--	0.21 U	--	0.19 U	0.19 U	--
PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	0.301 U	0.309 U	0.301 U	--	--	0.281 U	0.298 U	0.291 U
AROCLOR-1221	--	0.602 U	0.617 U	0.602 U	--	--	0.562 U	0.595 U	0.581 U
AROCLOR-1232	--	0.301 U	0.309 U	0.301 U	--	--	0.281 U	0.298 U	0.291 U
AROCLOR-1242	--	0.301 U	0.309 U	0.301 U	--	--	0.281 U	0.298 U	0.291 U
AROCLOR-1248	--	0.301 U	0.309 U	0.301 U	--	--	0.281 U	0.298 U	0.291 U
AROCLOR-1254	--	0.301 U	0.309 U	0.301 U	--	--	0.281 U	0.298 U	0.291 U
AROCLOR-1260	--	0.301 U	0.309 U	0.125 J	--	--	0.168 J	0.298 U	0.291 U
AROCLOR-1262	--	0.301 U	0.309 U	0.301 U	--	--	0.281 U	0.298 U	0.291 U
AROCLOR-1268	--	0.301 U	0.309 U	0.301 U	--	--	0.281 U	0.298 U	0.291 U
TOTAL AROCLOR	--	0 U	0 U	0.125	--	--	0.168	0 U	0 U
TOTAL AROCLOR HALFND	--	1.505	1.5445	1.4795	--	--	1.4325	1.4895	1.4545
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	0.00041 J	0.0001 J	0.0001 J	--	0.00035 J	--	0.00029 J	0.00011 J	--
HEPTACHLOROBIPHENYLS	0.13 J	0.041 J	0.008 J	--	0.04 J	--	0.017 J	0.0018 J	--
HEXACHLOROBIPHENYLS	0.12 J	0.038 J	0.0091 J	--	0.044 J	--	0.018 J	0.002 J	--
MONOCHLOROBIPHENYLS	0.00013 J	0.000027 J	0.000018 J	--	0.000088 J	--	0.000074 J	0.000056 J	--
NONACHLOROBIPHENYLS	0.0027 J	0.0013 J	0.00036 J	--	0.0012 J	--	0.0009 J	0.00075 J	--
OCTACHLOROBIPHENYLS	0.024 J	0.0087 J	0.0017 J	--	0.0098 J	--	0.0041 J	0.00061 J	--
PCB-1	0.000031	0.0000073	0.0000055	--	0.000022	--	0.00002	0.0000098	--
PCB-10	0.0000018 J	0.000002 U	0.000002 U	--	0.0000014 J	--	0.000002 U	0.000002 U	--
PCB-100	0.000019	0.0000044	0.000002 U	--	0.000003	--	0.0000015 J	0.000002 U	--
PCB-101/90	0.0069	0.0023	0.00062	--	0.0023	--	0.00081	0.00013	--
PCB-103	0.000031	0.0000077	0.0000025	--	0.0000062	--	0.0000032	0.000002 U	--
PCB-104	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-105	0.0011	0.0004	0.000092	--	0.00043	--	0.00015	0.000072	--
PCB-106	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--
PCB-108/107	0.00023	0.000076	0.000014	--	0.000079	--	0.000028	0.000013	--
PCB-108/124	--	--	--	--	--	--	--	--	--
PCB-109	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-11	0.000058	0.000012	0.0000048	--	0.000072	--	0.000041	0.000029	--
PCB-110	0.0043	0.0017	0.0004	--	0.0016	--	0.00061	0.00021	--
PCB-110/115	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--
PCB-111/115	0.000045	0.000017	0.0000029 J	--	0.00001	--	0.0000055	0.0000024 J	--
PCB-112	--	--	--	--	--	--	--	--	--
PCB-113	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-114	0.000063	0.000022	0.0000049	--	0.000022	--	0.0000096	0.0000035	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-118/106	0.0036	0.0013	0.0003	--	0.0012	--	0.00041	0.00016	--
PCB-119	0.000084	0.000025	0.0000051	--	0.000024	--	0.000011	0.0000034	--
PCB-12	0.000014	0.0000015 J	0.0000011 J	--	0.0000063	--	0.0000066	0.0000051	--
PCB-12/13	--	--	--	--	--	--	--	--	--
PCB-120	0.000021	0.0000054	0.0000022	--	0.0000086	--	0.0000044	0.000002 U	--
PCB-121	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-122	0.000046	0.000017	0.0000035	--	0.000014	--	0.0000061	0.0000021	--
PCB-123	0.000041	0.000014	0.0000036	--	0.000014	--	0.000007	0.0000035	--
PCB-124	0.00016	0.000067	0.000016	--	0.000072	--	0.000031	0.0000076	--
PCB-126	0.000036	0.000011	0.0000028	--	0.000016	--	0.0000067	0.0000028	--
PCB-127	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-128/162	0.0018	0.00062	0.00013	--	0.00066	--	0.0003	0.000066	--
PCB-128/166	--	--	--	--	--	--	--	--	--
PCB-129	0.00035	0.00011	0.000035	--	0.00012	--	0.000063	0.000015	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--
PCB-13	0.00002	0.0000059	0.0000044	--	0.000018	--	0.000019	0.0000077	--
PCB-130	0.0011	0.00037	0.000078	--	0.00035	--	0.00017	0.000029	--
PCB-131	--	--	--	--	--	--	--	--	--
PCB-131/133	0.00042	0.00012	0.000032	--	0.00015	--	0.000066	0.0000097	--
PCB-132	--	--	--	--	--	--	--	--	--
PCB-132/161	0.004	0.0012	0.00043	--	0.0013	--	0.00073	0.00011	--
PCB-133	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R09-S	R09-S	R09-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-2-S
SAMPLE ID	R9-S-0006-01	R9-S-0624	R9-S-2448	R10-1-S-0006	R10-1-S-0006-01	R10-1-S-0006-D	R10-1-S-0624	R10-1-S-2448	R10-2-S-0006
SAMPLE DATE	20191120	20191120	20191120	20191121	20191121	20191121	20191121	20191121	20191121
DUPLICATE						R10-1-S-0006			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SB	SS
PCB-134	--	--	--	--	--	--	--	--	--
PCB-134/143	0.00063	0.0002	0.000066	--	0.00022	--	0.0001	0.000016	--
PCB-135	0.0024	0.00072	0.00022	--	0.00092	--	0.00046	0.00005	--
PCB-135/151	--	--	--	--	--	--	--	--	--
PCB-136	0.002	0.00057	0.0003	--	0.00058	--	0.0003	0.000041	--
PCB-137	0.00021	0.000068	0.000019	--	0.0001	--	0.000044	0.000018	--
PCB-138/163/164	0.028	0.0086	0.0019	--	0.01	--	0.0041	0.00045	--
PCB-139/140	--	--	--	--	--	--	--	--	--
PCB-139/149	0.02	0.0055	0.0016	--	0.0073	--	0.0033	0.00035	--
PCB-14	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-140	0.000002 U	0.000002 U	0.000002 U	--	0.00002	--	0.0000054	0.0000022	--
PCB-141	0.0075	0.0024	0.00055	--	0.0024	--	0.001	0.000089	--
PCB-142	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-143	--	--	--	--	--	--	--	--	--
PCB-144	0.00087	0.00036	0.000091	--	0.00035	--	0.00011	0.000012	--
PCB-145	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-146	--	--	--	--	--	--	--	--	--
PCB-146/165	0.0039	0.0013	0.00026	--	0.0015	--	0.00052	0.000071	--
PCB-147	0.00011	0.000031	0.0000056	--	0.000033	--	0.000017	0.0000068	--
PCB-147/149	--	--	--	--	--	--	--	--	--
PCB-148	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-15	0.00014	0.000039	0.000025	--	0.00012	--	0.000074	0.000028	--
PCB-150	0.000011	0.0000032	0.000002 U	--	0.0000027	--	0.0000012 J	0.000002 U	--
PCB-151	0.0085	0.0026	0.00071	--	0.0031	--	0.0012	0.00011	--
PCB-152	0.0000033	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-153	0.036 J	0.011	0.0023	--	0.013	--	0.0048	0.00044	--
PCB-153/168	--	--	--	--	--	--	--	--	--
PCB-154	0.000099	0.000025	0.0000049	--	0.00003	--	0.000011	0.0000025	--
PCB-155	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-156	0.0018	0.00058	0.00012	--	0.00066	--	0.00025	0.000042	--
PCB-156/157	--	--	--	--	--	--	--	--	--
PCB-157	0.00017	0.000053	0.000014	--	0.000066	--	0.000031	0.0000094	--
PCB-158	--	--	--	--	--	--	--	--	--
PCB-158/160	0.0025	0.00083	0.00019	--	0.0009	--	0.00039	0.00005	--
PCB-159	0.00041	0.00014	0.000024	--	0.00015	--	0.000055	0.0000095	--
PCB-16	0.000024	0.0000076	0.000012	--	0.000017	--	0.000012	0.000007	--
PCB-160	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--
PCB-166	0.000017	0.0000044	0.000002 U	--	0.0000044	--	0.0000019 J	0.0000012 J	--
PCB-167	0.00079	0.00026	0.000054	--	0.00029	--	0.00012	0.00002	--
PCB-168	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-169	0.0000063	0.0000022	0.0000012 U	--	0.0000035	--	0.0000014 J	0.00000097 U	--
PCB-17	0.00003	0.0000088	0.000014	--	0.000022	--	0.000015	0.0000097	--
PCB-170	0.013	0.0038	0.00082	--	0.0046	--	0.002	0.00018	--
PCB-171	0.004	0.0014	0.00028	--	0.0012	--	0.00054	0.000059	--
PCB-171/173	--	--	--	--	--	--	--	--	--
PCB-172	0.0025	0.00086	0.00017	--	0.00086	--	0.00039	0.000037	--
PCB-173	0.0003	0.000085	0.000021	--	0.000088	--	0.000043	0.0000043	--
PCB-174	0.017	0.0056	0.0011	--	0.0045	--	0.002	0.0002	--
PCB-175	0.00053	0.00015	0.000045	--	0.00018	--	0.000088	0.000008	--
PCB-176	0.0015	0.00049	0.00014	--	0.00043	--	0.00022	0.000024	--
PCB-177	0.011	0.0037	0.00068	--	0.0035	--	0.0014	0.00014	--
PCB-178	0.0042	0.0013	0.00023	--	0.0012	--	0.00047	0.000055	--
PCB-179	0.0067	0.0022	0.00045	--	0.0019	--	0.00091	0.000094	--
PCB-18	0.00004	0.000016	0.00002	--	0.000028	--	0.000015	0.000017	--
PCB-18/30	--	--	--	--	--	--	--	--	--
PCB-180	0.028 J	0.0097	0.0018	--	0.0095	--	0.0038	0.00038	--
PCB-180/193	--	--	--	--	--	--	--	--	--
PCB-181	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-182	--	--	--	--	--	--	--	--	--
PCB-182/187	0.021	0.0067	0.0012	--	0.0071	--	0.0028	0.00034	--
PCB-183	0.0076	0.0023	0.00058	--	0.0025	--	0.0013	0.00013	--
PCB-183/185	--	--	--	--	--	--	--	--	--
PCB-184	0.0000038	0.000002 U	0.000002 U	--	0.0000017 J	--	0.000002 U	0.000002 U	--
PCB-185	0.0016	0.00061	0.00011	--	0.0005	--	0.0002	0.000018	--
PCB-186	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-187	--	--	--	--	--	--	--	--	--
PCB-188	0.0000071	0.0000025	0.000002 U	--	0.0000029	--	0.0000013 J	0.000002 U	--
PCB-189	0.00049	0.00014	0.000031	--	0.00018	--	0.000076	0.0000073	--
PCB-19	0.0000056	0.0000012 J	0.0000027	--	0.0000037	--	0.0000024	0.0000021	--
PCB-190	0.0033	0.0011	0.00021	--	0.0012	--	0.00045	0.00004	--
PCB-191	0.0005	0.00017	0.000039	--	0.00019	--	0.000089	0.0000086	--
PCB-192	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-193	0.0018	0.00059	0.00011	--	0.00065	--	0.00027	0.000025	--
PCB-194	0.0064	0.0022	0.00039	--	0.0022	--	0.00097	0.00012	--
PCB-195	0.0035	0.0012	0.00021	--	0.0014	--	0.00049	0.000059	--
PCB-196	--	--	--	--	--	--	--	--	--
PCB-196/203	0.0056	0.002	0.00046	--	0.0026	--	0.0011	0.00015	--
PCB-197	0.00016	0.00006	0.000015	--	0.000066	--	0.000029	0.0000054	--
PCB-197/200	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R09-S	R09-S	R09-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-2-S
SAMPLE ID	R9-S-0006-01	R9-S-0624	R9-S-2448	R10-1-S-0006	R10-1-S-0006-01	R10-1-S-0006-D	R10-1-S-0624	R10-1-S-2448	R10-2-S-0006
SAMPLE DATE	20191120	20191120	20191120	20191121	20191121	20191121	20191121	20191121	20191121
DUPLICATE						R10-1-S-0006			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SB	SS
PCB-198	0.0003	0.00013	0.000025	--	0.00014	--	0.000069	0.0000098	--
PCB-198/199	--	--	--	--	--	--	--	--	--
PCB-199	0.0052	0.002	0.00039	--	0.0023	--	0.00093	0.00017	--
PCB-2	0.000034	0.0000053	0.0000044	--	0.000014	--	0.000014	0.000017	--
PCB-20/21/33	0.000081	0.000024	0.000023	--	0.000068	--	0.000048	0.000022	--
PCB-20/28	--	--	--	--	--	--	--	--	--
PCB-200	0.00084	0.00027	0.000063	--	0.00031	--	0.00013	0.000018	--
PCB-201	0.00061	0.00023	0.000061	--	0.00025	--	0.00012	0.000021	--
PCB-202	0.0013	0.00045	0.000084	--	0.00044	--	0.00019	0.000054	--
PCB-203	--	--	--	--	--	--	--	--	--
PCB-204	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-205	0.00038	0.00012	0.000023	--	0.00014	--	0.000051	0.0000066	--
PCB-206	0.002	0.00095	0.00026	--	0.00084	--	0.00064	0.00048	--
PCB-207	0.00017	0.000085	0.000019	--	0.000088	--	0.000051	0.000041	--
PCB-208	0.00049	0.0003	0.000076	--	0.00023	--	0.00021	0.00023	--
PCB-209	0.00091	0.00072	0.00017	--	0.00065	--	0.00056	0.00056	--
PCB-21/33	--	--	--	--	--	--	--	--	--
PCB-22	0.000052	0.000018	0.000016	--	0.000045	--	0.000024	0.000013	--
PCB-23	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-24	0.0000039	0.0000011 J	0.000002	--	0.0000031	--	0.0000024	0.0000013 J	--
PCB-25	0.000013	0.0000037	0.0000032	--	0.00001	--	0.0000063	0.0000028	--
PCB-26	0.000028	0.0000084	0.0000066	--	0.000021	--	0.000013	0.0000064	--
PCB-26/29	--	--	--	--	--	--	--	--	--
PCB-27	0.0000045	0.0000011 J	0.0000017 J	--	0.0000029	--	0.0000015 J	0.0000018 J	--
PCB-28	0.00018	0.000056	0.000041	--	0.00013	--	0.000074	0.000036	--
PCB-29	0.0000015 J	0.000002 U	0.000002 U	--	0.0000011 J	--	0.000002 U	0.000002 U	--
PCB-3	0.000062	0.000014	0.000008	--	0.000052	--	0.00004	0.000029	--
PCB-30	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-31	0.00018	0.00005	0.000042	--	0.00012	--	0.000077	0.000044	--
PCB-32	0.000027	0.0000064	0.000011	--	0.000019	--	0.000014	0.000009	--
PCB-34	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-35	0.0000093	0.0000028	0.000002 U	--	0.0000062	--	0.0000037	0.0000029	--
PCB-36	0.0000017 J	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-37	0.00012	0.000035	0.000016	--	0.000086	--	0.000048	0.000021	--
PCB-38	0.0000058	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.0000027	--
PCB-39	0.0000018 J	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-4	0.000022	0.0000045	0.00001	--	0.000015	--	0.00001	0.0000037	--
PCB-40	0.000015	0.0000056	0.0000038	--	0.000015	--	0.0000093	0.0000039	--
PCB-40/71	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	0.00016	0.000062	0.000024	--	0.00012	--	0.000059	0.000034	--
PCB-42	--	--	--	--	--	--	--	--	--
PCB-42/59	0.000042	0.000013	0.000007	--	0.000036	--	0.000018	0.000011	--
PCB-43	--	--	--	--	--	--	--	--	--
PCB-43/49	0.00027	0.000079	0.000026	--	0.00013	--	0.000049	0.000031	--
PCB-44	0.00014	0.00007	0.000025	--	0.000097	--	0.000048	0.000032	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--
PCB-45	0.000011	0.0000025	0.0000041	--	0.0000089	--	0.0000062	0.0000047	--
PCB-45/51	--	--	--	--	--	--	--	--	--
PCB-46	0.0000044	0.0000011 J	0.0000019 J	--	0.0000036	--	0.0000022	0.000002	--
PCB-47	0.00013	0.000026	0.0000093	--	0.000047	--	0.000019	0.00001	--
PCB-48	--	--	--	--	--	--	--	--	--
PCB-48/75	0.000019	0.0000041	0.0000026 J	--	0.000015	--	0.0000058	0.0000065	--
PCB-49/69	--	--	--	--	--	--	--	--	--
PCB-5	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-50	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-50/53	--	--	--	--	--	--	--	--	--
PCB-51	0.0000095	0.0000021	0.0000012 J	--	0.0000031	--	0.0000016 J	0.0000015 J	--
PCB-52	--	--	--	--	--	--	--	--	--
PCB-52/69	0.00044	0.00015	0.000062	--	0.00019	--	0.000081	0.000047	--
PCB-53	0.000018	0.0000039	0.0000039	--	0.0000094	--	0.0000061	0.0000057	--
PCB-54	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-55	0.0000077	0.0000026	0.00000086 J	--	0.0000051	--	0.0000028	0.000001 J	--
PCB-56	--	--	--	--	--	--	--	--	--
PCB-56/60	0.0002	0.000072	0.000026	--	0.00013	--	0.000066	0.000028	--
PCB-57	0.0000021	0.000002 U	0.000002 U	--	0.0000013 J	--	0.000002 U	0.000002 U	--
PCB-58	0.0000015 J	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--
PCB-6	0.000022	0.0000061	0.00001	--	0.000019	--	0.000023	0.0000057	--
PCB-60	--	--	--	--	--	--	--	--	--
PCB-61/70	0.0006	0.00023	0.000061	--	0.00026	--	0.000057	0.000053	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--
PCB-62	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-63	0.000017	0.0000055	0.0000014 J	--	0.0000087	--	0.0000039	0.0000018 J	--
PCB-64	--	--	--	--	--	--	--	--	--
PCB-65	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-66	--	--	--	--	--	--	--	--	--
PCB-66/76	0.0004	0.00014	0.000048	--	0.00024	--	0.00011	0.000045	--
PCB-67	0.0000074	0.0000021	0.0000012 J	--	0.0000056	--	0.0000029	0.0000015 J	--
PCB-68	0.0000054	0.0000021	0.000002 U	--	0.0000021	--	0.0000013 J	0.000001 J	--
PCB-7	0.0000062	0.0000016 J	0.0000019 J	--	0.000007	--	0.0000081	0.0000024	--
PCB-72	--	--	--	--	--	--	--	--	--
PCB-73	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R09-S	R09-S	R09-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-2-S
SAMPLE ID	R9-S-0006-01	R9-S-0624	R9-S-2448	R10-1-S-0006	R10-1-S-0006-01	R10-1-S-0006-D	R10-1-S-0624	R10-1-S-2448	R10-2-S-0006
SAMPLE DATE	20191120	20191120	20191120	20191121	20191121	20191121	20191121	20191121	20191121
DUPLICATE						R10-1-S-0006			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SB	SS
PCB-74	0.00013	0.000051	0.000017	--	0.000081	--	0.000034	0.000017	--
PCB-77	0.000077	0.000023	0.0000068	--	0.000051	--	0.000024	0.000012	--
PCB-78	0.0000033	0.0000012 J	0.000002 U	--	0.0000014 J	--	0.000002 U	0.000002 U	--
PCB-79	0.000013	0.0000062	0.000002 U	--	0.0000058	--	0.0000024	0.0000015 J	--
PCB-8	0.00012	0.000029	0.00004	--	0.00009	--	0.000098	0.000025	--
PCB-80	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-81	0.000031	0.000014	0.0000036	--	0.000013	--	0.000005	0.0000021	--
PCB-82	0.00011	0.000057	0.000015	--	0.000052	--	0.000026	0.000012	--
PCB-83	--	--	--	--	--	--	--	--	--
PCB-83/112	0.000047	0.000021	0.0000054	--	0.000022	--	0.0000091	0.0000044	--
PCB-84	--	--	--	--	--	--	--	--	--
PCB-84/92	0.001	0.00038	0.00011	--	0.00038	--	0.00016	0.000038	--
PCB-85/116	0.00033	0.00013	0.000027	--	0.00014	--	0.000056	0.000023	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--
PCB-86	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--
PCB-87/117/125	0.00093	0.00039	0.000094	--	0.00035	--	0.00014	0.000043	--
PCB-88/91	0.00018	0.000076	0.00002	--	0.000061	--	0.000034	0.000014	--
PCB-89	0.000002 U	0.0000016 J	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-9	0.0000095	0.0000017 J	0.0000027	--	0.0000052	--	0.0000068	0.0000016 J	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--
PCB-93	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	--	0.000002 U	0.000002 U	--
PCB-93/100	--	--	--	--	--	--	--	--	--
PCB-94	0.0000064	0.0000022	0.000002 U	--	0.0000015 J	--	0.000002 U	0.000002 U	--
PCB-95	0.0027	0.00095	0.00043	--	0.0011	--	0.00058	0.000092	--
PCB-96	0.0000032	0.000002 U	0.000002 U	--	0.0000011 J	--	0.000002 U	0.000002 U	--
PCB-97	0.00032	0.00014	0.000033	--	0.00014	--	0.000061	0.000025	--
PCB-98/102	0.000004 U	0.000004 U	0.000004 U	--	0.000004 U	--	0.000004 U	0.000004 U	--
PCB-99	0.00084	0.00034	0.00006	--	0.00028	--	0.00011	0.000041	--
PENTACHLOROBIPHENYLS	0.023 J	0.0085 J	0.0023 J	--	0.0083 J	--	0.0033 J	0.0009 J	--
TEQ DIOXIN-LIKE PCBs (BIRD)	1.08828E-05	3.76184E-06	1.00398E-06	--	5.57614E-06	--	2.41749E-06	1.103E-06	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.08828E-05	3.76184E-06	1.00458E-06	--	5.57614E-06	--	2.41749E-06	1.10348E-06	--
TEQ DIOXIN-LIKE PCBs (FISH)	2.25785E-07	7.1755E-08	1.8077E-08	--	1.00085E-07	--	4.1688E-08	1.7037E-08	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	2.25785E-07	7.1755E-08	1.8107E-08	--	1.00085E-07	--	4.1688E-08	1.7061E-08	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	3.93962E-06	1.21657E-06	2.91345E-07	--	1.76386E-06	--	7.35208E-07	2.86561E-07	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	3.93962E-06	1.21657E-06	3.09345E-07	--	1.76386E-06	--	7.35208E-07	3.01111E-07	--
TETRACHLOROBIPHENYLS	0.0028 J	0.00097 J	0.00034 J	--	0.0015 J	--	0.00061 J	0.00035 J	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0046043	0.0015192	0.0003327	--	0.0017455	--	0.0006807	0.0001746	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.2991297	0.0975514	0.02199236	--	0.105232	--	0.0446549	0.0071393	--
TOTAL PCB CONGENERS ZEROND	0.303734	0.0990706	0.02232506	--	0.1069775	--	0.0453356	0.0073139	--
TOTAL PCB CONGENERS-NOAA	0.14713	0.047751	0.010038	--	0.052455	--	0.021286	0.003519	--
TOTAL PCB CONGENERS-NOAA HALFND	0.303765	0.0991106	0.02237566	--	0.1070125	--	0.0453776	0.007360385	--
TOTAL PCB CONGENERS-NOAA X2	0.29426	0.095502	0.020076	--	0.10491	--	0.042572	0.007038	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.29426	0.095502	0.020076	--	0.10491	--	0.042572	0.007038	--
TRICHLOROBIPHENYLS	0.00081 J	0.00024 J	0.00021 J	--	0.00058 J	--	0.00036 J	0.0002 J	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	800	1500	1200	--	3000	--	2700	710	--
1,2,3,4,6,7,8,9-OCDF	49	10	1.4 J	--	81	--	39	12	--
1,2,3,4,6,7,8-HPCDD	52	24	14	--	0.56 U	--	57	34	--
1,2,3,4,6,7,8-HPCDF	41	9.8	1.4 Z	--	24	--	25	8.4	--
1,2,3,4,7,8,9-HPCDF	2.8 J	0.26 Z	0.16 U	--	0.16 U	--	1.1 Z	0.43 J	--
1,2,3,4,7,8-HXCDD	1.3 Z	0.43 J	0.26 Z	--	1.6 Z	--	0.78 U	0.63 J	--
1,2,3,4,7,8-HXCDF	6.7	1.2 J	0.19 J	--	2.1 J	--	0.47 U	1.6 J	--
1,2,3,6,7,8-HXCDD	3.1 Z	1 Z	0.41 J	--	3.8 J	--	1.4 Z	1.6 J	--
1,2,3,6,7,8-HXCDF	5.9	0.75 Z	0.18 U	--	1.8 J	--	1.7 J	1.2 J	--
1,2,3,7,8,9-HXCDD	2.4 J	0.71 J	0.66 Z	--	3.8 J	--	1.5 Z	1 J	--
1,2,3,7,8,9-HXCDF	2.1 J	0.31 Z	0.21 U	--	0.46 J	--	0.57 U	0.36 J	--
1,2,3,7,8-PECDD	1.9 J	0.54 J	0.18 U	--	1.3 J	--	1.3 U	1 J	--
1,2,3,7,8-PECDF	4.2 J	0.73 Z	0.25 U	--	0.83 Z	--	1.6 U	1.8 J	--
2,3,4,6,7,8-HXCDF	7.8	1 J	0.11 U	--	1.6 J	--	1.6 J	1.5 J	--
2,3,4,7,8-PECDF	13	2.4 Z	0.27 U	--	6.3 Z	--	2 Z	1.4 J	--
2,3,7,8-TCDD	0.49 J	0.3 U	0.25 U	--	0.37 J	--	2.4 U	0.14 U	--
2,3,7,8-TCDF	5.6 J	1.2 J	0.43 Z	--	2.5 J	--	3.4 U	1.8 J	--
TEQ DIOXINS (BIRD)	24.5709	4.9171	0.68024	--	12.1951	--	3.0859	5.188	--
TEQ DIOXINS (BIRD) HALFND	24.5709	5.0671	1.06854	--	12.19618	--	6.7874	5.258	--
TEQ DIOXINS (FISH)	12.9099	2.6702	0.32934	--	7.0066	--	1.9509	2.8815	--
TEQ DIOXINS (FISH) HALFND	12.9099	2.8202	0.64389	--	7.00768	--	4.1729	2.9515	--
TEQ DIOXINS (HUMANS/MAMMALS)	11.1187	2.7355	0.70942	--	6.5152	--	2.8727	3.0879	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	11.1187	2.8855	0.99447	--	6.5188	--	5.0077	3.1579	--
TOTAL HPCDD	95 J	43 J	27 J	--	0 UJ	--	99 J	61 J	--
TOTAL HPCDF	77 J	18 J	1 J	--	85 J	--	51 J	18 J	--
TOTAL HXCDD	30 J	6.4 J	2.8 J	--	32 J	--	6.4 J	20 J	--
TOTAL HXCDF	110 J	16 J	1.1 J	--	62 J	--	17 J	19 J	--
TOTAL PECDD	11 J	1.5 J	0.74 J	--	5.7 J	--	1.3 J	11 J	--
TOTAL PECDF	270 J	65 J	2.1 J	--	130 J	--	13 J	21 J	--
TOTAL TCDD	60 J	9.1 J	0.62 J	--	8.5 J	--	0 UJ	14 J	--
TOTAL TCDF	140 J	26 J	0 UJ	--	67 J	--	3.2 J	21 J	--
METALS (MG/KG)									
ALUMINUM	7870	9810	9240	--	10800	--	9300	9770	--
ANTIMONY	0.38 J	1.2 U	1.2 U	--	1.2 U	--	5 J	0.27 J	--
ARSENIC	8.7	8.7	3.4	--	7.2	--	12.1	6.9	--
BARIUM	87.5	76.5	35.6	--	71.8	--	176	113	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R09-S	R09-S	R09-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-1-S	R10-2-S
SAMPLE ID	R9-S-0006-01	R9-S-0624	R9-S-2448	R10-1-S-0006	R10-1-S-0006-01	R10-1-S-0006-D	R10-1-S-0624	R10-1-S-2448	R10-2-S-0006
SAMPLE DATE	20191120	20191120	20191120	20191121	20191121	20191121	20191121	20191121	20191121
DUPLICATE						R10-1-S-0006			
SAMPLE CODE	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SS	SB	SS
BERYLLIUM	0.64	0.65	0.37 J	--	0.8	--	1.1	0.57 J	--
CADMIUM	0.4 J	0.22 J	0.08 J	--	0.2 J	--	0.62	0.57 J	--
CALCIUM	2870	1320	689	--	14600	--	6450	9450	--
CHROMIUM	9.1	13.8	6.5	--	13.6	--	128	11.8	--
COBALT	6.8	6.5	3	--	10.6	--	17	6.2	--
COPPER	47.1	20.9	9.1	--	25.2	--	72.7	38.7	--
CYANIDE	0.63 R	0.58 R	0.58 R	--	0.59 R	--	0.54 R	0.59 R	--
IRON	12800	20700	13700	--	26600	--	21400	16200	--
LEAD	165	63.6	25	--	63	--	166	172	--
MAGNESIUM	775	679	555 J	--	1860	--	1230	1540	--
MANGANESE	308	324	112	--	323	--	505	203	--
MERCURY	0.12 UJ	0.11 UJ	0.11 UJ	--	0.11 UJ	--	0.11 UJ	0.12 UJ	--
NICKEL	12.2	7.9	4.1	--	16.1	--	20.7	8.7	--
POTASSIUM	1200	995	992	--	1720	--	1310	1200	--
SELENIUM	0.55 J	0.41 J	0.19 J	--	0.34 J	--	0.72 J	0.27 J	--
SILVER	0.16 J	0.079 J	0.58 U	--	0.6 U	--	0.09 J	0.086 J	--
SODIUM	69.3 J	50.2 J	33.5 J	--	47.9 J	--	60.1 J	82 J	--
THALLIUM	0.63 UJ	0.61 UJ	0.58 UJ	--	0.6 UJ	--	0.53 UJ	0.59 UJ	--
VANADIUM	10.1	23.3	12.4	--	17.4	--	7.2	16.5	--
ZINC	138	72.5	33.4	--	86.5	--	367	190	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	83	81	83	--	--	89	84	86

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R10-2-S	R10-2-S	R10-2-S	R11-S	R11-S	R11-S	R11-S	SB-010	SS-013
SAMPLE ID	R10-2-S-0006-01	R10-2-S-0624	R10-2-S-2448	R11-S-0006	R11-S-0006-01	R11-S-0624	R11-S-2448	SB-010	SS-013
SAMPLE DATE	20191121	20191121	20191121	20191121	20191121	20191121	20191121	20170615	20170615
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SB	SB	SS
TOP DEPTH	0	0.5	2	0	0	0.5	2	54	0
BOTTOM DEPTH	0.5	2	4	0.5	0.5	2	4	60	6
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	--	0.005 U	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	0.005 U	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	0.005 U	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	0.005 U	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	0.005 U	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	0.005 U	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	0.005 UJ	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	0.005 UJ	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	0.005 UJ	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	0.005 U	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	0.005 UJ	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	0.005 U	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	0.005 U	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	0.005 UJ	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	0.005 UJ	--	--	--	--	--
2-BUTANONE	--	--	--	0.01 U	--	--	--	--	--
2-HEXANONE	--	--	--	0.01 U	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	0.01 U	--	--	--	--	--
ACETONE	--	--	--	0.01 U	--	--	--	--	--
BENZENE	--	--	--	0.005 U	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	0.005 U	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	0.005 U	--	--	--	--	--
BROMOFORM	--	--	--	0.005 UJ	--	--	--	--	--
BROMOMETHANE	--	--	--	0.005 U	--	--	--	--	--
CARBON DISULFIDE	--	--	--	0.005 U	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	0.005 U	--	--	--	--	--
CHLOROBENZENE	--	--	--	0.005 U	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	0.005 U	--	--	--	--	--
CHLOROETHANE	--	--	--	0.005 U	--	--	--	--	--
CHLOROFORM	--	--	--	0.005 U	--	--	--	--	--
CHLOROMETHANE	--	--	--	0.005 U	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	0.005 U	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	0.005 U	--	--	--	--	--
CYCLOHEXANE	--	--	--	0.005 U	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	0.005 U	--	--	--	--	--
ETHYLBENZENE	--	--	--	0.005 U	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	0.005 U	--	--	--	--	--
M+P-XYLENES	--	--	--	0.005 U	--	--	--	--	--
METHYL ACETATE	--	--	--	0.005 U	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	0.005 U	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	0.005 U	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	0.0033 J	--	--	--	--	--
O-XYLENE	--	--	--	0.005 U	--	--	--	--	--
STYRENE	--	--	--	0.005 U	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	0.005 U	--	--	--	--	--
TOLUENE	--	--	--	0.005 U	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	0.005 U	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	0.005 U	--	--	--	--	--
TRICHLOROETHENE	--	--	--	0.005 U	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	0.005 U	--	--	--	--	--
VINYL CHLORIDE	--	--	--	0.005 U	--	--	--	--	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.2 U	0.023 J	0.015 J	--	0.036 J	0.033 J	0.22 U	--	--
1,2,4,5-TETRACHLOROBENZENE	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
1,4-DIOXANE	0.08 U	0.076 U	0.078 U	--	0.092 U	0.084 U	0.086 U	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--
2,3,4,6-TETRACHLOROPHENOL	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
2,4,5-TRICHLOROPHENOL	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
2,4,6-TRICHLOROPHENOL	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
2,4-DICHLOROPHENOL	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
2,4-DIMETHYLPHENOL	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
2,4-DINITROPHENOL	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--
2,4-DINITROTOLUENE	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
2,6-DINITROTOLUENE	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
2-CHLORONAPHTHALENE	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
2-CHLOROPHENOL	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
2-METHYLNAPHTHALENE	0.041 J	0.072 J	0.046 J	--	0.079 J	0.095 J	0.22 U	--	--
2-METHYLPHENOL	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--
2-NITROANILINE	0.2 UJ	0.19 UJ	0.2 UJ	--	0.23 UJ	0.21 UJ	0.22 U	--	--
2-NITROPHENOL	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
3&4-METHYLPHENOL	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--
3,3'-DICHLOROBENZIDINE	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--
3-NITROANILINE	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--
4,6-DINITRO-2-METHYLPHENOL	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--
4-BROMOPHENYL PHENYL ETHER	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
4-CHLORO-3-METHYLPHENOL	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
4-CHLOROANILINE	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--
4-CHLOROPHENYL PHENYL ETHER	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
4-NITROANILINE	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--
4-NITROPHENOL	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--

LOCATION	R10-2-S	R10-2-S	R10-2-S	R11-S	R11-S	R11-S	R11-S	SB-010	SS-013
SAMPLE ID	R10-2-S-0006-01	R10-2-S-0624	R10-2-S-2448	R11-S-0006	R11-S-0006-01	R11-S-0624	R11-S-2448	SB-010	SS-013
SAMPLE DATE	20191121	20191121	20191121	20191121	20191121	20191121	20191121	20170615	20170615
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SB	SB	SS
ACENAPHTHENE	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
ACENAPHTHYLENE	0.39	0.13 J	0.097 J	--	0.15 J	0.19 J	0.22 U	--	--
ACETOPHENONE	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.049 J	--	--
ANTHRACENE	0.31	0.087 J	0.066 J	--	0.14 J	0.13 J	0.22 U	--	--
ATRAZINE	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--
BAP EQUIVALENT-HALFND	6.5606	0.56572	0.45155	--	0.85146	0.95029	0.22 U	--	--
BAP EQUIVALENT-POS	6.4606	0.47072	0.35155	--	0.73646	0.84529	0.22 U	--	--
BENZALDEHYDE	0.39 U	0.37 U	0.16 J	--	0.04 J	0.027 J	0.43 U	--	--
BENZO(A)ANTHRACENE	2.5	0.37	0.29	--	0.63	0.65	0.22 U	--	--
BENZO(A)PYRENE	5.2	0.35	0.26	--	0.54	0.63	0.22 U	--	--
BENZO(B)FLUORANTHENE	7.5	0.59	0.45	--	0.99	1.1	0.22 U	--	--
BENZO(G,H,I)PERYLENE	2.1	0.17 J	0.098 J	--	0.12 J	0.18 J	0.22 U	--	--
BENZO(K)FLUORANTHENE	1.8	0.23	0.13 J	--	0.37	0.44	0.22 U	--	--
BIS(2-CHLOROETHOXY)METHANE	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
BIS(2-CHLOROETHYL)ETHER	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	0.09 J	0.055 J	0.056 J	--	0.63	0.17 J	0.22 U	--	--
BUTYL BENZYL PHTHALATE	0.098 J	0.19 U	0.2 U	--	6.8	0.52	0.22 U	--	--
CAPROLACTAM	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--
CARBAZOLE	0.097 J	0.03 J	0.38 U	--	0.054 J	0.045 J	0.43 U	--	--
CHRYSENE	2.6	0.42	0.25	--	0.76	0.89	0.22 U	--	--
DIBENZO(A,H)ANTHRACENE	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
DIBENZOFURAN	0.034 J	0.021 J	0.02 J	--	0.036 J	0.056 J	0.22 U	--	--
DIETHYL PHTHALATE	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
DIMETHYL PHTHALATE	0.2 U	0.033 J	0.15 J	--	0.23 U	0.21 U	0.38	--	--
DI-N-BUTYL PHTHALATE	0.028 J	0.04 J	0.085 J	--	0.23 U	0.21 U	0.22 U	--	--
DI-N-OCTYL PHTHALATE	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--
FLUORANTHENE	6.6	0.69	0.51	--	1.3	1.3	0.43 U	--	--
FLUORENE	0.027 J	0.023 J	0.2 U	--	0.031 J	0.032 J	0.22 U	--	--
HEXACHLOROBENZENE	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
HEXACHLOROBUTADIENE	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
HEXACHLOROCYCLOPENTADIENE	0.39 UJ	0.37 UJ	0.38 UJ	--	0.45 UJ	0.41 UJ	0.43 U	--	--
HEXACHLOROETHANE	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
HIGH MOLECULAR WEIGHT PAHS	30.7	2.89	2.028	--	4.7	5.24	0 U	--	--
INDENO(1,2,3-CD)PYRENE	2.4	0.22	0.16 J	--	0.3	0.35	0.22 U	--	--
ISOPHORONE	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
LOW MOLECULAR WEIGHT PAHS	7.891	1.281	0.921	--	2.193	2.385	0 U	--	--
NAPHTHALENE	0.054 J	0.031 J	0.038 J	--	0.052 J	0.063 J	0.22 U	--	--
NITROBENZENE	0.2 UJ	0.19 UJ	0.2 UJ	--	0.23 UJ	0.21 UJ	0.22 U	--	--
N-NITROSO-DI-N-PROPYLAMINE	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
N-NITROSODIPHENYLAMINE	0.2 U	0.19 U	0.2 U	--	0.23 U	0.21 U	0.22 U	--	--
PENTACHLOROPHENOL	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.43 U	--	--
PHENANTHRENE	0.51	0.32	0.21	--	0.52	0.67	0.22 U	--	--
PHENOL	0.39 U	0.37 U	0.38 U	--	0.45 U	0.41 U	0.11 J	--	--
PYRENE	6.6	0.54	0.39	--	0.99	1	0.22 U	--	--
TOTAL PAHS	38.591	4.171	2.949	--	6.893	7.625	0 U	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	0.016 U	0.0076 U	0.0079 U	--	0.0091 U	0.0085 U	--	--	--
2-METHYLNAPHTHALENE	--	0.081	0.046	--	0.068	0.11	0.005	--	--
ACENAPHTHENE	--	0.014	0.007	--	0.021	0.022	0.0043 U	--	--
ACENAPHTHYLENE	--	0.097	0.077	--	0.12	0.14	0.0015 J	--	--
ANTHRACENE	--	0.062	0.049	--	0.098	0.1	0.0018 J	--	--
BAP EQUIVALENT-HALFND	--	0.42538	0.31872	--	0.74818	0.8137	0.012228	--	--
BAP EQUIVALENT-POS	--	0.42353	0.31682	--	0.74593	0.81165	0.012228	--	--
BENZO(A)ANTHRACENE	--	0.38 J	0.3	--	0.64 J	0.65 J	0.0084	--	--
BENZO(A)PYRENE	--	0.31 J	0.23	--	0.55 J	0.6 J	0.0079	--	--
BENZO(B)FLUORANTHENE	--	0.52 J	0.39 J	--	1 J	1.1 J	0.011	--	--
BENZO(G,H,I)PERYLENE	--	0.14	0.058 J	--	0.064 J+	0.13	0.0067	--	--
BENZO(K)FLUORANTHENE	--	0.21	0.15	--	0.32	0.38 J	0.0045	--	--
CHRYSENE	--	0.43 J	0.32 J	--	0.73 J	0.85 J	0.013	--	--
DIBENZO(A,H)ANTHRACENE	--	0.0037 UJ	0.0038 UJ	--	0.0045 UJ	0.0041 UJ	0.0018 J	--	--
FLUORANTHENE	--	0.64 J	0.47 J	--	1.1 J	1.2 J	0.016	--	--
FLUORENE	--	0.027	0.014	--	0.028	0.032	0.0018 J	--	--
HIGH MOLECULAR WEIGHT PAHS	--	2.67	1.948	--	4.404	4.86	0.0766	--	--
INDENO(1,2,3-CD)PYRENE	--	0.21	0.16	--	0.28	0.32	0.0053	--	--
LOW MOLECULAR WEIGHT PAHS	--	1.201	0.874	--	1.916	2.209	0.0408	--	--
NAPHTHALENE	--	0.031	0.037	--	0.049	0.075	0.0047	--	--
PENTACHLOROPHENOL	--	0.0076 R	0.0078 R	--	0.0092 R	0.0084 R	0.0086 U	--	--
PHENANTHRENE	--	0.33 J	0.22	--	0.5 J	0.64 J	0.015	--	--
PYRENE	--	0.47 J	0.34 J	--	0.82 J	0.83 J	0.018	--	--
TOTAL PAHS	--	0.43	0.32	--	0.73	0.85	0.013	--	--
PESTICIDES (MG/KG)									
4,4'-DDD	0.00037 R	0.0007 J	0.0012 J	--	0.00069 J	0.0047 J	0.00068 J	--	--
4,4'-DDE	0.0033 J	0.0015 J	0.003 J	--	0.00051 R	0.00058 R	0.0042 U	--	--
4,4'-DDT	0.0079	0.0036 J	0.0081	--	0.025	0.016	0.0042 U	--	--
ALDRIN	0.0021 U	0.002 U	0.002 U	--	0.0023 U	0.0022 U	0.0022 U	--	--
ALPHA-BHC	0.0021 U	0.002 U	0.002 U	--	0.0023 U	0.0022 U	0.0022 U	--	--
ALPHA-CHLORDANE	0.002 J	0.0005 J	0.0004 J	--	0.0019 J	0.0012 J	0.0022 U	--	--
BETA-BHC	0.0006 J	0.002 U	0.002 U	--	0.0023 U	0.00041 J	0.0022 U	--	--
DELTA-BHC	0.0021 U	0.002 U	0.002 U	--	0.0023 U	0.0022 U	0.0022 U	--	--
DIELDRIN	0.0013 R	0.0038 U	0.00093 R	--	0.0044 R	0.00058 R	0.0042 U	--	--
ENDOSULFAN I	0.00035 R	0.00026 R	0.00027 J	--	0.00093 J	0.00095 J	0.0022 U	--	--
ENDOSULFAN II	0.002 J	0.0038 U	0.0038 U	--	0.0045 U	0.0042 U	0.0042 U	--	--
ENDOSULFAN SULFATE	0.0011 J	0.0038 U	0.0038 U	--	0.00071 J	0.0018 R	0.0042 U	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R10-2-S	R10-2-S	R10-2-S	R11-S	R11-S	R11-S	R11-S	SB-010	SS-013
SAMPLE ID	R10-2-S-0006-01	R10-2-S-0624	R10-2-S-2448	R11-S-0006	R11-S-0006-01	R11-S-0624	R11-S-2448	SB-010	SS-013
SAMPLE DATE	20191121	20191121	20191121	20191121	20191121	20191121	20191121	20170615	20170615
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SB	SB	SS
ENDRIN	0.0023 J	0.00028 J	0.0038 U	--	0.00084 R	0.003 R	0.0042 U	--	--
ENDRIN ALDEHYDE	0.00088 J	0.00075 J	0.00042 J	--	0.00067 R	0.0017 R	0.0042 U	--	--
ENDRIN KETONE	0.0032 R	0.0038 U	0.0021 J	--	0.0045 U	0.00095 R	0.0042 U	--	--
GAMMA-BHC (LINDANE)	0.0021 U	0.00079 J	0.00045 J	--	0.0015 J	0.0022 U	0.0005 J	--	--
GAMMA-CHLORDANE	0.0029 J	0.002 U	0.00026 J	--	0.0023 U	0.0018 J	0.0022 U	--	--
HEPTACHLOR	0.00099 J	0.00056 J	0.002 U	--	0.0023 U	0.0006 R	0.0022 U	--	--
HEPTACHLOR EPOXIDE	0.0021 U	0.002 U	0.002 U	--	0.0023 U	0.00058 J	0.0022 U	--	--
METHOXYCHLOR	0.076	0.019 J	0.012 J	--	0.028	0.043	0.022 U	--	--
TOXAPHENE	0.21 U	0.2 U	0.2 U	--	0.23 U	0.22 U	0.22 U	--	--
PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	0.042 U	0.043 U	0.049 U
AROCLOR-1221	--	--	--	--	--	--	0.042 U	0.043 U	0.049 U
AROCLOR-1232	--	--	--	--	--	--	0.042 U	0.043 U	0.049 U
AROCLOR-1242	--	--	--	--	--	--	0.042 U	0.043 U	0.049 U
AROCLOR-1248	--	--	--	--	--	--	0.042 U	0.043 U	0.049 U
AROCLOR-1254	--	--	--	--	--	--	0.042 U	0.043 U	0.049 U
AROCLOR-1260	--	--	--	--	--	--	0.0092 J	0.043 U	0.45
AROCLOR-1262	--	--	--	--	--	--	0.042 U	0.043 U	0.049 U
AROCLOR-1268	--	--	--	--	--	--	0.042 U	0.043 U	0.049 U
TOTAL AROCLOR	--	--	--	--	--	--	0.0092	0 U	0.45
TOTAL AROCLOR HALFND	--	--	--	--	--	--	0.1772	0.1935	0.646
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	0.281 U	0.291 U	0.338 U	--	0.313 U	0.309 U	--	--
AROCLOR-1221	--	0.562 U	0.581 U	0.676 U	--	0.625 U	0.617 U	--	--
AROCLOR-1232	--	0.281 U	0.291 U	0.338 U	--	0.313 U	0.309 U	--	--
AROCLOR-1242	--	0.281 U	0.291 U	0.338 U	--	0.313 U	0.309 U	--	--
AROCLOR-1248	--	0.281 U	0.291 U	0.338 U	--	0.313 U	0.309 U	--	--
AROCLOR-1254	--	0.281 U	0.291 U	0.338 U	--	0.313 U	0.309 U	--	--
AROCLOR-1260	--	0.281 U	0.291 U	0.52	--	0.214 J	0.309 U	--	--
AROCLOR-1262	--	0.281 U	0.291 U	0.338 U	--	0.313 U	0.309 U	--	--
AROCLOR-1268	--	0.281 U	0.291 U	0.338 U	--	0.313 U	0.309 U	--	--
TOTAL AROCLOR	--	0 U	0 U	0.52	--	0.214	0 U	--	--
TOTAL AROCLOR HALFND	--	1.405	1.4545	2.041	--	1.622	1.5445	--	--
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	0.00064 J	0.00025 J	0.00033 J	--	0.001 J	0.00047 J	0.000046 J	--	--
HEPTACHLOROBIPHENYLS	0.027 J	0.0028 J	0.0018 J	--	0.25 J	0.069 J	0.0078 J	--	--
HEXACHLOROBIPHENYLS	0.027 J	0.0029 J	0.003 J	--	0.28 J	0.1 J	0.0092 J	--	--
MONOCHLOROBIPHENYLS	0.000059 J	0.000029 J	0.000068 J	--	0.00017 J	0.00012 J	0.000023 J	--	--
NONACHLOROBIPHENYLS	0.0017 J	0.00043 J	0.00086 J	--	0.0051 J	0.0024 J	0.00019 J	--	--
OCTACHLOROBIPHENYLS	0.0074 J	0.00092 J	0.00074 J	--	0.054 J	0.016 J	0.002 J	--	--
PCB-1	0.00002	0.0000082	0.000013	--	0.000048	0.00003	0.0000041 J	--	--
PCB-10	0.0000048	0.000002 U	0.000002	--	0.0000032	0.0000021	0.000002 UJ	--	--
PCB-100	0.0000031	0.000002 U	0.0000018 J	--	0.000029	0.000012	--	--	--
PCB-101/90	0.0015	0.00015	0.0002	--	0.017	0.0086	--	--	--
PCB-103	0.000003	0.000002 U	0.00000096 J	--	0.000042	0.000026	0.00000086 J	--	--
PCB-104	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 UJ	--	--
PCB-105	0.00042	0.000069	0.00015	--	0.0039	0.0031	0.00013 J	--	--
PCB-106	--	--	--	--	--	--	0.000002 UJ	--	--
PCB-107	--	--	--	--	--	--	0.00002 J	--	--
PCB-108/107	0.000081	0.000012	0.000026	--	0.00063	0.00053	--	--	--
PCB-108/124	--	--	--	--	--	--	0.000013 J	--	--
PCB-109	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	--	--
PCB-11	0.000053	0.0000082	0.000014	--	0.00024	0.000066	0.00002 J	--	--
PCB-110	0.0015	0.00021	0.00048	--	0.013	0.0094	--	--	--
PCB-110/115	--	--	--	--	--	--	0.00045 J	--	--
PCB-111	--	--	--	--	--	--	0.000002 UJ	--	--
PCB-111/115	0.000014	0.0000025 J	0.0000078	--	0.00012	0.00013	--	--	--
PCB-112	--	--	--	--	--	--	0.000002 UJ	--	--
PCB-113	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	--	--
PCB-114	0.000022	0.0000035	0.0000067	--	0.00018	0.00016	0.0000057 J	--	--
PCB-118	--	--	--	--	--	--	0.00034 J	--	--
PCB-118/106	0.0012	0.00016	0.00027	--	0.01	0.0073	--	--	--
PCB-119	0.000022	0.0000038	0.00001	--	0.00016	0.00011	--	--	--
PCB-12	0.000006	0.0000027	0.0000067	--	0.000011	0.0000063	--	--	--
PCB-12/13	--	--	--	--	--	--	0.0000053 J	--	--
PCB-120	0.000003	0.000002 U	0.000002 U	--	0.000051	0.000019	0.00000081 J	--	--
PCB-121	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 UJ	--	--
PCB-122	0.000017	0.0000021	0.0000056	--	0.00011	0.000088	0.0000029 J	--	--
PCB-123	0.000016	0.0000031	0.0000084	--	0.0001	0.000097	0.0000039 J	--	--
PCB-124	0.00005	0.0000086	0.000013	--	0.00055	0.00034	--	--	--
PCB-126	0.000017	0.000004	0.0000061	--	0.00017	0.00011	0.0000099 J	--	--
PCB-127	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 UJ	--	--
PCB-128/162	0.00056	0.000078	0.00013	--	0.0051	0.0028	--	--	--
PCB-128/166	--	--	--	--	--	--	0.00015 J	--	--
PCB-129	0.00011	0.000016	0.000036	--	0.0011	0.00083	--	--	--
PCB-129/138/163	--	--	--	--	--	--	0.0023 J	--	--
PCB-13	0.000023	0.0000093	0.000014	--	0.000054	0.000033	--	--	--
PCB-130	0.0003	0.000038	0.000046	--	0.0024	0.0011	0.000069 J	--	--
PCB-131	--	--	--	--	--	--	0.0000083 J	--	--
PCB-131/133	0.00011	0.000013	0.000018	--	0.001	0.00047	--	--	--
PCB-132	--	--	--	--	--	--	0.00043 J	--	--
PCB-132/161	0.00094	0.00011	0.00016	--	0.012	0.0054	--	--	--
PCB-133	--	--	--	--	--	--	0.000024 J	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R10-2-S	R10-2-S	R10-2-S	R11-S	R11-S	R11-S	R11-S	SB-010	SS-013
SAMPLE ID	R10-2-S-0006-01	R10-2-S-0624	R10-2-S-2448	R11-S-0006	R11-S-0006-01	R11-S-0624	R11-S-2448	SB-010	SS-013
SAMPLE DATE	20191121	20191121	20191121	20191121	20191121	20191121	20191121	20170615	20170615
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SB	SB	SS
PCB-134	--	--	--	--	--	--	0.000064 J	--	--
PCB-134/143	0.00016	0.000016	0.000028	--	0.0017	0.00089	--	--	--
PCB-135	0.00051	0.000066	0.000064	--	0.0017	0.0025	--	--	--
PCB-135/151	--	--	--	--	--	--	0.00074 J	--	--
PCB-136	0.00039	0.000043	0.000064	--	0.0049	0.0022	0.00014 J	--	--
PCB-137	0.00011	0.000015	0.000047	--	0.0011	0.00099	0.000017 J	--	--
PCB-138/163/164	0.0063	0.00073	0.00076	--	0.06	0.023	--	--	--
PCB-139/140	--	--	--	--	--	--	0.0000067 J	--	--
PCB-139/149	0.0039	0.00045	0.00045	--	0.054 J	0.019	--	--	--
PCB-14	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 UJ	--	--
PCB-140	0.000014	0.0000015 J	0.0000037	--	0.00015	0.000067	--	--	--
PCB-141	0.0015	0.00013	0.000096	--	0.017	0.0058	0.00048 J	--	--
PCB-142	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 UJ	--	--
PCB-143	--	--	--	--	--	--	0.000002 UJ	--	--
PCB-144	0.00021	0.000016	0.000014	--	0.0017	0.00053	0.000084 J	--	--
PCB-145	0.000002 U	0.000002 U	0.000002 U	--	0.0000024	0.0000051	0.000002 UJ	--	--
PCB-146	--	--	--	--	--	--	0.00023 J	--	--
PCB-146/165	0.00093	0.0001	0.000099	--	0.0083	0.003	--	--	--
PCB-147	0.000032	0.000005	0.000013	--	0.00033	0.00026	--	--	--
PCB-147/149	--	--	--	--	--	--	0.0016 J	--	--
PCB-148	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.00000079 J	--	--
PCB-15	0.00015	0.000057	0.000076	--	0.00037	0.00018	0.000013 J	--	--
PCB-150	0.0000023	0.000002 U	0.000002 U	--	0.000022	0.000013	0.0000006 J	--	--
PCB-151	0.0015	0.00014	0.000088	--	0.024 J	0.0064	--	--	--
PCB-152	0.000002 U	0.000002 U	0.000002 U	--	0.00001	0.000011	0.000002 UJ	--	--
PCB-153	0.0078	0.00079	0.00063	--	0.07 J	0.023 J	--	--	--
PCB-153/168	--	--	--	--	--	--	0.0023 J	--	--
PCB-154	0.00002	0.0000035	0.0000059	--	0.00016	0.000082	0.0000052 J	--	--
PCB-155	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 UJ	--	--
PCB-156	0.00044	0.000061	0.000067	--	0.0045	0.0022	--	--	--
PCB-156/157	--	--	--	--	--	--	0.00015 J	--	--
PCB-157	0.000061	0.000011	0.00002	--	0.0005	0.00038	--	--	--
PCB-158	--	--	--	--	--	--	0.00018 J	--	--
PCB-158/160	0.00062	0.000071	0.000091	--	0.006	0.0024	--	--	--
PCB-159	0.000086	0.000012	0.0000058	--	0.00075	0.00023	0.000002 UJ	--	--
PCB-16	0.000071	0.000034	0.000027	--	0.000062	0.000016	0.0000023 J	--	--
PCB-160	--	--	--	--	--	--	0.000002 UJ	--	--
PCB-161	--	--	--	--	--	--	0.000002 UJ	--	--
PCB-162	--	--	--	--	--	--	0.000002 UJ	--	--
PCB-164	--	--	--	--	--	--	0.00015 J	--	--
PCB-165	--	--	--	--	--	--	0.000002 UJ	--	--
PCB-166	0.0000039	0.0000017 J	0.0000034	--	0.000037	0.000059	--	--	--
PCB-167	0.00021	0.000029	0.000034	--	0.0016	0.00081	0.000058 J	--	--
PCB-168	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	--	--
PCB-169	0.000003	0.0000017 J	0.00000099 J	--	0.000013	0.0000067	0.0000011 UJ	--	--
PCB-17	0.000095	0.000044	0.000037	--	0.000066	0.000018	0.0000028 J	--	--
PCB-170	0.0024	0.00033	0.00021	--	0.027 J	0.0072	0.00089 J	--	--
PCB-171	0.00089	0.000088	0.000056	--	0.0079	0.0023	--	--	--
PCB-171/173	--	--	--	--	--	--	0.00025 J	--	--
PCB-172	0.00057	0.000063	0.000042	--	0.0055	0.0014	0.00016 J	--	--
PCB-173	0.000062	0.0000074	0.0000053	--	0.00059	0.00017	--	--	--
PCB-174	0.0033	0.00031	0.00022	--	0.033 J	0.0088	0.00097 J	--	--
PCB-175	0.00011	0.000012	0.0000095	--	0.0013	0.00035	0.000031 J	--	--
PCB-176	0.0003	0.000026	0.000024	--	0.0037	0.001	0.000092 J	--	--
PCB-177	0.0024	0.00024	0.00015	--	0.022 J	0.006	0.00058 J	--	--
PCB-178	0.00076	0.000091	0.000052	--	0.0075	0.002	0.00022 J	--	--
PCB-179	0.0013	0.00012	0.0001	--	0.015	0.0039	0.0004 J	--	--
PCB-18	0.00015	0.000066	0.000048	--	0.000075	0.000021	--	--	--
PCB-18/30	--	--	--	--	--	--	0.0000046 J	--	--
PCB-180	0.0066	0.00062	0.00043	--	0.053 J	0.016	--	--	--
PCB-180/193	--	--	--	--	--	--	0.0022 J	--	--
PCB-181	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.0000027 J	--	--
PCB-182	--	--	--	--	--	--	0.000002 UJ	--	--
PCB-182/187	0.0045	0.0005	0.0003	--	0.042 J	0.011	--	--	--
PCB-183	0.0018	0.00018	0.00013	--	0.018	0.0049	--	--	--
PCB-183/185	--	--	--	--	--	--	0.00061 J	--	--
PCB-184	0.0000015 J	0.000002 U	0.000002 U	--	0.0000085	0.0000037	0.000002 UJ	--	--
PCB-185	0.00034	0.000031	0.000017	--	0.0032	0.0007	--	--	--
PCB-186	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 UJ	--	--
PCB-187	--	--	--	--	--	--	0.0012 J	--	--
PCB-188	0.0000024	0.000002 U	0.000002 U	--	0.000015	0.0000052	0.00000047 J	--	--
PCB-189	0.00011	0.000015	0.0000095	--	0.00098	0.00028	0.000035 J	--	--
PCB-19	0.000018	0.0000099	0.0000063	--	0.000011	0.0000038	0.000002 UJ	--	--
PCB-190	0.00074	0.000084	0.000048	--	0.0064	0.0017	0.0002 J	--	--
PCB-191	0.00013	0.000014	0.0000091	--	0.0012	0.00033	0.000033 J	--	--
PCB-192	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 UJ	--	--
PCB-193	0.00042	0.000047	0.000027	--	0.0036	0.00092	--	--	--
PCB-194	0.0018	0.0002	0.00013	--	0.014	0.0042	0.00048 J	--	--
PCB-195	0.00095	0.000095	0.000058	--	0.0075	0.0021	0.00022 J	--	--
PCB-196	--	--	--	--	--	--	0.00024 J	--	--
PCB-196/203	0.0019	0.00025	0.0002	--	0.014	0.0039	--	--	--
PCB-197	0.00005	0.0000061	0.0000055	--	0.00041	0.00012	--	--	--
PCB-197/200	--	--	--	--	--	--	0.000076 J	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R10-2-S	R10-2-S	R10-2-S	R11-S	R11-S	R11-S	R11-S	SB-010	SS-013
SAMPLE ID	R10-2-S-0006-01	R10-2-S-0624	R10-2-S-2448	R11-S-0006	R11-S-0006-01	R11-S-0624	R11-S-2448	SB-010	SS-013
SAMPLE DATE	20191121	20191121	20191121	20191121	20191121	20191121	20191121	20170615	20170615
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SB	SB	SS
PCB-198	0.0001	0.000017	0.000015	--	0.00096	0.00018	--	--	--
PCB-198/199	--	--	--	--	--	--	0.00049 J	--	--
PCB-199	0.0017	0.00023	0.00021	--	0.011	0.0034	--	--	--
PCB-2	0.000013	0.0000093	0.000021	--	0.000036	0.000024	0.0000076 J	--	--
PCB-20/21/33	0.00021	0.0001	0.000095	--	0.00019	0.000078	--	--	--
PCB-20/28	--	--	--	--	--	--	0.000022 J	--	--
PCB-200	0.00022	0.000027	0.00002	--	0.0018	0.00052	--	--	--
PCB-201	0.00021	0.000026	0.000027	--	0.0015	0.00046	0.000046 J	--	--
PCB-202	0.00037	0.000058	0.000063	--	0.0025	0.00078	0.000096 J	--	--
PCB-203	--	--	--	--	--	--	0.00034 J	--	--
PCB-204	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 UJ	--	--
PCB-205	0.0001	0.000012	0.0000089	--	0.00074	0.00022	0.000026 J	--	--
PCB-206	0.0012	0.00029	0.00058	--	0.0038	0.0017	0.00014 J	--	--
PCB-207	0.00011	0.000027	0.00004	--	0.00039	0.00017	0.000015 J	--	--
PCB-208	0.00034	0.00011	0.00024	--	0.00089	0.00048	0.000038 J	--	--
PCB-209	0.0007	0.00032	0.00074	--	0.0015	0.0011	0.000072 J	--	--
PCB-21/33	--	--	--	--	--	--	0.000008 J	--	--
PCB-22	0.00013	0.000053	0.000044	--	0.00013	0.000041	0.0000052 J	--	--
PCB-23	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 UJ	--	--
PCB-24	0.000015	0.0000055	0.0000051	--	0.0000094	0.0000025	0.000002 UJ	--	--
PCB-25	0.000024	0.000013	0.000012	--	0.000035	0.000012	0.0000015 J	--	--
PCB-26	0.000056	0.00003	0.000028	--	0.000078	0.000024	--	--	--
PCB-26/29	--	--	--	--	--	--	0.0000031 J	--	--
PCB-27	0.0000088	0.0000048	0.0000045	--	0.0000088	0.0000024	0.00000062 J	--	--
PCB-28	0.00031	0.00014	0.00014	--	0.00046	0.00017	--	--	--
PCB-29	0.0000036	0.0000019 J	0.0000024	--	0.0000029	0.000002 U	--	--	--
PCB-3	0.000026	0.000011	0.000034	--	0.000087	0.000069	0.000011 J	--	--
PCB-30	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	--	--
PCB-31	0.00035	0.00015	0.00015	--	0.00055	0.00017	0.000018 J	--	--
PCB-32	0.000081	0.000035	0.00003	--	0.000059	0.000019	0.0000028 J	--	--
PCB-34	0.000002	0.000002 U	0.000002 U	--	0.0000019 J	0.000002 U	0.000002 UJ	--	--
PCB-35	0.0000094	0.0000036	0.0000065	--	0.000022	0.0000086	0.0000015 J	--	--
PCB-36	0.0000015 J	0.000002 U	0.000002 U	--	0.000003	0.000002 U	0.000002 UJ	--	--
PCB-37	0.00012	0.000041	0.000054	--	0.0003	0.00011	0.000013 J	--	--
PCB-38	0.0000028	0.000002 U	0.000002 U	--	0.0000023	0.000002 U	0.000002 UJ	--	--
PCB-39	0.0000016 J	0.000002 U	0.000002 U	--	0.0000026	0.000002 U	0.000002 UJ	--	--
PCB-4	0.000059	0.000029	0.000022	--	0.000036	0.000015	0.0000024 J	--	--
PCB-40	0.000035	0.000013	0.000012	--	0.000036	0.000024	--	--	--
PCB-40/71	--	--	--	--	--	--	0.000006 J	--	--
PCB-41	--	--	--	--	--	--	0.000002 UJ	--	--
PCB-41/64/71/72	0.0003	0.00011	0.00011	--	0.0005	0.00025	--	--	--
PCB-42	--	--	--	--	--	--	0.0000043 J	--	--
PCB-42/59	0.0001	0.000041	0.000035	--	0.00012	0.000049	--	--	--
PCB-43	--	--	--	--	--	--	0.000002 UJ	--	--
PCB-43/49	0.00021	0.000089	0.000085	--	0.00052	0.00025	--	--	--
PCB-44	0.00023	0.000085	0.000081	--	0.00042	0.00032	--	--	--
PCB-44/47/65	--	--	--	--	--	--	0.000021 J	--	--
PCB-45	0.000037	0.000019	0.000014	--	0.00003	0.000015	--	--	--
PCB-45/51	--	--	--	--	--	--	0.0000039 UJ	--	--
PCB-46	0.000012	0.0000059	0.0000046	--	0.000011	0.000007	0.00000069 J	--	--
PCB-47	0.00012	0.000052	0.000044	--	0.0002	0.000002 U	--	--	--
PCB-48	--	--	--	--	--	--	0.0000021 J	--	--
PCB-48/75	0.000053	0.00002	0.000019	--	0.000043	0.000062	--	--	--
PCB-49/69	--	--	--	--	--	--	0.000014 J	--	--
PCB-5	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 UJ	--	--
PCB-50	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	--	--
PCB-50/53	--	--	--	--	--	--	0.0000013 J	--	--
PCB-51	0.000009	0.0000037	0.000003	--	0.000011	0.0000041	--	--	--
PCB-52	--	--	--	--	--	--	0.00005 J	--	--
PCB-52/69	0.00028	0.000094	0.00011	--	0.0012	0.00075	--	--	--
PCB-53	0.000028	0.000014	0.000013	--	0.000039	0.000023	--	--	--
PCB-54	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 UJ	--	--
PCB-55	0.0000037	0.000001 J	0.0000027	--	0.000029	0.000019	0.000002 UJ	--	--
PCB-56	--	--	--	--	--	--	0.000016 J	--	--
PCB-56/60	0.0001	0.000016	0.000053	--	0.00061	0.00026	--	--	--
PCB-57	0.0000024	0.0000011 J	0.0000011 J	--	0.0000049	0.0000021	0.000002 UJ	--	--
PCB-58	0.0000014 J	0.000002 U	0.000002 U	--	0.0000025	0.0000013 J	0.000002 UJ	--	--
PCB-59/62/75	--	--	--	--	--	--	0.0000018 J	--	--
PCB-6	0.000049	0.000024	0.000036	--	0.000054	0.00003	0.000002 UJ	--	--
PCB-60	--	--	--	--	--	--	0.0000075 J	--	--
PCB-61/70	0.00015	0.000057	0.000086	--	0.0017	0.0012	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	0.00009 J	--	--
PCB-62	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	--	--
PCB-63	0.000011	0.0000038	0.0000055	--	0.000045	0.000019	0.0000015 J	--	--
PCB-64	--	--	--	--	--	--	0.000015 J	--	--
PCB-65	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	--	--
PCB-66	--	--	--	--	--	--	0.000038 J	--	--
PCB-66/76	0.00019	0.000042	0.0001	--	0.0012	0.00059	--	--	--
PCB-67	0.0000064	0.0000026	0.0000035	--	0.0000023	0.0000079	0.000002 UJ	--	--
PCB-68	0.0000029	0.0000013 J	0.0000015 J	--	0.0000057	0.0000029	0.000002 UJ	--	--
PCB-7	0.000017	0.0000046	0.000011	--	0.000017	0.0000093	0.000002 UJ	--	--
PCB-72	--	--	--	--	--	--	0.000002 UJ	--	--
PCB-73	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 UJ	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R10-2-S	R10-2-S	R10-2-S	R11-S	R11-S	R11-S	R11-S	SB-010	SS-013
SAMPLE ID	R10-2-S-0006-01	R10-2-S-0624	R10-2-S-2448	R11-S-0006	R11-S-0006-01	R11-S-0624	R11-S-2448	SB-010	SS-013
SAMPLE DATE	20191121	20191121	20191121	20191121	20191121	20191121	20191121	20170615	20170615
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SB	SB	SS
PCB-74	0.000063	0.000019	0.000034	--	0.00043	0.00022	--	--	--
PCB-77	0.000036	0.0000073	0.000018	--	0.00045	0.00022	0.000011 J	--	--
PCB-78	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000014	0.000002 UJ	--	--
PCB-79	0.0000079	0.0000015 J	0.0000033	--	0.00004	0.000029	0.000002 UJ	--	--
PCB-8	0.00027	0.00011	0.00014	--	0.0002	0.00012	0.0000055 J	--	--
PCB-80	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	0.000002 UJ	--	--
PCB-81	0.000011	0.000002	0.0000043	--	0.0001	0.000091	0.00000083 UJ	--	--
PCB-82	0.000051	0.00001	0.000032	--	0.00052	0.00074	0.000014 J	--	--
PCB-83	--	--	--	--	--	--	0.0000085 J	--	--
PCB-83/112	0.000026	0.0000039 J	0.000011	--	0.00021	0.00029	--	--	--
PCB-84	--	--	--	--	--	--	0.000016 J	--	--
PCB-84/92	0.00031	0.000035	0.000083	--	0.0031	0.0026	--	--	--
PCB-85/116	0.00016	0.000028	0.000083	--	0.0012	0.0011	--	--	--
PCB-85/116/117	--	--	--	--	--	--	0.000037 J	--	--
PCB-86	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	0.00014 J	--	--
PCB-87/117/125	0.00029	0.000038	0.000087	--	0.0033	0.003	--	--	--
PCB-88/91	0.000076	0.000019	0.000056	--	0.00064	0.00075	0.000015 J	--	--
PCB-89	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000035	0.000002 UJ	--	--
PCB-9	0.000011	0.0000084	0.000012	--	0.000013	0.0000087	0.000002 UJ	--	--
PCB-90/101/113	--	--	--	--	--	--	0.00047 J	--	--
PCB-92	--	--	--	--	--	--	0.000061 J	--	--
PCB-93	0.000002 U	0.000002 U	0.000002 U	--	0.000002 U	0.000002 U	--	--	--
PCB-93/100	--	--	--	--	--	--	0.00000066 J	--	--
PCB-94	0.0000017 J	0.000002 U	0.0000016 J	--	0.000018	0.000021	0.000002 UJ	--	--
PCB-95	0.00064	0.000002 U	0.00022	--	0.0097	0.0069	0.00019 J	--	--
PCB-96	0.0000029	0.000002 U	0.000002 U	--	0.000012	0.000022	0.000002 UJ	--	--
PCB-97	0.00017	0.000026	0.000074	--	0.0015	0.0017	--	--	--
PCB-98/102	0.000004 U	0.00009	0.000004 U	--	0.000004 U	0.000004 U	0.0000016 J	--	--
PCB-99	0.00031	0.000041	0.00011	--	0.0022	0.0018	0.000087 J	--	--
PENTACHLOROBIPHENYLS	0.0069 J	0.00092 J	0.0019 J	--	0.068 J	0.049 J	0.002 J	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	4.70066E-06	9.81621E-07	1.96588E-06	--	5.04478E-05	3.17026E-05	1.57294E-06	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	4.70066E-06	9.81621E-07	1.96588E-06	--	5.04478E-05	3.17026E-05	1.61499E-06	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	1.00645E-07	2.2772E-08	3.5976E-08	--	1.00445E-06	6.5297E-07	5.4212E-08	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	1.00645E-07	2.2772E-08	3.5976E-08	--	1.00445E-06	6.5297E-07	5.4446E-08	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.83527E-06	4.58078E-07	6.51658E-07	--	1.78178E-05	1.14611E-05	1.01278E-06	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	1.83527E-06	4.58078E-07	6.51658E-07	--	1.78178E-05	1.14611E-05	1.0294E-06	--	--
TETRACHLOROBIPHENYLS	0.002 J	0.0007 J	0.00084 J	--	0.0078 J	0.0044 J	0.00028 J	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.001346	0.0002066	0.00032499	--	0.012493	0.0074547	0.0007435	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.073229	0.0098224	0.01070556	--	0.6599151	0.239968	0.0210496	--	--
TOTAL PCB CONGENERS ZEROND	0.074575	0.010029	0.01103055	--	0.6724081	0.2474227	0.0217931	--	--
TOTAL PCB CONGENERS-NOAA	0.03556	0.004669	0.005077	--	0.304355	0.108871	0.0105531	--	--
TOTAL PCB CONGENERS-NOAA HALFND	0.074606	0.010073	0.01107155	--	0.6724371	0.2474557	0.021846015	--	--
TOTAL PCB CONGENERS-NOAA X2	0.07112	0.009338	0.010154	--	0.60871	0.217742	0.0211062	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.07112	0.009338	0.010154	--	0.60871	0.217742	0.0211062	--	--
TRICHLOROBIPHENYLS	0.0017 J	0.00073 J	0.00069 J	--	0.0021 J	0.0007 J	0.000085 J	--	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	2000	1900	720	--	2100	1200	850 J	--	--
1,2,3,4,6,7,8,9-OCDF	180 Z	43	63	--	97	42	3.9 J	--	--
1,2,3,4,6,7,8-HPCDD	150	54	75	--	180	63	15 J	--	--
1,2,3,4,6,7,8-HPCDF	45	15	27	--	47	26	2.7 J	--	--
1,2,3,4,7,8,9-HPCDF	3.2 J	1.1 J	2.8 J	--	3.2 J	1.2 J	2.2 UJ	--	--
1,2,3,4,7,8-HXCDD	2.3 J	1.3 J	1.9 J	--	2.4 J	2.1 Z	1.4 UJ	--	--
1,2,3,4,7,8-HXCDF	5.5 Z	2.4 J	4.9 Z	--	6.6	3.7 J	1.5 UJ	--	--
1,2,3,6,7,8-HXCDD	6 J	2.7 J	3.9 J	--	7.7	3.3 J	1.2 UJ	--	--
1,2,3,6,7,8-HXCDF	4.9 J	2.3 J	4.6 J	--	4.7 J	2.2 Z	1.8 UJ	--	--
1,2,3,7,8,9-HXCDD	4.9 J	2.3 J	3 J	--	6.2	2.1 J	2.3 UJ	--	--
1,2,3,7,8,9-HXCDF	1.3 U	0.8 J	1.4 Z	--	1.4 J	1.6 Z	1.4 UJ	--	--
1,2,3,7,8-PECDD	2.8 J	1.6 J	2.4 J	--	3.9 J	0.46 U	1.8 UJ	--	--
1,2,3,7,8-PECDF	4.1 J	2 J	4 J	--	3.9 J	2.2 Z	1.6 UJ	--	--
2,3,4,6,7,8-HXCDF	4.9 J	2 J	4.2 J	--	4.6 J	2.8 J	0.93 UJ	--	--
2,3,4,7,8-PECDF	7.1 J	2.5 Z	4.2 J	--	16 Z	5.3	0.87 UJ	--	--
2,3,7,8-TCDD	0.85 U	0.47 Z	0.63 Z	--	1 Z	0.74 Z	0.21 UJ	--	--
2,3,7,8-TCDF	2.7 Z	1.7	2.5	--	6.7 J	37 J	0.73 J	--	--
TEQ DIOXINS (BIRD)	16.055	7.9513	12.5253	--	31.4387	45.0972	0.85739	--	--
TEQ DIOXINS (BIRD) HALFND	16.545	7.9513	12.5253	--	31.4387	45.3272	2.82589	--	--
TEQ DIOXINS (FISH)	10.329	5.3643	8.4353	--	17.4007	7.9432	0.16389	--	--
TEQ DIOXINS (FISH) HALFND	10.819	5.3643	8.4353	--	17.4007	8.1732	2.08639	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	10.809	5.7139	8.3329	--	16.8081	9.1506	0.50617	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	11.299	5.7139	8.3329	--	16.8081	9.3806	2.20317	--	--
TOTAL HPCDD	250 J	93 J	130 J	--	320 J	110 J	30 J	--	--
TOTAL HPCDF	120 J	37 J	58 J	--	110 J	54 J	5.4 J	--	--
TOTAL HXCDD	51 J	33 J	40 J	--	78 J	34 J	5.6 J	--	--
TOTAL HXCDF	69 J	26 J	42 J	--	100 J	62 J	1.4 J	--	--
TOTAL PECDD	10 J	17 J	21 J	--	21 J	3.1 J	1.8 UJ	--	--
TOTAL PECDF	21 J	19 J	58 J	--	320 J	57 J	3.4 J	--	--
TOTAL TCDD	14 J	16 J	18 J	--	38 J	12 J	3.2 J	--	--
TOTAL TCDF	39 J	23 J	45 J	--	220 J	170 J	5.3 J	--	--
METALS (MG/KG)									
ALUMINUM	8660	9410	5630	--	8770	9110	10100	--	--
ANTIMONY	0.41 J	0.22 J	0.45 J	--	0.74 J	0.61 J	1.2 U	--	--
ARSENIC	5.4	17.4	17.4 J	--	18.6	17.6	21.1	--	--
BARIUM	90.4	115	313 J	--	499	160	51.9	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R10-2-S	R10-2-S	R10-2-S	R11-S	R11-S	R11-S	R11-S	SB-010	SS-013
SAMPLE ID	R10-2-S-0006-01	R10-2-S-0624	R10-2-S-2448	R11-S-0006	R11-S-0006-01	R11-S-0624	R11-S-2448	SB-010	SS-013
SAMPLE DATE	20191121	20191121	20191121	20191121	20191121	20191121	20191121	20170615	20170615
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SB	SS	SS	SS	SB	SB	SS
BERYLLIUM	0.57	0.61	0.54 J	--	1.1	0.76 J	0.32 J	--	--
CADMIUM	0.84	0.26 J	0.4 J	--	1.2	0.51 J	0.6 U	--	--
CALCIUM	78700	44900	29000 J	--	13800	9930	1340	--	--
CHROMIUM	15.2	9.4	9 J	--	22.7	10.2	7.1	--	--
COBALT	6.9	7.5	5.6	--	12.4	6.3	2.3	--	--
COPPER	23.6	29.6	41.5 J	--	51.6	36	7.6	--	--
CYANIDE	0.6 R	0.56 R	0.56 R	--	0.67 R	0.8 R	0.61 R	--	--
IRON	16700	13600	13200	--	17600	18900	13700	--	--
LEAD	66	63.3	60.2 J	--	367	223	23.6	--	--
MAGNESIUM	4010	2690	2320	--	2130	2020	749	--	--
MANGANESE	312	291	349 J	--	516	227	82.9	--	--
MERCURY	0.12 UJ	0.11 UJ	0.11 UJ	--	0.13 UJ	0.16 UJ	0.25	--	--
NICKEL	12.4	10.6	10 J	--	26.4	13.2	4.7	--	--
POTASSIUM	1580	1490	987	--	1770	2060	953	--	--
SELENIUM	0.24 J	0.79 J	0.82 J	--	0.92 J	0.46 J	0.78 J	--	--
SILVER	0.56 U	0.54 U	0.57 U	--	0.27 J	0.13 J	0.6 U	--	--
SODIUM	105 J	97.4 J	129 J	--	100 J	178 J	607 UJ	--	--
THALLIUM	0.56 UJ	0.54 UJ	0.57 UJ	--	0.64 UJ	0.85 UJ	0.43 J	--	--
VANADIUM	10	14.7	14 J	--	16.5	10.7	12.6	--	--
ZINC	136	79.8	145 J	--	515	135	30.5	--	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	82	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	67500	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	89	86	74	--	80	81	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-014	SS-015	SS-016	SS-017	SS-018	SS-019	SS-020	SS-022	SS-023
SAMPLE ID	SS-014	SS-015	SS-016	SS-017	SS-018	SS-019	SS-020	SS-022	SS-023
SAMPLE DATE	20170615	20170615	20170615	20170615	20170615	20170615	20170615	20170615	20170615
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0	12
BOTTOM DEPTH	6	6	6	6	6	6	6	6	18
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	--	--	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--	--
2,4-DINITROPHENOL	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--	--	--
2-CHLOROPHENOL	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--
2-METHYLPHENOL	--	--	--	--	--	--	--	--	--
2-NITROANILINE	--	--	--	--	--	--	--	--	--
2-NITROPHENOL	--	--	--	--	--	--	--	--	--
3&4-METHYLPHENOL	--	--	--	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--	--	--
3-NITROANILINE	--	--	--	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--	--	--
4-CHLOROANILINE	--	--	--	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--
4-NITROANILINE	--	--	--	--	--	--	--	--	--
4-NITROPHENOL	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-014	SS-015	SS-016	SS-017	SS-018	SS-019	SS-020	SS-022	SS-023
SAMPLE ID	SS-014	SS-015	SS-016	SS-017	SS-018	SS-019	SS-020	SS-022	SS-023
SAMPLE DATE	20170615	20170615	20170615	20170615	20170615	20170615	20170615	20170615	20170615
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
ACENAPHTHENE	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--
ACETOPHENONE	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--
ATRAZINE	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--
BENZALDEHYDE	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	--	--
CAPROLACTAM	--	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--	--
DIETHYL PHTHALATE	--	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--
HEXACHLOROBENZENE	--	--	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--	--	--
HEXACHLOROETHANE	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--
ISOPHORONE	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--
PESTICIDES (MG/KG)									
4,4'-DDD	--	--	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--	--
ALDRIN	--	--	--	--	--	--	--	--	--
ALPHA-BHC	--	--	--	--	--	--	--	--	--
ALPHA-CHLORDANE	--	--	--	--	--	--	--	--	--
BETA-BHC	--	--	--	--	--	--	--	--	--
DELTA-BHC	--	--	--	--	--	--	--	--	--
DIELDRIN	--	--	--	--	--	--	--	--	--
ENDOSULFAN I	--	--	--	--	--	--	--	--	--
ENDOSULFAN II	--	--	--	--	--	--	--	--	--
ENDOSULFAN SULFATE	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-014	SS-015	SS-016	SS-017	SS-018	SS-019	SS-020	SS-022	SS-023
SAMPLE ID	SS-014	SS-015	SS-016	SS-017	SS-018	SS-019	SS-020	SS-022	SS-023
SAMPLE DATE	20170615	20170615	20170615	20170615	20170615	20170615	20170615	20170615	20170615
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
ENDRIN	--	--	--	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	--	--	--	--	--	--	--
ENDRIN KETONE	--	--	--	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--	--	--
GAMMA-CHLORDANE	--	--	--	--	--	--	--	--	--
HEPTACHLOR	--	--	--	--	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--	--	--
METHOXYCHLOR	--	--	--	--	--	--	--	--	--
TOXAPHENE	--	--	--	--	--	--	--	--	--
PCBS (MG/KG)									
AROCLOR-1016	0.05 U	0.05 U	0.042 U	0.041 U	0.039 U	0.046 U	0.04 U	0.074 U	0.048 U
AROCLOR-1221	0.05 U	0.05 U	0.042 U	0.041 U	0.039 U	0.046 U	0.04 U	0.074 U	0.048 U
AROCLOR-1232	0.05 U	0.05 U	0.042 U	0.041 U	0.039 U	0.046 U	0.04 U	0.074 U	0.048 U
AROCLOR-1242	0.05 U	0.05 U	0.042 U	0.041 U	0.039 U	0.046 U	0.04 U	0.074 U	0.048 U
AROCLOR-1248	0.05 U	0.05 U	0.042 U	0.041 U	0.039 U	0.046 U	0.04 U	0.074 U	0.048 U
AROCLOR-1254	0.05 U	0.05 U	0.042 U	0.041 U	0.039 U	0.046 U	0.04 U	0.074 U	0.048 U
AROCLOR-1260	0.091	0.09	0.26	0.13 J	0.34	0.21	0.16	0.2	0.025 J
AROCLOR-1262	0.05 U	0.05 U	0.042 U	0.041 U	0.039 U	0.046 U	0.04 U	0.074 U	0.048 U
AROCLOR-1268	0.05 U	0.05 U	0.042 U	0.041 U	0.039 U	0.046 U	0.04 U	0.074 U	0.048 U
TOTAL AROCLOR	0.091	0.09	0.26	0.13	0.34	0.21	0.16	0.2	0.025
TOTAL AROCLOR HALFND	0.291	0.29	0.428	0.294	0.496	0.394	0.32	0.496	0.217
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-106	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--

LOCATION	SS-014	SS-015	SS-016	SS-017	SS-018	SS-019	SS-020	SS-022	SS-023
SAMPLE ID	SS-014	SS-015	SS-016	SS-017	SS-018	SS-019	SS-020	SS-022	SS-023
SAMPLE DATE	20170615	20170615	20170615	20170615	20170615	20170615	20170615	20170615	20170615
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-134	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--	--
PCB-14	--	--	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-156/157	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--	--
PCB-196	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--

LOCATION	SS-014	SS-015	SS-016	SS-017	SS-018	SS-019	SS-020	SS-022	SS-023
SAMPLE ID	SS-014	SS-015	SS-016	SS-017	SS-018	SS-019	SS-020	SS-022	SS-023
SAMPLE DATE	20170615	20170615	20170615	20170615	20170615	20170615	20170615	20170615	20170615
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-198	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--	--	--
PCB-201	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--	--
PCB-21/33	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-014	SS-015	SS-016	SS-017	SS-018	SS-019	SS-020	SS-022	SS-023
SAMPLE ID	SS-014	SS-015	SS-016	SS-017	SS-018	SS-019	SS-020	SS-022	SS-023
SAMPLE DATE	20170615	20170615	20170615	20170615	20170615	20170615	20170615	20170615	20170615
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-74	--	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--	--
PCB-80	--	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	--	590	990	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	32	38	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	53	46	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	16	9.6	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	1.4 J	2.3 J	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	0.9 J	0.4 U	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	2.6 J	3.5 J	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	2.3 J	1.4 J	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	1.1 J	1.1 J	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	2.3 J	1.2 Z	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	0.36 J	0.39 J	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	0.86 Z	0.61 J	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	1.9 J	1.8 J	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	1.4 J	1.1 J	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	1.2 J	1.8 J	--	--	--	--	--
2,3,7,8-TCDD	--	--	0.31 J	0.39 J	--	--	--	--	--
2,3,7,8-TCDF	--	--	1.3	2.7	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	4.9932	6.6908	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	4.9932	6.7008	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	3.2612	3.0278	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	3.2612	3.1278	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	3.7036	3.6204	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	3.7036	3.6404	--	--	--	--	--
TOTAL HPCDD	--	--	110 J	170 J	--	--	--	--	--
TOTAL HPCDF	--	--	37 J	27 J	--	--	--	--	--
TOTAL HXCDD	--	--	33 J	16 J	--	--	--	--	--
TOTAL HXCDF	--	--	21 J	16 J	--	--	--	--	--
TOTAL PECDD	--	--	13 J	11 J	--	--	--	--	--
TOTAL PECDF	--	--	20 J	19 J	--	--	--	--	--
TOTAL TCDD	--	--	9.5 J	17 J	--	--	--	--	--
TOTAL TCDF	--	--	10 J	36 J	--	--	--	--	--
METALS (MG/KG)									
ALUMINUM	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-014	SS-015	SS-016	SS-017	SS-018	SS-019	SS-020	SS-022	SS-023
SAMPLE ID	SS-014	SS-015	SS-016	SS-017	SS-018	SS-019	SS-020	SS-022	SS-023
SAMPLE DATE	20170615	20170615	20170615	20170615	20170615	20170615	20170615	20170615	20170615
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
BERYLLIUM	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--
CYANIDE	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-024	SS-025	SS-027	SS-041	SS-042	SS-043	SS-044	SS-100	SS-101
SAMPLE ID	SS-024	SS-025	SS-027	SS-041	SS-042	SS-043	SS-044	SS-100	SS-101
SAMPLE DATE	20170615	20170615	20170615	20170614	20170615	20170615	20170615	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	--	--	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--	--
2,4-DINITROPHENOL	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--	--	--
2-CHLOROPHENOL	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--
2-METHYLPHENOL	--	--	--	--	--	--	--	--	--
2-NITROANILINE	--	--	--	--	--	--	--	--	--
2-NITROPHENOL	--	--	--	--	--	--	--	--	--
3&4-METHYLPHENOL	--	--	--	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--	--	--
3-NITROANILINE	--	--	--	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--	--	--
4-CHLOROANILINE	--	--	--	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--
4-NITROANILINE	--	--	--	--	--	--	--	--	--
4-NITROPHENOL	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-024	SS-025	SS-027	SS-041	SS-042	SS-043	SS-044	SS-100	SS-101
SAMPLE ID	SS-024	SS-025	SS-027	SS-041	SS-042	SS-043	SS-044	SS-100	SS-101
SAMPLE DATE	20170615	20170615	20170615	20170614	20170615	20170615	20170615	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
ACENAPHTHENE	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--
ACETOPHENONE	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--
ATRAZINE	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--
BENZALDEHYDE	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	--	--
CAPROLACTAM	--	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--	--
DIETHYL PHTHALATE	--	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--
HEXACHLOROBENZENE	--	--	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--	--	--
HEXACHLOROETHANE	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--
ISOPHORONE	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--
PESTICIDES (MG/KG)									
4,4'-DDD	--	--	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--	--
ALDRIN	--	--	--	--	--	--	--	--	--
ALPHA-BHC	--	--	--	--	--	--	--	--	--
ALPHA-CHLORDANE	--	--	--	--	--	--	--	--	--
BETA-BHC	--	--	--	--	--	--	--	--	--
DELTA-BHC	--	--	--	--	--	--	--	--	--
DIELDRIN	--	--	--	--	--	--	--	--	--
ENDOSULFAN I	--	--	--	--	--	--	--	--	--
ENDOSULFAN II	--	--	--	--	--	--	--	--	--
ENDOSULFAN SULFATE	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-024	SS-025	SS-027	SS-041	SS-042	SS-043	SS-044	SS-100	SS-101
SAMPLE ID	SS-024	SS-025	SS-027	SS-041	SS-042	SS-043	SS-044	SS-100	SS-101
SAMPLE DATE	20170615	20170615	20170615	20170614	20170615	20170615	20170615	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
ENDRIN	--	--	--	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	--	--	--	--	--	--	--
ENDRIN KETONE	--	--	--	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--	--	--
GAMMA-CHLORDANE	--	--	--	--	--	--	--	--	--
HEPTACHLOR	--	--	--	--	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--	--	--
METHOXYCHLOR	--	--	--	--	--	--	--	--	--
TOXAPHENE	--	--	--	--	--	--	--	--	--
PCBS (MG/KG)									
AROCLOR-1016	0.055 U	0.05 U	0.047 U	0.047 U	0.041 U	0.049 U	0.045 U	0.075 U	0.069 U
AROCLOR-1221	0.055 U	0.05 U	0.047 U	0.047 U	0.041 U	0.049 U	0.045 U	0.075 U	0.069 U
AROCLOR-1232	0.055 U	0.05 U	0.047 U	0.047 U	0.041 U	0.049 U	0.045 U	0.075 U	0.069 U
AROCLOR-1242	0.055 U	0.05 U	0.047 U	0.047 U	0.041 U	0.049 U	0.045 U	0.075 U	0.069 U
AROCLOR-1248	0.055 U	0.05 U	0.047 U	0.047 U	0.041 U	0.049 U	0.045 U	0.075 U	0.069 U
AROCLOR-1254	0.055 U	0.05 U	0.047 U	0.047 U	0.041 U	0.049 U	0.045 U	0.075 U	0.069 U
AROCLOR-1260	0.0064 J	0.1	0.35	0.13	0.23	1.3	1.2	0.075 U	0.069 U
AROCLOR-1262	0.055 U	0.05 U	0.047 U	0.047 U	0.041 U	0.049 U	0.045 U	0.075 U	0.069 U
AROCLOR-1268	0.055 U	0.05 U	0.047 U	0.047 U	0.041 U	0.049 U	0.045 U	0.075 U	0.069 U
TOTAL AROCLOR	0.0064	0.1	0.35	0.13	0.23	1.3	1.2	0 U	0 U
TOTAL AROCLOR HALFND	0.2264	0.3	0.538	0.318	0.394	1.496	1.38	0.3375	0.3105
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-106	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--

LOCATION	SS-024	SS-025	SS-027	SS-041	SS-042	SS-043	SS-044	SS-100	SS-101
SAMPLE ID	SS-024	SS-025	SS-027	SS-041	SS-042	SS-043	SS-044	SS-100	SS-101
SAMPLE DATE	20170615	20170615	20170615	20170614	20170615	20170615	20170615	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-134	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--	--
PCB-14	--	--	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-156/157	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--	--
PCB-196	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-024	SS-025	SS-027	SS-041	SS-042	SS-043	SS-044	SS-100	SS-101
SAMPLE ID	SS-024	SS-025	SS-027	SS-041	SS-042	SS-043	SS-044	SS-100	SS-101
SAMPLE DATE	20170615	20170615	20170615	20170614	20170615	20170615	20170615	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-198	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--	--	--
PCB-201	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--	--
PCB-21/33	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-024	SS-025	SS-027	SS-041	SS-042	SS-043	SS-044	SS-100	SS-101
SAMPLE ID	SS-024	SS-025	SS-027	SS-041	SS-042	SS-043	SS-044	SS-100	SS-101
SAMPLE DATE	20170615	20170615	20170615	20170614	20170615	20170615	20170615	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-74	--	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--	--
PCB-80	--	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--	--	--	--
METALS (MG/KG)									
ALUMINUM	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-024	SS-025	SS-027	SS-041	SS-042	SS-043	SS-044	SS-100	SS-101
SAMPLE ID	SS-024	SS-025	SS-027	SS-041	SS-042	SS-043	SS-044	SS-100	SS-101
SAMPLE DATE	20170615	20170615	20170615	20170614	20170615	20170615	20170615	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
BERYLLIUM	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--
CYANIDE	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-102	SS-103	SS-104	SS-105	SS-106	SS-107	SS-108	SS-109	SS-110
SAMPLE ID	SS-102	SS-103	SS-104	SS-105	SS-106	SS-107	SS-108	SS-109	SS-110
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	--	--	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--	--
2,4-DINITROPHENOL	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--	--	--
2-CHLOROPHENOL	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--
2-METHYLPHENOL	--	--	--	--	--	--	--	--	--
2-NITROANILINE	--	--	--	--	--	--	--	--	--
2-NITROPHENOL	--	--	--	--	--	--	--	--	--
3&4-METHYLPHENOL	--	--	--	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--	--	--
3-NITROANILINE	--	--	--	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--	--	--
4-CHLOROANILINE	--	--	--	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--
4-NITROANILINE	--	--	--	--	--	--	--	--	--
4-NITROPHENOL	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-102	SS-103	SS-104	SS-105	SS-106	SS-107	SS-108	SS-109	SS-110
SAMPLE ID	SS-102	SS-103	SS-104	SS-105	SS-106	SS-107	SS-108	SS-109	SS-110
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
ACENAPHTHENE	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--
ACETOPHENONE	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--
ATRAZINE	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--
BENZALDEHYDE	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	--	--
CAPROLACTAM	--	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--	--
DIETHYL PHTHALATE	--	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--
HEXACHLOROBENZENE	--	--	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--	--	--
HEXACHLOROETHANE	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--
ISOPHORONE	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--
PESTICIDES (MG/KG)									
4,4'-DDD	--	--	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--	--
ALDRIN	--	--	--	--	--	--	--	--	--
ALPHA-BHC	--	--	--	--	--	--	--	--	--
ALPHA-CHLORDANE	--	--	--	--	--	--	--	--	--
BETA-BHC	--	--	--	--	--	--	--	--	--
DELTA-BHC	--	--	--	--	--	--	--	--	--
DIELDRIN	--	--	--	--	--	--	--	--	--
ENDOSULFAN I	--	--	--	--	--	--	--	--	--
ENDOSULFAN II	--	--	--	--	--	--	--	--	--
ENDOSULFAN SULFATE	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-102	SS-103	SS-104	SS-105	SS-106	SS-107	SS-108	SS-109	SS-110
SAMPLE ID	SS-102	SS-103	SS-104	SS-105	SS-106	SS-107	SS-108	SS-109	SS-110
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
ENDRIN	--	--	--	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	--	--	--	--	--	--	--
ENDRIN KETONE	--	--	--	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--	--	--
GAMMA-CHLORDANE	--	--	--	--	--	--	--	--	--
HEPTACHLOR	--	--	--	--	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--	--	--
METHOXYCHLOR	--	--	--	--	--	--	--	--	--
TOXAPHENE	--	--	--	--	--	--	--	--	--
PCBS (MG/KG)									
AROCLOR-1016	0.047 U	0.057 UJ	0.046 U	0.047 UJ	0.049 UJ	0.047 U	0.048 U	0.048 U	0.069 U
AROCLOR-1221	0.047 U	0.057 UJ	0.046 U	0.047 UJ	0.049 UJ	0.047 U	0.048 U	0.048 U	0.069 U
AROCLOR-1232	0.047 U	0.057 UJ	0.046 U	0.047 UJ	0.049 UJ	0.047 U	0.048 U	0.048 U	0.069 U
AROCLOR-1242	0.047 U	0.057 UJ	0.046 U	0.047 UJ	0.049 UJ	0.047 U	0.048 U	0.048 U	0.069 U
AROCLOR-1248	0.047 U	0.057 UJ	0.046 U	0.047 UJ	0.049 UJ	0.047 U	0.048 U	0.048 U	0.069 U
AROCLOR-1254	0.047 U	0.057 UJ	0.046 U	0.047 UJ	0.049 UJ	0.047 U	0.048 U	0.048 U	0.069 U
AROCLOR-1260	0.047 U	0.057 UJ	0.072 J	0.067 J	0.049 UJ	0.047 U	0.048 U	0.048 U	0.011 J
AROCLOR-1262	0.047 U	0.057 UJ	0.046 U	0.047 UJ	0.049 UJ	0.047 U	0.048 U	0.048 U	0.069 U
AROCLOR-1268	0.047 U	0.057 UJ	0.046 U	0.047 UJ	0.049 UJ	0.047 U	0.048 U	0.048 U	0.069 U
TOTAL AROCLOR	0 U	0 U	0.072	0.067	0 U	0 U	0 U	0 U	0.011
TOTAL AROCLOR HALFND	0.2115	0.2565	0.256	0.255	0.2205	0.2115	0.216	0.216	0.287
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-106	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-102	SS-103	SS-104	SS-105	SS-106	SS-107	SS-108	SS-109	SS-110
SAMPLE ID	SS-102	SS-103	SS-104	SS-105	SS-106	SS-107	SS-108	SS-109	SS-110
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-134	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--	--
PCB-14	--	--	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-156/157	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--	--
PCB-196	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-102	SS-103	SS-104	SS-105	SS-106	SS-107	SS-108	SS-109	SS-110
SAMPLE ID	SS-102	SS-103	SS-104	SS-105	SS-106	SS-107	SS-108	SS-109	SS-110
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-198	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--	--	--
PCB-201	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--	--
PCB-21/33	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-102	SS-103	SS-104	SS-105	SS-106	SS-107	SS-108	SS-109	SS-110
SAMPLE ID	SS-102	SS-103	SS-104	SS-105	SS-106	SS-107	SS-108	SS-109	SS-110
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-74	--	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--	--
PCB-80	--	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--	--	--	--
METALS (MG/KG)									
ALUMINUM	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-102	SS-103	SS-104	SS-105	SS-106	SS-107	SS-108	SS-109	SS-110
SAMPLE ID	SS-102	SS-103	SS-104	SS-105	SS-106	SS-107	SS-108	SS-109	SS-110
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
BERYLLIUM	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--
CYANIDE	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-111	SS-111	SS-112	SS-113	SS-115	SS-116	SS-117	SS-118	SS-119
SAMPLE ID	SS-111	SS-111-D	SS-112	SS-113	SS-115	SS-116	SS-117	SS-118	SS-119
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	--	--	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--	--
2,4-DINITROPHENOL	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--	--	--
2-CHLOROPHENOL	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--
2-METHYLPHENOL	--	--	--	--	--	--	--	--	--
2-NITROANILINE	--	--	--	--	--	--	--	--	--
2-NITROPHENOL	--	--	--	--	--	--	--	--	--
3&4-METHYLPHENOL	--	--	--	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--	--	--
3-NITROANILINE	--	--	--	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--	--	--
4-CHLOROANILINE	--	--	--	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--
4-NITROANILINE	--	--	--	--	--	--	--	--	--
4-NITROPHENOL	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-111	SS-111	SS-112	SS-113	SS-115	SS-116	SS-117	SS-118	SS-119
SAMPLE ID	SS-111	SS-111-D	SS-112	SS-113	SS-115	SS-116	SS-117	SS-118	SS-119
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
ACENAPHTHENE	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--
ACETOPHENONE	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--
ATRAZINE	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--
BENZALDEHYDE	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	--	--
CAPROLACTAM	--	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--	--
DIETHYL PHTHALATE	--	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--
HEXACHLOROBENZENE	--	--	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--	--	--
HEXACHLOROETHANE	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--
ISOPHORONE	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--
PESTICIDES (MG/KG)									
4,4'-DDD	--	--	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--	--
ALDRIN	--	--	--	--	--	--	--	--	--
ALPHA-BHC	--	--	--	--	--	--	--	--	--
ALPHA-CHLORDANE	--	--	--	--	--	--	--	--	--
BETA-BHC	--	--	--	--	--	--	--	--	--
DELTA-BHC	--	--	--	--	--	--	--	--	--
DIELDRIN	--	--	--	--	--	--	--	--	--
ENDOSULFAN I	--	--	--	--	--	--	--	--	--
ENDOSULFAN II	--	--	--	--	--	--	--	--	--
ENDOSULFAN SULFATE	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-111	SS-111	SS-112	SS-113	SS-115	SS-116	SS-117	SS-118	SS-119
SAMPLE ID	SS-111	SS-111-D	SS-112	SS-113	SS-115	SS-116	SS-117	SS-118	SS-119
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
ENDRIN	--	--	--	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	--	--	--	--	--	--	--
ENDRIN KETONE	--	--	--	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--	--	--
GAMMA-CHLORDANE	--	--	--	--	--	--	--	--	--
HEPTACHLOR	--	--	--	--	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--	--	--
METHOXYCHLOR	--	--	--	--	--	--	--	--	--
TOXAPHENE	--	--	--	--	--	--	--	--	--
PCBS (MG/KG)									
AROCLOR-1016	0.089 U	0.091 U	0.049 UJ	0.048 U	0.063 U	0.041 U	0.069 UJ	0.065 UJ	0.049 U
AROCLOR-1221	0.089 U	0.091 U	0.049 UJ	0.048 U	0.063 U	0.041 U	0.069 UJ	0.065 UJ	0.049 U
AROCLOR-1232	0.089 U	0.091 U	0.049 UJ	0.048 U	0.063 U	0.041 U	0.069 UJ	0.065 UJ	0.049 U
AROCLOR-1242	0.089 U	0.091 U	0.049 UJ	0.048 U	0.063 U	0.041 U	0.069 UJ	0.065 UJ	0.049 U
AROCLOR-1248	0.089 U	0.091 U	0.049 UJ	0.048 U	0.063 U	0.041 U	0.069 UJ	0.065 UJ	0.049 U
AROCLOR-1254	0.089 U	0.091 U	0.049 UJ	0.048 U	0.063 U	0.041 U	0.069 UJ	0.065 UJ	0.049 U
AROCLOR-1260	0.089 U	0.091 U	0.049 UJ	0.048 U	0.063 U	0.041 U	0.069 UJ	0.065 UJ	0.023 J
AROCLOR-1262	0.089 U	0.091 U	0.049 UJ	0.048 U	0.063 U	0.041 U	0.069 UJ	0.065 UJ	0.049 U
AROCLOR-1268	0.089 U	0.091 U	0.049 UJ	0.048 U	0.063 U	0.041 U	0.069 UJ	0.065 UJ	0.049 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0.023
TOTAL AROCLOR HALFND	0.4005	0.4095	0.2205	0.216	0.2835	0.1845	0.3105	0.2925	0.219
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-106	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-111	SS-111	SS-112	SS-113	SS-115	SS-116	SS-117	SS-118	SS-119
SAMPLE ID	SS-111	SS-111-D	SS-112	SS-113	SS-115	SS-116	SS-117	SS-118	SS-119
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-134	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--	--
PCB-14	--	--	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-156/157	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--	--
PCB-196	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-111	SS-111	SS-112	SS-113	SS-115	SS-116	SS-117	SS-118	SS-119
SAMPLE ID	SS-111	SS-111-D	SS-112	SS-113	SS-115	SS-116	SS-117	SS-118	SS-119
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-198	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--	--	--
PCB-201	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--	--
PCB-21/33	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-111	SS-111	SS-112	SS-113	SS-115	SS-116	SS-117	SS-118	SS-119
SAMPLE ID	SS-111	SS-111-D	SS-112	SS-113	SS-115	SS-116	SS-117	SS-118	SS-119
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-74	--	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--	--
PCB-80	--	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--	--	--	--
METALS (MG/KG)									
ALUMINUM	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-111	SS-111	SS-112	SS-113	SS-115	SS-116	SS-117	SS-118	SS-119
SAMPLE ID	SS-111	SS-111-D	SS-112	SS-113	SS-115	SS-116	SS-117	SS-118	SS-119
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180320
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
BERYLLIUM	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--
CYANIDE	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-120	SS-121	SS-122	SS-123	SS-124	SS-212	SS-213	SS-216	SS-217
SAMPLE ID	SS-120	SS-121	SS-122	SS-123	SS-124	SEC-SS-212	SEC-SS-213	SEC-SS-216	SEC-SS-217
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180627	20180626	20180626	20180627
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	--	--	--	--	0.21 U	0.23 U	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	0.21 U	0.23 U	--	--
1,4-DIOXANE	--	--	--	--	--	0.083 U	0.09 U	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	0.41 U	0.44 UJ	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	0.21 U	0.23 U	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	0.21 U	0.23 U	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	0.21 U	0.23 U	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--	0.21 U	0.23 U	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	0.21 U	0.23 U	--	--
2,4-DINITROPHENOL	--	--	--	--	--	0.41 U	0.44 U	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	0.21 U	0.23 U	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	0.21 U	0.23 U	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--	0.21 U	0.23 U	--	--
2-CHLOROPHENOL	--	--	--	--	--	0.21 U	0.23 U	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	0.21 U	0.23 U	--	--
2-METHYLPHENOL	--	--	--	--	--	0.41 U	0.44 U	--	--
2-NITROANILINE	--	--	--	--	--	0.21 U	0.23 U	--	--
2-NITROPHENOL	--	--	--	--	--	0.21 U	0.23 U	--	--
3&4-METHYLPHENOL	--	--	--	--	--	0.41 U	0.44 U	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	0.41 U	0.44 U	--	--
3-NITROANILINE	--	--	--	--	--	0.057 J	0.44 U	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	0.41 U	0.44 U	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	0.21 U	0.23 U	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	0.21 U	0.23 U	--	--
4-CHLOROANILINE	--	--	--	--	--	0.41 U	0.44 U	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	0.21 U	0.23 U	--	--
4-NITROANILINE	--	--	--	--	--	0.41 U	0.44 U	--	--
4-NITROPHENOL	--	--	--	--	--	0.41 U	0.44 U	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-120	SS-121	SS-122	SS-123	SS-124	SS-212	SS-213	SS-216	SS-217
SAMPLE ID	SS-120	SS-121	SS-122	SS-123	SS-124	SEC-SS-212	SEC-SS-213	SEC-SS-216	SEC-SS-217
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180627	20180626	20180626	20180627
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
ACENAPHTHENE	--	--	--	--	--	0.21 U	0.23 U	--	--
ACENAPHTHYLENE	--	--	--	--	--	0.21 U	0.23 U	--	--
ACETOPHENONE	--	--	--	--	--	0.41 U	0.44 U	--	--
ANTHRACENE	--	--	--	--	--	0.21 U	0.23 U	--	--
ATRAZINE	--	--	--	--	--	0.41 U	0.44 U	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	0.21 U	0.26628	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	0.21 U	0.01213	--	--
BENZALDEHYDE	--	--	--	--	--	0.41 U	0.44 U	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	0.21 U	0.23 U	--	--
BENZO(A)PYRENE	--	--	--	--	--	0.21 U	0.23 U	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	0.21 U	0.12 J	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	0.21 U	0.23 U	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	0.21 U	0.23 U	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	0.21 U	0.23 U	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	0.41 U	0.44 U	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	0.21 U	0.23 U	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	0.21 U	0.23 U	--	--
CAPROLACTAM	--	--	--	--	--	0.41 U	0.44 U	--	--
CARBAZOLE	--	--	--	--	--	0.41 U	0.44 UJ	--	--
CHRYSENE	--	--	--	--	--	0.21 U	0.13 J	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	0.21 U	0.23 U	--	--
DIBENZOFURAN	--	--	--	--	--	0.21 U	0.23 U	--	--
DIETHYL PHTHALATE	--	--	--	--	--	0.21 U	0.23 U	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	0.21 U	0.23 U	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	0.21 U	0.23 U	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	0.41 U	0.44 U	--	--
FLUORANTHENE	--	--	--	--	--	0.41 U	0.18 J	--	--
FLUORENE	--	--	--	--	--	0.21 U	0.23 U	--	--
HEXACHLOROBENZENE	--	--	--	--	--	0.21 U	0.23 U	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--	0.21 U	0.23 U	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	0.41 UJ	0.44 UJ	--	--
HEXACHLOROETHANE	--	--	--	--	--	0.21 U	0.23 UJ	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	0 U	0.37	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	0.21 U	0.23 U	--	--
ISOPHORONE	--	--	--	--	--	0.21 U	0.23 U	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	0.078	0.31	--	--
NAPHTHALENE	--	--	--	--	--	0.21 U	0.23 U	--	--
NITROBENZENE	--	--	--	--	--	0.21 U	0.23 U	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	0.21 U	0.23 U	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	0.21 U	0.23 U	--	--
PENTACHLOROPHENOL	--	--	--	--	--	0.41 U	0.44 U	--	--
PHENANTHRENE	--	--	--	--	--	0.078 J	0.13 J	--	--
PHENOL	--	--	--	--	--	0.41 U	0.44 U	--	--
PYRENE	--	--	--	--	--	0.21 U	0.12 J	--	--
TOTAL PAHS	--	--	--	--	--	0.078	0.68	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	0.031	0.037	--	--
ACENAPHTHENE	--	--	--	--	--	0.0031 J	0.0044 U	--	--
ACENAPHTHYLENE	--	--	--	--	--	0.0041 U	0.0058	--	--
ANTHRACENE	--	--	--	--	--	0.01	0.01	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	0.038274	0.05552	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	0.038274	0.05552	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	0.024	0.038	--	--
BENZO(A)PYRENE	--	--	--	--	--	0.024	0.031	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	0.048	0.11	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	0.015	0.02	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	0.012	0.028	--	--
CHRYSENE	--	--	--	--	--	0.054	0.14	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	0.0052	0.0069	--	--
FLUORANTHENE	--	--	--	--	--	0.049	0.19	--	--
FLUORENE	--	--	--	--	--	0.0027 J	0.0044 U	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	0.2292	0.5079	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	0.017	0.024	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	0.1508	0.3708	--	--
NAPHTHALENE	--	--	--	--	--	0.016	0.025	--	--
PENTACHLOROPHENOL	--	--	--	--	--	0.0083 U	0.009 U	--	--
PHENANTHRENE	--	--	--	--	--	0.07	0.14	--	--
PYRENE	--	--	--	--	--	0.03	0.11	--	--
TOTAL PAHS	--	--	--	--	--	0.054	0.14	--	--
PESTICIDES (MG/KG)									
4,4'-DDD	--	--	--	--	--	0.0023 J	0.0068 J	--	--
4,4'-DDE	--	--	--	--	--	0.0041 U	0.0063 J	--	--
4,4'-DDT	--	--	--	--	--	0.0018 J	0.01 J	--	--
ALDRIN	--	--	--	--	--	0.0021 U	0.00022 R	--	--
ALPHA-BHC	--	--	--	--	--	0.0021 U	0.0023 U	--	--
ALPHA-CHLORDANE	--	--	--	--	--	0.00026 R	0.0029 J	--	--
BETA-BHC	--	--	--	--	--	0.00034 R	0.00055 R	--	--
DELTA-BHC	--	--	--	--	--	0.00045 J	0.00096 J	--	--
DIELDRIN	--	--	--	--	--	0.00093 R	0.0044 U	--	--
ENDOSULFAN I	--	--	--	--	--	0.00037 J	0.0023 U	--	--
ENDOSULFAN II	--	--	--	--	--	0.00037 R	0.0044 U	--	--
ENDOSULFAN SULFATE	--	--	--	--	--	0.00087 J	0.0035 J	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-120	SS-121	SS-122	SS-123	SS-124	SS-212	SS-213	SS-216	SS-217
SAMPLE ID	SS-120	SS-121	SS-122	SS-123	SS-124	SEC-SS-212	SEC-SS-213	SEC-SS-216	SEC-SS-217
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180627	20180626	20180626	20180627
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
ENDRIN	--	--	--	--	--	0.0015 R	0.0023 R	--	--
ENDRIN ALDEHYDE	--	--	--	--	--	0.0023 J	0.0044 U	--	--
ENDRIN KETONE	--	--	--	--	--	0.0033 J	0.0078	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--	0.0021 U	0.0023 U	--	--
GAMMA-CHLORDANE	--	--	--	--	--	0.00043 R	0.0013 J	--	--
HEPTACHLOR	--	--	--	--	--	0.0021 U	0.00069 J	--	--
HEPTACHLOR EPOXIDE	--	--	--	--	--	0.00066 J	0.0027	--	--
METHOXYCHLOR	--	--	--	--	--	0.0012 R	0.006 R	--	--
TOXAPHENE	--	--	--	--	--	0.21 U	0.23 U	--	--
PCBS (MG/KG)									
AROCLOR-1016	0.046 U	0.069 UJ	0.054 UJ	0.044 U	0.04 U	0.041 U	0.044 U	0.039 U	0.044 U
AROCLOR-1221	0.046 U	0.069 UJ	0.054 UJ	0.044 U	0.04 U	0.041 U	0.044 U	0.039 U	0.044 U
AROCLOR-1232	0.046 U	0.069 UJ	0.054 UJ	0.044 U	0.04 U	0.041 U	0.044 U	0.039 U	0.044 U
AROCLOR-1242	0.046 U	0.069 UJ	0.054 UJ	0.044 U	0.04 U	0.041 U	0.044 U	0.039 U	0.044 U
AROCLOR-1248	0.046 U	0.069 UJ	0.054 UJ	0.044 U	0.04 U	0.041 U	0.044 U	0.039 U	0.044 U
AROCLOR-1254	0.046 U	0.069 UJ	0.054 UJ	0.044 U	0.04 U	0.041 U	0.044 U	0.039 U	0.044 U
AROCLOR-1260	0.046 U	0.069 UJ	0.054 UJ	0.044 U	0.04 U	0.041 U	0.044 U	0.039 U	1.4 J
AROCLOR-1262	0.046 U	0.069 UJ	0.054 UJ	0.044 U	0.04 U	0.041 U	0.044 U	0.039 U	0.044 U
AROCLOR-1268	0.046 U	0.069 UJ	0.054 UJ	0.044 U	0.04 U	0.041 U	0.044 U	0.039 U	0.044 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	1.4
TOTAL AROCLOR HALFND	0.207	0.3105	0.243	0.198	0.18	0.1845	0.198	0.1755	1.576
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-106	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-120	SS-121	SS-122	SS-123	SS-124	SS-212	SS-213	SS-216	SS-217
SAMPLE ID	SS-120	SS-121	SS-122	SS-123	SS-124	SEC-SS-212	SEC-SS-213	SEC-SS-216	SEC-SS-217
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180627	20180626	20180626	20180627
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-134	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--	--
PCB-14	--	--	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-156/157	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--	--
PCB-196	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-120	SS-121	SS-122	SS-123	SS-124	SS-212	SS-213	SS-216	SS-217
SAMPLE ID	SS-120	SS-121	SS-122	SS-123	SS-124	SEC-SS-212	SEC-SS-213	SEC-SS-216	SEC-SS-217
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180627	20180626	20180626	20180627
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-198	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--	--	--
PCB-201	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--	--
PCB-21/33	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-120	SS-121	SS-122	SS-123	SS-124	SS-212	SS-213	SS-216	SS-217
SAMPLE ID	SS-120	SS-121	SS-122	SS-123	SS-124	SEC-SS-212	SEC-SS-213	SEC-SS-216	SEC-SS-217
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180627	20180626	20180626	20180627
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-74	--	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--	--
PCB-80	--	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--	--	--	--
METALS (MG/KG)									
ALUMINUM	--	--	--	--	--	4120	7040 J	--	--
ANTIMONY	--	--	--	--	--	6.5 U	6.2 U	--	--
ARSENIC	--	--	--	--	--	8.5	10.2	--	--
BARIUM	--	--	--	--	--	40.9	78.2	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-120	SS-121	SS-122	SS-123	SS-124	SS-212	SS-213	SS-216	SS-217
SAMPLE ID	SS-120	SS-121	SS-122	SS-123	SS-124	SEC-SS-212	SEC-SS-213	SEC-SS-216	SEC-SS-217
SAMPLE DATE	20180320	20180320	20180320	20180320	20180320	20180627	20180626	20180626	20180627
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
BERYLLIUM	--	--	--	--	--	0.95	1.7	--	--
CADMIUM	--	--	--	--	--	0.21 J	0.44 J	--	--
CALCIUM	--	--	--	--	--	369 J	1460	--	--
CHROMIUM	--	--	--	--	--	23.7	15.1	--	--
COBALT	--	--	--	--	--	6.9	13.5	--	--
COPPER	--	--	--	--	--	15.6	40.2	--	--
CYANIDE	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	53800	27700	--	--
LEAD	--	--	--	--	--	21	80.4	--	--
MAGNESIUM	--	--	--	--	--	438 J	1430	--	--
MANGANESE	--	--	--	--	--	451	904	--	--
MERCURY	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	18.7	41.1	--	--
POTASSIUM	--	--	--	--	--	709	1170	--	--
SELENIUM	--	--	--	--	--	3.8 U	3.6 U	--	--
SILVER	--	--	--	--	--	1.1 U	1 U	--	--
SODIUM	--	--	--	--	--	542 U	514 U	--	--
THALLIUM	--	--	--	--	--	1.4 J	2.2 J	--	--
VANADIUM	--	--	--	--	--	5.8	9.8	--	--
ZINC	--	--	--	--	--	53.2	183	--	--
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-218	SS-219	SS-220	SS-221	SS-222	SS-223	SS-224	SS-247	SS-250
SAMPLE ID	SEC-SS-218	SEC-SS-219	SEC-SS-220	SEC-SS-221	SEC-SS-222	SEC-SS-223	SEC-SS-224	SEC-SS-247	SEC-SS-250
SAMPLE DATE	20180627	20180627	20180627	20180628	20180627	20180627	20180627	20180627	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
1,2,4,5-TETRACHLOROBENZENE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
1,4-DIOXANE	--	--	--	0.086 U	--	--	--	0.18 U	0.19 U
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	0.42 UJ	--	--	--	0.9 U	0.93 U
2,3,4,6-TETRACHLOROPHENOL	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
2,4,5-TRICHLOROPHENOL	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
2,4,6-TRICHLOROPHENOL	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
2,4-DICHLOROPHENOL	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
2,4-DIMETHYLPHENOL	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
2,4-DINITROPHENOL	--	--	--	0.42 U	--	--	--	0.9 U	0.93 U
2,4-DINITROTOLUENE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
2,6-DINITROTOLUENE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
2-CHLORONAPHTHALENE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
2-CHLOROPHENOL	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
2-METHYLNAPHTHALENE	--	--	--	0.22 U	--	--	--	0.46 U	0.14 J
2-METHYLPHENOL	--	--	--	0.42 U	--	--	--	0.9 U	0.93 U
2-NITROANILINE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
2-NITROPHENOL	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
3&4-METHYLPHENOL	--	--	--	0.42 U	--	--	--	0.49 J	0.93 U
3,3'-DICHLOROBENZIDINE	--	--	--	0.42 U	--	--	--	0.9 U	0.93 U
3-NITROANILINE	--	--	--	0.42 U	--	--	--	0.9 U	0.93 U
4,6-DINITRO-2-METHYLPHENOL	--	--	--	0.42 U	--	--	--	0.9 U	0.93 U
4-BROMOPHENYL PHENYL ETHER	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
4-CHLORO-3-METHYLPHENOL	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
4-CHLOROANILINE	--	--	--	0.42 U	--	--	--	0.9 U	0.93 UJ
4-CHLOROPHENYL PHENYL ETHER	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
4-NITROANILINE	--	--	--	0.42 U	--	--	--	0.9 U	0.93 U
4-NITROPHENOL	--	--	--	0.42 U	--	--	--	0.9 U	0.93 U

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-218	SS-219	SS-220	SS-221	SS-222	SS-223	SS-224	SS-247	SS-250
SAMPLE ID	SEC-SS-218	SEC-SS-219	SEC-SS-220	SEC-SS-221	SEC-SS-222	SEC-SS-223	SEC-SS-224	SEC-SS-247	SEC-SS-250
SAMPLE DATE	20180627	20180627	20180627	20180628	20180627	20180627	20180627	20180627	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
ACENAPHTHENE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
ACENAPHTHYLENE	--	--	--	0.12 J	--	--	--	0.46 U	0.48 U
ACETOPHENONE	--	--	--	0.42 U	--	--	--	0.9 U	0.93 U
ANTHRACENE	--	--	--	0.087 J	--	--	--	0.46 U	0.48 U
ATRAZINE	--	--	--	0.42 U	--	--	--	0.9 U	0.93 U
BAP EQUIVALENT-HALFND	--	--	--	0.61437	--	--	--	0.52153	0.77354
BAP EQUIVALENT-POS	--	--	--	0.61437	--	--	--	0.013	0.53354
BENZALDEHYDE	--	--	--	0.42 U	--	--	--	0.13 J	0.93 U
BENZO(A)ANTHRACENE	--	--	--	0.31	--	--	--	0.46 U	0.35 J
BENZO(A)PYRENE	--	--	--	0.39	--	--	--	0.46 U	0.39 J
BENZO(B)FLUORANTHENE	--	--	--	0.68	--	--	--	0.13 J	0.81
BENZO(G,H,I)PERYLENE	--	--	--	0.37	--	--	--	0.46 U	0.26 J
BENZO(K)FLUORANTHENE	--	--	--	0.2 J	--	--	--	0.46 U	0.19 J
BIS(2-CHLOROETHOXY)METHANE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
BIS(2-CHLOROETHYL)ETHER	--	--	--	0.42 U	--	--	--	0.9 U	0.93 U
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	0.55	--	--	--	0.23 J	0.16 J
BUTYL BENZYL PHTHALATE	--	--	--	0.28	--	--	--	0.46 U	0.48 U
CAPROLACTAM	--	--	--	0.42 U	--	--	--	0.9 U	0.93 U
CARBAZOLE	--	--	--	0.42 UJ	--	--	--	0.9 UJ	0.93 UJ
CHRYSENE	--	--	--	0.37	--	--	--	0.46 U	0.64
DIBENZO(A,H)ANTHRACENE	--	--	--	0.088 J	--	--	--	0.46 U	0.48 U
DIBENZOFURAN	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
DIETHYL PHTHALATE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
DIMETHYL PHTHALATE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
DI-N-BUTYL PHTHALATE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
DI-N-OCTYL PHTHALATE	--	--	--	0.42 U	--	--	--	0.9 U	0.93 U
FLUORANTHENE	--	--	--	0.74	--	--	--	0.9 U	0.87 J
FLUORENE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
HEXACHLOROBENZENE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
HEXACHLOROBUTADIENE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
HEXACHLOROCYCLOPENTADIENE	--	--	--	0.42 UJ	--	--	--	0.9 UJ	0.93 UJ
HEXACHLOROETHANE	--	--	--	0.22 UJ	--	--	--	0.46 U	0.48 U
HIGH MOLECULAR WEIGHT PAHS	--	--	--	3.408	--	--	--	0.13	3.67
INDENO(1,2,3-CD)PYRENE	--	--	--	0.35	--	--	--	0.46 U	0.25 J
ISOPHORONE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
LOW MOLECULAR WEIGHT PAHS	--	--	--	1.277	--	--	--	0 U	1.46
NAPHTHALENE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
NITROBENZENE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
N-NITROSODIPHENYLAMINE	--	--	--	0.22 U	--	--	--	0.46 U	0.48 U
PENTACHLOROPHENOL	--	--	--	0.42 U	--	--	--	0.9 U	0.93 U
PHENANTHRENE	--	--	--	0.33	--	--	--	0.46 U	0.59
PHENOL	--	--	--	0.42 U	--	--	--	0.9 U	0.93 U
PYRENE	--	--	--	0.65	--	--	--	0.46 U	0.78
TOTAL PAHS	--	--	--	4.685	--	--	--	0.13	5.13
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
1,4-DIOXANE	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	0.016	--	--	--	0.024	0.14
ACENAPHTHENE	--	--	--	0.0092	--	--	--	0.0025 J	0.019
ACENAPHTHYLENE	--	--	--	0.15	--	--	--	0.027	0.095
ANTHRACENE	--	--	--	0.13	--	--	--	0.025	0.12
BAP EQUIVALENT-HALFND	--	--	--	0.6273	--	--	--	0.118204	0.58149
BAP EQUIVALENT-POS	--	--	--	0.6273	--	--	--	0.118204	0.58149
BENZO(A)ANTHRACENE	--	--	--	0.35	--	--	--	0.064	0.37
BENZO(A)PYRENE	--	--	--	0.43 J	--	--	--	0.077	0.39
BENZO(B)FLUORANTHENE	--	--	--	0.65 J	--	--	--	0.12	0.67
BENZO(G,H,I)PERYLENE	--	--	--	0.34	--	--	--	0.058	0.13
BENZO(K)FLUORANTHENE	--	--	--	0.19	--	--	--	0.033	0.19
CHRYSENE	--	--	--	0.4 J	--	--	--	0.074	0.59
DIBENZO(A,H)ANTHRACENE	--	--	--	0.055	--	--	--	0.016	0.058
FLUORANTHENE	--	--	--	0.74 J	--	--	--	0.084	0.86
FLUORENE	--	--	--	0.023	--	--	--	0.009 U	0.028
HIGH MOLECULAR WEIGHT PAHS	--	--	--	3.275	--	--	--	0.574	3.148
INDENO(1,2,3-CD)PYRENE	--	--	--	0.4 J	--	--	--	0.064	0.27
LOW MOLECULAR WEIGHT PAHS	--	--	--	1.3872	--	--	--	0.1925	1.763
NAPHTHALENE	--	--	--	0.015	--	--	--	0.019	0.091
PENTACHLOROPHENOL	--	--	--	0.0017 J	--	--	--	0.018 U	0.0054 J
PHENANTHRENE	--	--	--	0.32	--	--	--	0.035	0.55
PYRENE	--	--	--	0.46 J	--	--	--	0.068	0.48
TOTAL PAHS	--	--	--	0.4	--	--	--	0.074	0.59
PESTICIDES (MG/KG)									
4,4'-DDD	--	--	--	0.051 J	--	--	--	0.0089 U	0.0094 U
4,4'-DDE	--	--	--	0.071 J	--	--	--	0.0021 R	0.023 J
4,4'-DDT	--	--	--	0.16 J	--	--	--	0.013 J	0.016 J
ALDRIN	--	--	--	0.0022 U	--	--	--	0.0016 R	0.0049 U
ALPHA-BHC	--	--	--	0.0022 U	--	--	--	0.0017 J	0.0049 U
ALPHA-CHLORDANE	--	--	--	0.0035 J	--	--	--	0.0058 J	0.0016 R
BETA-BHC	--	--	--	0.0036 J	--	--	--	0.00098 R	0.00048 R
DELTA-BHC	--	--	--	0.0011 J	--	--	--	0.0045 J	0.0012 J
DIELDRIN	--	--	--	0.0019 R	--	--	--	0.0089 U	0.014 J
ENDOSULFAN I	--	--	--	0.0022 U	--	--	--	0.0046 U	0.0014 J
ENDOSULFAN II	--	--	--	0.00089 R	--	--	--	0.0022 R	0.0094 R
ENDOSULFAN SULFATE	--	--	--	0.0026 J	--	--	--	0.0085 J	0.013 J

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-218	SS-219	SS-220	SS-221	SS-222	SS-223	SS-224	SS-247	SS-250
SAMPLE ID	SEC-SS-218	SEC-SS-219	SEC-SS-220	SEC-SS-221	SEC-SS-222	SEC-SS-223	SEC-SS-224	SEC-SS-247	SEC-SS-250
SAMPLE DATE	20180627	20180627	20180627	20180628	20180627	20180627	20180627	20180627	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
ENDRIN	--	--	--	0.02 J	--	--	--	0.012 J	0.0094 R
ENDRIN ALDEHYDE	--	--	--	0.0042 U	--	--	--	0.0092 R	0.0094 U
ENDRIN KETONE	--	--	--	0.0045 J	--	--	--	0.0012 R	0.024 J
GAMMA-BHC (LINDANE)	--	--	--	0.0022 U	--	--	--	0.0022 J	0.002 J
GAMMA-CHLORDANE	--	--	--	0.0045 J	--	--	--	0.00031 R	0.0038 J
HEPTACHLOR	--	--	--	0.0021 J	--	--	--	0.0046 U	0.0049 U
HEPTACHLOR EPOXIDE	--	--	--	0.0028 J	--	--	--	0.00042 R	0.0012 R
METHOXYCHLOR	--	--	--	0.0048 R	--	--	--	0.0085 J	0.049 R
TOXAPHENE	--	--	--	0.22 U	--	--	--	0.46 U	0.49 U
PCBS (MG/KG)									
AROCLOR-1016	0.051 U	0.053 U	0.044 U	0.042 U	0.046 U	0.045 U	0.039 U	0.089 U	0.094 U
AROCLOR-1221	0.051 U	0.053 U	0.044 U	0.042 U	0.046 U	0.045 U	0.039 U	0.089 U	0.094 U
AROCLOR-1232	0.051 U	0.053 U	0.044 U	0.042 U	0.046 U	0.045 U	0.039 U	0.089 U	0.094 U
AROCLOR-1242	0.051 U	0.053 U	0.044 U	0.042 U	0.046 U	0.045 U	0.039 U	0.089 U	0.094 U
AROCLOR-1248	0.051 U	0.053 U	0.044 U	0.042 U	0.046 U	0.045 U	0.039 U	0.089 U	0.094 U
AROCLOR-1254	0.051 U	0.053 U	0.044 U	0.042 U	0.046 U	0.045 U	0.039 U	0.089 U	0.094 U
AROCLOR-1260	0.051 U	0.053 U	0.044 U	0.042 U	0.046 U	0.51 J	0.039 U	0.089 U	0.094 U
AROCLOR-1262	0.051 U	0.053 U	0.044 U	0.042 U	0.046 U	0.045 U	0.039 U	0.089 U	0.094 U
AROCLOR-1268	0.051 U	0.053 U	0.044 U	0.042 U	0.046 U	0.045 U	0.039 U	0.089 U	0.094 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U	0 U	0.51	0 U	0 U	0 U
TOTAL AROCLOR HALFND	0.2295	0.2385	0.198	0.189	0.207	0.69	0.1755	0.4005	0.423
MOBILE LAB PESTICIDES/PCBS (MG/KG)									
AROCLOR-1016	--	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--	--
PCB CONGENERS (MG/KG)									
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-106	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-218	SS-219	SS-220	SS-221	SS-222	SS-223	SS-224	SS-247	SS-250
SAMPLE ID	SEC-SS-218	SEC-SS-219	SEC-SS-220	SEC-SS-221	SEC-SS-222	SEC-SS-223	SEC-SS-224	SEC-SS-247	SEC-SS-250
SAMPLE DATE	20180627	20180627	20180627	20180628	20180627	20180627	20180627	20180627	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-134	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--	--
PCB-14	--	--	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-156/157	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--	--
PCB-196	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--

LOCATION	SS-218	SS-219	SS-220	SS-221	SS-222	SS-223	SS-224	SS-247	SS-250
SAMPLE ID	SEC-SS-218	SEC-SS-219	SEC-SS-220	SEC-SS-221	SEC-SS-222	SEC-SS-223	SEC-SS-224	SEC-SS-247	SEC-SS-250
SAMPLE DATE	20180627	20180627	20180627	20180628	20180627	20180627	20180627	20180627	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-198	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--	--	--
PCB-201	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--	--
PCB-21/33	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-218	SS-219	SS-220	SS-221	SS-222	SS-223	SS-224	SS-247	SS-250
SAMPLE ID	SEC-SS-218	SEC-SS-219	SEC-SS-220	SEC-SS-221	SEC-SS-222	SEC-SS-223	SEC-SS-224	SEC-SS-247	SEC-SS-250
SAMPLE DATE	20180627	20180627	20180627	20180628	20180627	20180627	20180627	20180627	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
PCB-74	--	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--	--
PCB-80	--	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--	--	--	--
METALS (MG/KG)									
ALUMINUM	--	--	--	5710	--	--	--	5970	7470 J
ANTIMONY	--	--	--	7 U	--	--	--	15.2 U	9.3 U
ARSENIC	--	--	--	14.3	--	--	--	5.6	15.5
BARIUM	--	--	--	155	--	--	--	117	151

TABLE 15

SOIL ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-218	SS-219	SS-220	SS-221	SS-222	SS-223	SS-224	SS-247	SS-250
SAMPLE ID	SEC-SS-218	SEC-SS-219	SEC-SS-220	SEC-SS-221	SEC-SS-222	SEC-SS-223	SEC-SS-224	SEC-SS-247	SEC-SS-250
SAMPLE DATE	20180627	20180627	20180627	20180628	20180627	20180627	20180627	20180627	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
BERYLLIUM	--	--	--	0.76	--	--	--	1.2 J	1.7
CADMIUM	--	--	--	1.7	--	--	--	0.5 J	0.98
CALCIUM	--	--	--	6320	--	--	--	4020	2800
CHROMIUM	--	--	--	19	--	--	--	36.7	14.8
COBALT	--	--	--	8.6	--	--	--	6.4 J	11.7
COPPER	--	--	--	37.7	--	--	--	43	48.8
CYANIDE	--	--	--	--	--	--	--	--	--
IRON	--	--	--	18900	--	--	--	15000	18900
LEAD	--	--	--	527	--	--	--	103	213
MAGNESIUM	--	--	--	749	--	--	--	1190 J	898
MANGANESE	--	--	--	384	--	--	--	167	347
MERCURY	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	11.2	--	--	--	34.6	23.6
POTASSIUM	--	--	--	723	--	--	--	1820	955
SELENIUM	--	--	--	4.1 U	--	--	--	8.9 U	5.4 U
SILVER	--	--	--	1.2 U	--	--	--	2.5 U	0.19 J
SODIUM	--	--	--	579 U	--	--	--	1270 U	776 U
THALLIUM	--	--	--	0.97 J	--	--	--	6.3 U	1.1 J
VANADIUM	--	--	--	11.8	--	--	--	11.4 J	17.2
ZINC	--	--	--	471	--	--	--	226	275
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--
MOBILE LAB MISCELLANEOUS (%)									
PERCENT SOLIDS	--	--	--	--	--	--	--	--	--

TABLE 16

SURFACE WATER ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD333	SW/SD333	SW/SD334	SW/SD334
SAMPLE ID	SW333-20191210	SW333-20191210-F	SW334-20191210	SW334-20191210-F
SAMPLE DATE	20191210	20191210	20191210	20191210
DUPLICATE				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential
VOLATILES (UG/L)				
1,1,1-TRICHLOROETHANE	5 U	--	5 U	--
1,1,2,2-TETRACHLOROETHANE	5 U	--	5 U	--
1,1,2-TRICHLOROETHANE	5 U	--	5 U	--
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	--	5 U	--
1,1-DICHLOROETHANE	5 U	--	5 U	--
1,1-DICHLOROETHENE	5 U	--	5 U	--
1,2,3-TRICHLOROBENZENE	5 U	--	5 U	--
1,2,4-TRICHLOROBENZENE	5 U	--	5 U	--
1,2-DIBROMO-3-CHLOROPROPANE	5 U	--	5 U	--
1,2-DIBROMOETHANE	5 U	--	5 U	--
1,2-DICHLOROBENZENE	5 U	--	5 U	--
1,2-DICHLOROETHANE	5 U	--	5 U	--
1,2-DICHLOROPROPANE	5 U	--	5 U	--
1,3-DICHLOROBENZENE	5 U	--	5 U	--
1,4-DICHLOROBENZENE	5 U	--	5 U	--
2-BUTANONE	10 U	--	10 U	--
2-HEXANONE	10 U	--	10 U	--
4-METHYL-2-PENTANONE	10 U	--	10 U	--
ACETONE	10 U	--	10 U	--
BENZENE	5 U	--	5 U	--
BROMOCHLOROMETHANE	5 U	--	5 U	--
BROMODICHLOROMETHANE	5 U	--	5 U	--
BROMOFORM	5 U	--	5 U	--
BROMOMETHANE	5 U	--	5 U	--
CARBON DISULFIDE	5 UJ	--	5 UJ	--
CARBON TETRACHLORIDE	5 U	--	5 U	--
CHLOROBENZENE	5 U	--	5 U	--
CHLORODIBROMOMETHANE	5 U	--	5 U	--
CHLOROETHANE	5 U	--	5 U	--
CHLOROFORM	5 U	--	5 U	--
CHLOROMETHANE	5 U	--	5 U	--
CIS-1,2-DICHLOROETHENE	5 U	--	5 U	--
CIS-1,3-DICHLOROPROPENE	5 U	--	5 U	--
CYCLOHEXANE	5 U	--	5 U	--
DICHLORODIFLUOROMETHANE	5 U	--	5 U	--
ETHYLBENZENE	5 U	--	5 U	--
ISOPROPYLBENZENE	5 U	--	5 U	--
M+P-XYLENES	5 U	--	5 U	--
METHYL ACETATE	5 U	--	5 U	--
METHYL CYCLOHEXANE	5 U	--	5 U	--
METHYL TERT-BUTYL ETHER	5 U	--	5 U	--
METHYLENE CHLORIDE	5 U	--	5 U	--
O-XYLENE	5 U	--	5 U	--
STYRENE	5 U	--	5 U	--
TETRACHLOROETHENE	5 U	--	5 U	--
TOLUENE	5 U	--	5 U	--
TRANS-1,2-DICHLOROETHENE	5 U	--	5 U	--
TRANS-1,3-DICHLOROPROPENE	5 U	--	5 U	--
TRICHLOROETHENE	5 U	--	5 U	--
TRICHLOROFLUOROMETHANE	5 U	--	5 U	--
VINYL CHLORIDE	5 U	--	5 U	--
SEMIVOLATILES (UG/L)				
1,1-BIPHENYL	5 U	--	5 U	--
1,2,4,5-TETRACHLOROBENZENE	5 U	--	5 U	--
1,4-DIOXANE	2 U	--	2 U	--
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	--	10 U	--
2,3,4,6-TETRACHLOROPHENOL	5 U	--	5 U	--
2,4,5-TRICHLOROPHENOL	5 U	--	5 U	--
2,4,6-TRICHLOROPHENOL	5 U	--	5 U	--
2,4-DICHLOROPHENOL	5 U	--	5 U	--
2,4-DIMETHYLPHENOL	5 U	--	5 U	--
2,4-DINITROPHENOL	10 U	--	10 U	--
2,4-DINITROTOLUENE	5 U	--	5 U	--
2,6-DINITROTOLUENE	5 U	--	5 U	--
2-CHLORONAPHTHALENE	5 U	--	5 U	--
2-CHLOROPHENOL	5 U	--	5 U	--
2-METHYLNAPHTHALENE	5 U	--	5 U	--
2-METHYLPHENOL	10 U	--	10 U	--
2-NITROANILINE	5 U	--	5 U	--
2-NITROPHENOL	5 U	--	5 U	--
3&4-METHYLPHENOL	10 U	--	10 U	--
3,3'-DICHLOROBENZIDINE	10 U	--	10 U	--
3-NITROANILINE	10 U	--	10 U	--
4,6-DINITRO-2-METHYLPHENOL	10 U	--	10 U	--
4-BROMOPHENYL PHENYL ETHER	5 U	--	5 U	--
4-CHLORO-3-METHYLPHENOL	5 U	--	5 U	--
4-CHLOROANILINE	10 U	--	10 U	--
4-CHLOROPHENYL PHENYL ETHER	5 U	--	5 U	--
4-NITROANILINE	10 U	--	10 U	--
4-NITROPHENOL	10 U	--	10 U	--
ACENAPHTHENE	5 U	--	5 U	--
ACENAPHTHYLENE	5 U	--	5 U	--
ACETOPHENONE	10 U	--	10 U	--

TABLE 16

SURFACE WATER ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD333	SW/SD333	SW/SD334	SW/SD334
SAMPLE ID	SW333-20191210	SW333-20191210-F	SW334-20191210	SW334-20191210-F
SAMPLE DATE	20191210	20191210	20191210	20191210
DUPLICATE				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential
ANTHRACENE	5 U	--	5 U	--
ATRAZINE	10 U	--	10 U	--
BAP EQUIVALENT-HALFND	5 U	--	5 U	--
BAP EQUIVALENT-POS	5 U	--	5 U	--
BENZALDEHYDE	10 U	--	10 U	--
BENZO(A)ANTHRACENE	5 U	--	5 U	--
BENZO(A)PYRENE	5 U	--	5 U	--
BENZO(B)FLUORANTHENE	5 U	--	5 U	--
BENZO(G,H,I)PERYLENE	5 U	--	5 U	--
BENZO(K)FLUORANTHENE	5 U	--	5 U	--
BIS(2-CHLOROETHOXY)METHANE	5 U	--	5 U	--
BIS(2-CHLOROETHYL)ETHER	10 U	--	10 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	5 U	--	5 U	--
BUTYL BENZYL PHTHALATE	5 U	--	5 U	--
CAPROLACTAM	10 U	--	10 U	--
CARBAZOLE	10 U	--	10 U	--
CHRYSENE	5 U	--	5 U	--
DIBENZO(A,H)ANTHRACENE	5 U	--	5 U	--
DIBENZOFURAN	5 U	--	5 U	--
DIETHYL PHTHALATE	5 U	--	5 U	--
DIMETHYL PHTHALATE	1.5 J	--	5 U	--
DI-N-BUTYL PHTHALATE	5 U	--	5 U	--
DI-N-OCTYL PHTHALATE	10 U	--	10 U	--
FLUORANTHENE	10 U	--	10 U	--
FLUORENE	5 U	--	5 U	--
HEXACHLOROBENZENE	5 U	--	5 U	--
HEXACHLOROBUTADIENE	5 U	--	5 U	--
HEXACHLOROCYCLOPENTADIENE	10 U	--	10 U	--
HEXACHLOROETHANE	5 U	--	5 U	--
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0 U	--
INDENO(1,2,3-CD)PYRENE	5 U	--	5 U	--
ISOPHORONE	5 U	--	5 U	--
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	--
NAPHTHALENE	5 U	--	5 U	--
NITROBENZENE	5 U	--	5 U	--
N-NITROSO-DI-N-PROPYLAMINE	5 U	--	5 U	--
N-NITROSODIPHENYLAMINE	5 U	--	5 U	--
PENTACHLOROPHENOL	10 U	--	10 U	--
PHENANTHRENE	5 U	--	5 U	--
PHENOL	10 U	--	10 U	--
PYRENE	5 U	--	5 U	--
TOTAL PAHS	0 U	--	0 U	--
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L				
2-METHYLNAPHTHALENE	0.1 U	--	0.1 U	--
ACENAPHTHENE	0.1 U	--	0.1 U	--
ACENAPHTHYLENE	0.1 U	--	0.1 U	--
ANTHRACENE	0.1 U	--	0.1 U	--
BAP EQUIVALENT-HALFND	0.11255	--	0.11425	--
BAP EQUIVALENT-POS	0.002	--	0.0042	--
BENZO(A)ANTHRACENE	0.1 U	--	0.1 U	--
BENZO(A)PYRENE	0.1 U	--	0.1 U	--
BENZO(B)FLUORANTHENE	0.02 J	--	0.04 J	--
BENZO(G,H,I)PERYLENE	0.1 U	--	0.1 U	--
BENZO(K)FLUORANTHENE	0.1 U	--	0.02 J	--
CHRYSENE	0.1 U	--	0.1 U	--
DIBENZO(A,H)ANTHRACENE	0.1 U	--	0.1 U	--
FLUORANTHENE	0.1 U	--	0.1 U	--
FLUORENE	0.1 U	--	0.1 U	--
HIGH MOLECULAR WEIGHT PAHS	0.02	--	0.06	--
INDENO(1,2,3-CD)PYRENE	0.1 U	--	0.1 U	--
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	--
NAPHTHALENE	0.1 U	--	0.1 U	--
PENTACHLOROPHENOL	0.2 U	--	0.2 U	--
PHENANTHRENE	0.1 U	--	0.1 U	--
PYRENE	0.1 U	--	0.1 U	--
TOTAL PAHS	0.1	--	0.1	--
PESTICIDES (UG/L)				
4,4'-DDD	0.1 U	--	0.1 U	--
4,4'-DDE	0.1 U	--	0.1 U	--
4,4'-DDT	0.1 U	--	0.1 U	--
ALDRIN	0.05 U	--	0.05 U	--
ALPHA-BHC	0.05 U	--	0.05 U	--
ALPHA-CHLORDANE	0.05 U	--	0.05 U	--
BETA-BHC	0.05 U	--	0.05 U	--
DELTA-BHC	0.05 U	--	0.05 U	--
DIELDRIN	0.1 U	--	0.1 U	--
ENDOSULFAN I	0.05 U	--	0.05 U	--
ENDOSULFAN II	0.1 U	--	0.1 U	--
ENDOSULFAN SULFATE	0.1 U	--	0.1 U	--
ENDRIN	0.1 U	--	0.1 U	--
ENDRIN ALDEHYDE	0.1 U	--	0.1 U	--
ENDRIN KETONE	0.1 U	--	0.1 U	--
GAMMA-BHC (LINDANE)	0.05 U	--	0.05 U	--
GAMMA-CHLORDANE	0.05 U	--	0.05 U	--

TABLE 16

SURFACE WATER ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD333	SW/SD333	SW/SD334	SW/SD334
SAMPLE ID	SW333-20191210	SW333-20191210-F	SW334-20191210	SW334-20191210-F
SAMPLE DATE	20191210	20191210	20191210	20191210
DUPLICATE				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential
HEPTACHLOR	0.05 U	--	0.05 U	--
HEPTACHLOR EPOXIDE	0.05 U	--	0.05 U	--
METHOXYCHLOR	0.5 U	--	0.5 U	--
TOXAPHENE	5 U	--	5 U	--
PCBS (UG/L)				
AROCLOR-1016	1 U	--	1 U	--
AROCLOR-1221	1 U	--	1 U	--
AROCLOR-1232	1 U	--	1 U	--
AROCLOR-1242	1 U	--	1 U	--
AROCLOR-1248	1 U	--	1 U	--
AROCLOR-1254	1 U	--	1 U	--
AROCLOR-1260	1 U	--	1 U	--
AROCLOR-1262	1 U	--	1 U	--
AROCLOR-1268	1 U	--	1 U	--
TOTAL AROCLOR	0 U	--	0 U	--
TOTAL AROCLOR HALFND	4.5	--	4.5	--
PCB CONGENERS (UG/L)				
PCB-105	0.000157 U	--	0.00000659 Z	--
PCB-114	0.000105 U	--	0.000101 U	--
PCB-118	0.000105 U	--	0.0000112 Z	--
PCB-123	0.000105 U	--	0.000101 U	--
PCB-126	0.000105 U	--	0.000101 U	--
PCB-128/166	0.00021 U	--	0.000202 U	--
PCB-129/138/163	0.000315 U	--	0.000302 U	--
PCB-153/168	0.00021 U	--	0.000202 U	--
PCB-156	0.00021 U	--	0.00000327 Z	--
PCB-167	0.000105 U	--	0.00000276 Z	--
PCB-169	0.000105 U	--	0.000101 U	--
PCB-170	0.000105 U	--	0.000011 J	--
PCB-18/30	0.00021 U	--	0.00000353 Z	--
PCB-180/193	0.00021 U	--	0.000202 U	--
PCB-187	0.000105 U	--	0.000101 U	--
PCB-189	0.000105 U	--	0.000101 U	--
PCB-195	0.000105 U	--	0.000101 U	--
PCB-20/28	0.00021 U	--	0.000202 U	--
PCB-206	0.000105 U	--	0.0000149 J	--
PCB-209	0.00000359 Z	--	0.0000112 J	--
PCB-44/47/65	0.000315 U	--	0.000302 U	--
PCB-52	0.00021 U	--	0.000202 U	--
PCB-66	0.00000399 J	--	0.00000444 Z	--
PCB-77	0.000105 U	--	0.000101 U	--
PCB-8	0.000105 U	--	0.000101 U	--
PCB-81	0.000105 U	--	0.000101 U	--
PCB-90/101/113	0.000315 U	--	0.000302 U	--
TEQ DIOXIN-LIKE PCBs (BIRD)	0.000157 U	--	1.125E-09	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	0.000157 U	--	1.26827E-05	--
TEQ DIOXIN-LIKE PCBs (FISH)	0.000157 U	--	1.17E-10	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	0.000157 U	--	2.86198E-07	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	0.000157 U	--	7.13E-10	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	0.000157 U	--	6.59046E-06	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0 U	--	0.00002382	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00000758	--	0.00004507	--
TOTAL PCB CONGENERS ZEROND	0.00000758	--	0.00006889	--
TOTAL PCB CONGENERS-NOAA	0.00000758	--	0.00006286	--
TOTAL PCB CONGENERS-NOAA HALFND	0.00202858	--	0.00153189	--
TOTAL PCB CONGENERS-NOAA X2	0.00001516	--	0.00012572	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.00300716	--	0.00234472	--
DIOXINS/FURANS (PG/L)				
1,2,3,4,6,7,8,9-OCDD	102 U	--	102 U	--
1,2,3,4,6,7,8,9-OCDF	102 U	--	102 U	--
1,2,3,4,6,7,8-HPCDD	51.2 U	--	3.73 J	--
1,2,3,4,6,7,8-HPCDF	51.2 U	--	2.66 JZ	--
1,2,3,4,7,8,9-HPCDF	51.2 U	--	51.2 U	--
1,2,3,4,7,8-HXCDD	51.2 U	--	51.2 U	--
1,2,3,4,7,8-HXCDF	51.2 U	--	51.2 U	--
1,2,3,6,7,8-HXCDD	51.2 U	--	51.2 U	--
1,2,3,6,7,8-HXCDF	51.2 U	--	51.2 U	--
1,2,3,7,8,9-HXCDD	51.2 U	--	51.2 U	--
1,2,3,7,8,9-HXCDF	51.2 U	--	51.2 U	--
1,2,3,7,8-PECDD	51.2 U	--	51.2 U	--
1,2,3,7,8-PECDF	51.2 U	--	51.2 U	--
2,3,4,6,7,8-HXCDF	51.2 U	--	51.2 U	--
2,3,4,7,8-PECDF	51.2 U	--	51.2 U	--
2,3,7,8-TCDD	10.2 U	--	10.2 U	--
2,3,7,8-TCDF	10.2 U	--	10.2 U	--
TEQ DIOXINS (BIRD)	10.2 U	--	0.03033	--
TEQ DIOXINS (BIRD) HALFND	10.2 U	--	78.59253	--
TEQ DIOXINS (FISH)	10.2 U	--	0.03033	--
TEQ DIOXINS (FISH) HALFND	10.2 U	--	68.88353	--
TEQ DIOXINS (HUMANS/MAMMALS)	10.2 U	--	0.0639	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	10.2 U	--	57.9285	--
TOTAL HPCDD	51.2 UJ	--	7.68 J	--
TOTAL HPCDF	51.2 UJ	--	4.44 J	--
TOTAL HXCDD	51.2 UJ	--	51.2 UJ	--

TABLE 16

SURFACE WATER ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD333	SW/SD333	SW/SD334	SW/SD334
SAMPLE ID	SW333-20191210	SW333-20191210-F	SW334-20191210	SW334-20191210-F
SAMPLE DATE	20191210	20191210	20191210	20191210
DUPLICATE				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential
TOTAL HXCDF	51.2 UJ	--	1.19 J	--
TOTAL PECDD	51.2 UJ	--	51.2 UJ	--
TOTAL PECDF	51.2 UJ	--	51.2 UJ	--
TOTAL TCDD	10.2 UJ	--	10.2 UJ	--
TOTAL TCDF	10.2 UJ	--	10.2 UJ	--
METALS (UG/L)				
ALUMINUM	227	88.4	741	21.4
ANTIMONY	2 U	2 U	2 U	2 U
ARSENIC	0.19 J	1 U	0.86 J	0.15 J
BARIUM	23.4	22.4	25	16.3
BERYLLIUM	1 U	1 U	1 U	1 U
CADMIUM	1 U	1 U	1 U	1 U
CALCIUM	89200	87300	58900	55100
CHROMIUM	2 U	2 U	0.42 J	2 U
COBALT	0.81 J	0.09 J	3.6	0.09 J
COPPER	1.8 J	2 U	4.7	2 U
CYANIDE	10 U	--	10 U	--
IRON	302	261	737	200 U
LEAD	0.18 J	1 U	5.1	1 U
MAGNESIUM	59000	57100	32600	30300
MANGANESE	174	43.5	505	22.3
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	15.9	12.2	14.6	2.9
POTASSIUM	14900	14500	9970	9450
SELENIUM	2.8 J	3.1 J	1.3 J	1.4 J
SILVER	1 U	1 U	1 U	1 U
SODIUM	11700	11500	7380	6990
THALLIUM	1 U	1 U	1 U	1 U
VANADIUM	0.09 J	0.04 J	0.71 J	0.06 J
ZINC	60	54.5	81.4	15.9

TABLE 17

SEDIMENT ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-086	SD-087	SD-089	SD-092	SD-093	SD-096	SD-097	SD-100
SAMPLE ID	SEC-SD-86	SEC-SD-87	SEC-SD-88	SEC-SD-92	SEC-SD-93	SEC-SD-96	SEC-SD-97	SEC-SD-100
SAMPLE DATE	20180627	20180628	20180627	20180627	20180627	20180626	20180626	20180627
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential (UST)	Residential (Railroad)	Residential (Barrels)	Residential	Residential	Residential	Residential	Residential (UST)
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)								
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)								
1,1-BIPHENYL	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
1,2,4,5-TETRACHLOROBENZENE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
1,4-DIOXANE	0.12 U	0.09 U	0.076 U	0.13 U	0.18 U	0.088 U	0.095 U	0.12 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.57 U	0.44 U	0.38 U	0.64 U	0.9 U	0.44 UJ	0.47 UJ	0.58 U
2,3,4,6-TETRACHLOROPHENOL	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
2,4,5-TRICHLOROPHENOL	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
2,4,6-TRICHLOROPHENOL	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
2,4-DICHLOROPHENOL	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
2,4-DIMETHYLPHENOL	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
2,4-DINITROPHENOL	0.57 U	0.44 U	0.38 U	0.64 U	0.9 U	0.44 U	0.47 U	0.58 U
2,4-DINITROTOLUENE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
2,6-DINITROTOLUENE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
2-CHLORONAPHTHALENE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
2-CHLOROPHENOL	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
2-METHYLNAPHTHALENE	0.14 J	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
2-METHYLPHENOL	0.57 U	0.44 U	0.38 U	0.64 U	0.9 U	0.44 U	0.47 U	0.58 U
2-NITROANILINE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
2-NITROPHENOL	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
3&4-METHYLPHENOL	0.48 J	0.44 U	0.38 U	0.64 U	1.7	0.44 U	0.47 U	0.58 U
3,3'-DICHLOROBENZIDINE	0.57 U	0.44 U	0.38 U	0.64 U	0.9 U	0.44 U	0.47 U	0.58 U
3-NITROANILINE	0.57 U	0.44 U	0.38 U	0.64 U	0.25 J	0.44 U	0.47 U	0.58 U
4,6-DINITRO-2-METHYLPHENOL	0.57 U	0.44 U	0.38 U	0.64 U	0.9 U	0.44 U	0.47 U	0.58 U
4-BROMOPHENYL PHENYL ETHER	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
4-CHLORO-3-METHYLPHENOL	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
4-CHLOROANILINE	0.57 U	0.44 U	0.38 U	0.64 U	0.9 U	0.44 U	0.47 U	0.58 U
4-CHLOROPHENYL PHENYL ETHER	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
4-NITROANILINE	0.57 U	0.44 U	0.38 U	0.64 U	0.9 U	0.44 U	0.47 U	0.58 U
4-NITROPHENOL	0.57 U	0.44 U	0.38 U	0.64 U	0.9 U	0.44 U	0.47 U	0.58 U

TABLE 17

SEDIMENT ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-086	SD-087	SD-089	SD-092	SD-093	SD-096	SD-097	SD-100
SAMPLE ID	SEC-SD-86	SEC-SD-87	SEC-SD-88	SEC-SD-92	SEC-SD-93	SEC-SD-96	SEC-SD-97	SEC-SD-100
SAMPLE DATE	20180627	20180628	20180627	20180627	20180627	20180626	20180626	20180627
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential (UST)	Residential (Railroad)	Residential (Barrels)	Residential	Residential	Residential	Residential	Residential (UST)
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6
ACENAPHTHENE	0.35	0.14 J	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.27 J
ACENAPHTHYLENE	3.5	0.16 J	0.072 J	0.33 U	0.46 U	0.22 U	0.24 U	1.9
ACETOPHENONE	0.57 U	0.44 U	0.38 U	0.64 U	0.9 U	0.44 U	0.47 U	0.58 U
ANTHRACENE	3.9	0.18 J	0.08 J	0.33 U	0.46 U	0.22 U	0.24 U	2.1
ATRAZINE	0.57 U	0.44 U	0.38 U	0.64 U	0.9 U	0.44 U	0.47 U	0.58 U
BAP EQUIVALENT-HALFND	14.0909	0.87043	0.37419	0.37629	0.53245	0.2542	0.27971	6.3065
BAP EQUIVALENT-POS	14.0909	0.87043	0.27919	0.02814	0.02415	0.0111	0.02651	6.3065
BENZALDEHYDE	0.57 U	0.44 U	0.38 U	0.64 U	0.14 J	0.44 U	0.47 U	0.58 U
BENZO(A)ANTHRACENE	11	0.58	0.24	0.12 J	0.46 U	0.22 U	0.073 J	5.4
BENZO(A)PYRENE	9.6	0.58	0.21	0.33 U	0.46 U	0.22 U	0.24 U	4.3
BENZO(B)FLUORANTHENE	14	1.1	0.32	0.16 J	0.24 J	0.11 J	0.19 J	6.3
BENZO(G,H,I)PERYLENE	4.6	0.3	0.1 J	0.33 U	0.46 U	0.22 U	0.24 U	1.8
BENZO(K)FLUORANTHENE	5.1	0.28	0.097 J	0.33 U	0.46 U	0.22 U	0.24 U	2.2
BIS(2-CHLOROETHOXY)METHANE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
BIS(2-CHLOROETHYL)ETHER	0.57 U	0.44 U	0.38 U	0.64 U	0.9 U	0.44 U	0.47 U	0.58 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.29 U	0.23 U	0.19 U	0.33 U	0.24 J	0.22 U	0.24 U	0.3 U
BUTYL BENZYL PHTHALATE	0.29 U	0.23 U	0.18 J	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
CAPROLACTAM	0.57 U	0.44 U	0.38 U	0.64 U	0.9 U	0.44 U	0.47 U	0.58 U
CARBAZOLE	0.46 J	0.44 UJ	0.38 U	0.64 U	0.9 U	0.44 UJ	0.47 UJ	0.2 J
CHRYSENE	9.9	0.63	0.22	0.14 J	0.15 J	0.1 J	0.21 J	4.5
DIBENZO(A,H)ANTHRACENE	1.4	0.085 J	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.59
DIBENZOFURAN	0.49	0.067 J	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3
DIETHYL PHTHALATE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
DIMETHYL PHTHALATE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
DI-N-BUTYL PHTHALATE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
DI-N-OCTYL PHTHALATE	0.57 U	0.44 U	0.38 U	0.64 U	0.9 U	0.44 U	0.47 U	0.58 U
FLUORANTHENE	26	1.5	0.53	0.24 J	0.21 J	0.12 J	0.37 J	15
FLUORENE	1.1	0.11 J	0.19 U	0.33 U	0.18 J	0.22 U	0.24 U	0.89
HEXACHLOROBENZENE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
HEXACHLOROBUTADIENE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
HEXACHLOROCYCLOPENTADIENE	0.57 UJ	0.44 UJ	0.38 UJ	0.64 UJ	0.9 UJ	0.44 UJ	0.47 UJ	0.58 UJ
HEXACHLOROETHANE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 UJ	0.24 UJ	0.3 U
HIGH MOLECULAR WEIGHT PAHS	76.9	4.895	1.647	0.59	0.55	0.3	0.733	35.49
INDENO(1,2,3-CD)PYRENE	5.3	0.34	0.12 J	0.33 U	0.46 U	0.22 U	0.24 U	2.2
ISOPHORONE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
LOW MOLECULAR WEIGHT PAHS	48	2.5	0.922	0.43	0.39	0.25	0.49	28.66
NAPHTHALENE	0.15 J	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
NITROBENZENE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
N-NITROSO-DI-N-PROPYLAMINE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
N-NITROSODIPHENYLAMINE	0.29 U	0.23 U	0.19 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
PENTACHLOROPHENOL	0.57 U	0.44 U	0.38 U	0.64 U	0.9 U	0.44 U	0.47 U	0.58 U
PHENANTHRENE	13	0.41	0.24	0.19 J	0.46 U	0.13 J	0.12 J	8.5
PHENOL	0.57 U	0.44 U	0.38 U	0.64 U	0.17 J	0.44 U	0.47 U	0.58 U
PYRENE	16	1	0.34	0.17 J	0.16 J	0.09 J	0.26	8.2
TOTAL PAHS	124.9	7.395	2.569	1.02	0.94	0.55	1.223	64.15
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K								
2-METHYLNAPHTHALENE	--	0.041	0.0036 J	0.031	0.028	0.026	0.024	--
ACENAPHTHENE	--	0.13	0.0057	0.0035 J	0.0045 J	0.0044 U	0.0047 U	--
ACENAPHTHYLENE	--	0.17	0.083	0.039	0.037	0.0075	0.0079	--
ANTHRACENE	--	0.2	0.087	0.045	0.037	0.01	0.015	--
BAP EQUIVALENT-HALFND	--	0.91159	0.28034	0.14688	0.19168	0.09007	0.10223	--
BAP EQUIVALENT-POS	--	0.91159	0.28034	0.14688	0.19168	0.09007	0.10223	--
BENZO(A)ANTHRACENE	--	0.6 J	0.24	0.12	0.12	0.052	0.075	--
BENZO(A)PYRENE	--	0.61 J	0.21	0.098	0.13	0.056	0.06	--
BENZO(B)FLUORANTHENE	--	0.91 J	0.28	0.14	0.18	0.1	0.19	--
BENZO(G,H,I)PERYLENE	--	0.38 J	0.11	0.049	0.075	0.041	0.033	--
BENZO(K)FLUORANTHENE	--	0.3	0.094	0.045	0.054	0.026	0.049	--
CHRYSENE	--	0.59 J	0.2	0.13	0.14	0.11	0.24	--
DIBENZO(A,H)ANTHRACENE	--	0.1	0.0042	0.016	0.022	0.014	0.011	--
FLUORANTHENE	--	1.2 J	0.48 J	0.24	0.19	0.12	0.41	--
FLUORENE	--	0.12	0.021	0.0073	0.009 U	0.0044 U	0.0047 U	--
HIGH MOLECULAR WEIGHT PAHS	--	4.81	1.5482	0.791	0.941	0.529	0.948	--
INDENO(1,2,3-CD)PYRENE	--	0.47 J	0.13	0.063	0.09	0.045	0.04	--
LOW MOLECULAR WEIGHT PAHS	--	2.24	0.8898	0.5428	0.3765	0.2815	0.5699	--
NAPHTHALENE	--	0.05	0.0031 J	0.038	0.017	0.014	0.017	--
PENTACHLOROPHENOL	--	0.0048 J	0.0009 J	0.013 U	0.0021 J	0.0088 U	0.0011 J	--
PHENANTHRENE	--	0.37 J	0.21	0.17	0.091	0.13	0.12	--
PYRENE	--	0.85 J	0.28	0.13	0.13	0.085	0.25	--
TOTAL PAHS	--	0.59	0.2	0.13	0.14	0.11	0.24	--
PESTICIDES (MG/KG)								
4,4'-DDD	0.01 R	0.0044 U	0.0038 U	0.0084 J	0.0089 U	0.0043 U	0.0059 J	0.0058 U
4,4'-DDE	0.0079 J	0.0029 R	0.0038 U	0.0064 U	0.0089 U	0.0046 J	0.0048 J	0.0047 J
4,4'-DDT	0.012 J	0.0044 U	0.0024 J	0.0034 J	0.013	0.0081	0.0087 J	0.012 J
ALDRIN	0.003 U	0.00075 J	0.002 U	0.0033 U	0.0046 U	0.0005 R	0.0024 U	0.0016 J
ALPHA-BHC	0.0012 J	0.0023 U	0.002 U	0.0033 U	0.0046 U	0.0022 U	0.0024 U	0.003 U
ALPHA-CHLORDANE	0.003 U	0.0043	0.002 U	0.0033 U	0.0046 U	0.0022 J	0.0023 J	0.003 U
BETA-BHC	0.0074 R	0.0003 R	0.002 U	0.0033 U	0.00072 R	0.0011 R	0.00035 R	0.0045 R
DELTA-BHC	0.00094 R	0.0013 J	0.00024 J	0.0007 J	0.0046 U	0.00073 J	0.0011 J	0.0012 R
DIELDRIN	0.0056 R	0.0044 U	0.0038 U	0.0063 R	0.0089 U	0.0043 U	0.0047 U	0.0058 U
ENDOSULFAN I	0.0022 R	0.00081 J	0.00085 J	0.0021 J	0.00097 J	0.0022 U	0.0016 R	0.003 U
ENDOSULFAN II	0.0039 R	0.00042 R	0.00017 R	0.00096 J	0.0024 R	0.0043 U	0.0047 U	0.0058 U

TABLE 17

SEDIMENT ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-086	SD-087	SD-089	SD-092	SD-093	SD-096	SD-097	SD-100
SAMPLE ID	SEC-SD-86	SEC-SD-87	SEC-SD-88	SEC-SD-92	SEC-SD-93	SEC-SD-96	SEC-SD-97	SEC-SD-100
SAMPLE DATE	20180627	20180628	20180627	20180627	20180627	20180626	20180626	20180627
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential (UST)	Residential (Railroad)	Residential (Barrels)	Residential	Residential	Residential	Residential	Residential (UST)
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6
ENDOSULFAN SULFATE	0.032 J	0.0029 J	0.0038 U	0.0016 R	0.0062 J	0.0039 J	0.0034 J	0.011 J
ENDRIN	0.0058 U	0.0048 R	0.0013 R	0.004 R	0.0036 R	0.001 R	0.0022 R	0.0047 R
ENDRIN ALDEHYDE	0.023 J	0.0044 U	0.002 R	0.012 J	0.002 R	0.0019 R	0.0063 J	0.0058 U
ENDRIN KETONE	0.077 J	0.0013 R	0.0038 U	0.0085	0.0019 R	0.0057	0.0073 J	0.0058 U
GAMMA-BHC (LINDANE)	0.003 U	0.0023 U	0.002 U	0.00071 R	0.00067 J	0.0022 U	0.0024 U	0.003 U
GAMMA-CHLORDANE	0.015 J	0.0041 R	0.002 U	0.00039 R	0.0052 R	0.00094 J	0.0011 J	0.006 R
HEPTACHLOR	0.0017 R	0.00044 J	0.002 U	0.0033 U	0.0014 J	0.00091 J	0.00073 J	0.001 R
HEPTACHLOR EPOXIDE	0.0016 J	0.00084 R	0.00058 J	0.0023 J	0.0016 J	0.00068 R	0.001 J	0.003 U
METHOXYCHLOR	0.064 R	0.0017 R	0.02 U	0.0065 R	0.033 J	0.0038 R	0.0054 R	0.018 R
TOXAPHENE	0.3 U	0.23 U	0.2 U	0.33 U	0.46 U	0.22 U	0.24 U	0.3 U
PCBS (MG/KG)								
AROCLOR-1016	0.058 U	0.044 U	0.038 U	0.064 U	0.089 U	0.043 U	0.047 U	0.058 U
AROCLOR-1221	0.058 U	0.044 U	0.038 U	0.064 U	0.089 U	0.043 U	0.047 U	0.058 U
AROCLOR-1232	0.058 U	0.044 U	0.038 U	0.064 U	0.089 U	0.043 U	0.047 U	0.058 U
AROCLOR-1242	0.058 U	0.044 U	0.038 U	0.064 U	0.089 U	0.043 U	0.047 U	0.058 U
AROCLOR-1248	0.058 U	0.044 U	0.038 U	0.064 U	0.089 U	0.043 U	0.047 U	0.058 U
AROCLOR-1254	0.058 U	0.044 U	0.038 U	0.064 U	0.089 U	0.043 U	0.047 U	0.058 U
AROCLOR-1260	0.058 U	0.044 U	0.038 U	0.064 U	0.089 U	0.043 U	0.047 U	0.058 U
AROCLOR-1262	0.058 U	0.044 U	0.038 U	0.064 U	0.089 U	0.043 U	0.047 U	0.058 U
AROCLOR-1268	0.058 U	0.044 U	0.038 U	0.064 U	0.089 U	0.043 U	0.047 U	0.058 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U
TOTAL AROCLOR HALFND	0.261	0.198	0.171	0.288	0.4005	0.1935	0.2115	0.261
PCB CONGENERS (MG/KG)								
PCB-105	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)								
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--

TABLE 17

SEDIMENT ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-086	SD-087	SD-089	SD-092	SD-093	SD-096	SD-097	SD-100
SAMPLE ID	SEC-SD-86	SEC-SD-87	SEC-SD-88	SEC-SD-92	SEC-SD-93	SEC-SD-96	SEC-SD-97	SEC-SD-100
SAMPLE DATE	20180627	20180628	20180627	20180627	20180627	20180626	20180626	20180627
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Residential (UST)	Residential (Railroad)	Residential (Barrels)	Residential	Residential	Residential	Residential	Residential (UST)
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--	--	--
METALS (MG/KG)								
ALUMINUM	4350	3200	5270	8420	5650	5970 J	8020 J	5020
ANTIMONY	8.7 U	6.7 U	5.8 U	10.5 U	15 U	6.9 U	7.3 U	9.1 U
ARSENIC	7.5	5	4.8	9.1	4.7	11	11.6	6.2
BARIUM	93.6	39.8	49	78.8	125	75.1	109	99.2
BERYLLIUM	1.1	0.5 J	0.58	4.2	0.71 J	1.5	1.9	0.98
CADMIUM	0.82	0.56 U	0.18 J	2	0.84 J	0.36 J	0.68	1.2
CALCIUM	5610	704	261 J	2740	4130	3100	2120	3180
CHROMIUM	15.8	6.7	10.8	13.6	18.7	12.3	15.2	10.4
COBALT	20.4	6.4	9.1	100	7.2 J	9.7	45.3	20.5
COPPER	56.3	23.2	9.7	40.4	33.1	35.2	44.8	51.6
CYANIDE	--	--	--	--	--	--	--	--
IRON	33300	14800	20400	11100	14000	14800	23000	28600
LEAD	66.8	14.3	17.9	17.1	74.2	59.7	112	62.3
MAGNESIUM	938	973	348 J	942	1030 J	1340	1370	882
MANGANESE	1070	145	325	14100	161	363	1770	688
MERCURY	--	--	--	--	--	--	--	--
NICKEL	46	10.5	9.5	287	18.2	33.6	56.5	45
POTASSIUM	709 J	560	480 J	758 J	859 J	1270	1340	891
SELENIUM	5.1 U	3.9 U	3.4 U	10	8.7 U	4 U	4.3 U	5.3 U
SILVER	1.4 U	1.1 U	0.97 U	0.27 J	2.5 U	1.2 U	0.22 J	1.5 U
SODIUM	723 U	555 U	485 U	875 U	1250 U	576 U	612 U	754 U
THALLIUM	2.6 J	2.8 U	1.1 J	1.3 J	6.2 U	0.92 J	4.1	1.7 J
VANADIUM	5.5 J	5.6	8.2	6.8 J	10.8 J	10.7	13.4	7.8
ZINC	404	41.4	40	500	317	108	293	594
MISCELLANEOUS (%)								
TOTAL SOLIDS	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)								
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--

TABLE 17

SEDIMENT ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-105	SD-106	SW/SD333	SW/SD334
SAMPLE ID	SEC-SD-105	SEC-SD-106	SD333-20191210	SD334-20191210
SAMPLE DATE	20180628	20180628	20191210	20191210
DUPLICATE				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential (Railroad)	Residential (Railroad)	Residential	Residential
SUBMATRIX	NA	NA	NA	NA
TOP DEPTH	0	0	0	0
BOTTOM DEPTH	6	6	0.5	0.5
VOLATILES (MG/KG)				
1,1,1-TRICHLOROETHANE	--	--	0.0094 U	0.011 U
1,1,2,2-TETRACHLOROETHANE	--	--	0.0094 U	0.011 U
1,1,2-TRICHLOROETHANE	--	--	0.0094 U	0.011 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	0.0094 U	0.011 U
1,1-DICHLOROETHANE	--	--	0.0094 U	0.011 U
1,1-DICHLOROETHENE	--	--	0.0094 U	0.011 U
1,2,3-TRICHLOROBENZENE	--	--	0.0094 UJ	0.011 U
1,2,4-TRICHLOROBENZENE	--	--	0.0094 UJ	0.011 U
1,2-DIBROMO-3-CHLOROPROPANE	--	--	0.0094 UJ	0.011 U
1,2-DIBROMOETHANE	--	--	0.0094 U	0.011 U
1,2-DICHLOROBENZENE	--	--	0.0094 UJ	0.011 U
1,2-DICHLOROETHANE	--	--	0.0094 U	0.011 U
1,2-DICHLOROPROPANE	--	--	0.0094 U	0.011 U
1,3-DICHLOROBENZENE	--	--	0.0094 UJ	0.011 U
1,4-DICHLOROBENZENE	--	--	0.0094 UJ	0.011 U
2-BUTANONE	--	--	0.019 U	0.022 U
2-HEXANONE	--	--	0.019 U	0.022 U
4-METHYL-2-PENTANONE	--	--	0.019 U	0.022 U
ACETONE	--	--	0.019 U	0.022 U
BENZENE	--	--	0.0094 U	0.011 U
BROMOCHLOROMETHANE	--	--	0.0094 U	0.011 U
BROMODICHLOROMETHANE	--	--	0.0094 U	0.011 U
BROMOFORM	--	--	0.0094 UJ	0.011 U
BROMOMETHANE	--	--	0.0094 U	0.011 U
CARBON DISULFIDE	--	--	0.0094 U	0.011 U
CARBON TETRACHLORIDE	--	--	0.0094 U	0.011 U
CHLOROBENZENE	--	--	0.0094 U	0.011 U
CHLORODIBROMOMETHANE	--	--	0.0094 U	0.011 U
CHLOROETHANE	--	--	0.0094 U	0.011 U
CHLOROFORM	--	--	0.0094 U	0.011 U
CHLOROMETHANE	--	--	0.0094 U	0.011 U
CIS-1,2-DICHLOROETHENE	--	--	0.0094 U	0.011 U
CIS-1,3-DICHLOROPROPENE	--	--	0.0094 U	0.011 U
CYCLOHEXANE	--	--	0.0094 U	0.011 U
DICHLORODIFLUOROMETHANE	--	--	0.0019 J	0.011 U
ETHYLBENZENE	--	--	0.0094 U	0.011 U
ISOPROPYLBENZENE	--	--	0.0094 U	0.011 U
M+P-XYLENES	--	--	0.0094 U	0.011 U
METHYL ACETATE	--	--	0.0094 U	0.011 U
METHYL CYCLOHEXANE	--	--	0.0094 U	0.011 U
METHYL TERT-BUTYL ETHER	--	--	0.0094 U	0.011 U
METHYLENE CHLORIDE	--	--	0.0094 U	0.012
O-XYLENE	--	--	0.0094 U	0.011 U
STYRENE	--	--	0.0094 U	0.011 U
TETRACHLOROETHENE	--	--	0.0094 U	0.011 U
TOLUENE	--	--	0.0094 U	0.011 U
TRANS-1,2-DICHLOROETHENE	--	--	0.0094 U	0.011 U
TRANS-1,3-DICHLOROPROPENE	--	--	0.0094 U	0.011 U
TRICHLOROETHENE	--	--	0.0094 U	0.011 U
TRICHLOROFLUOROMETHANE	--	--	0.0094 U	0.011 U
VINYL CHLORIDE	--	--	0.0094 U	0.011 U
SEMIVOLATILES (MG/KG)				
1,1-BIPHENYL	0.22 U	0.26 U	0.27 U	0.29 U
1,2,4,5-TETRACHLOROBENZENE	0.22 U	0.26 U	0.27 U	0.29 U
1,4-DIOXANE	0.086 U	0.1 U	0.11 U	0.11 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.42 UJ	0.51 UJ	0.52 U	0.56 U
2,3,4,6-TETRACHLOROPHENOL	0.22 U	0.26 U	0.27 U	0.29 U
2,4,5-TRICHLOROPHENOL	0.22 U	0.26 U	0.27 U	0.29 U
2,4,6-TRICHLOROPHENOL	0.22 U	0.26 U	0.27 U	0.29 U
2,4-DICHLOROPHENOL	0.22 U	0.26 U	0.27 U	0.29 U
2,4-DIMETHYLPHENOL	0.22 U	0.26 U	0.27 U	0.29 U
2,4-DINITROPHENOL	0.42 U	0.51 U	0.52 U	0.56 U
2,4-DINITROTOLUENE	0.22 U	0.26 U	0.27 U	0.29 U
2,6-DINITROTOLUENE	0.22 U	0.26 U	0.27 U	0.29 U
2-CHLORONAPHTHALENE	0.22 U	0.26 U	0.27 U	0.29 U
2-CHLOROPHENOL	0.22 U	0.26 U	0.27 U	0.29 U
2-METHYLNAPHTHALENE	0.22 U	0.26 U	0.27 U	0.29 U
2-METHYLPHENOL	0.42 U	0.51 U	0.52 U	0.56 U
2-NITROANILINE	0.22 U	0.26 U	0.27 U	0.29 U
2-NITROPHENOL	0.22 U	0.26 U	0.27 U	0.29 U
3&4-METHYLPHENOL	0.42 U	0.51 U	0.52 U	0.56 U
3,3'-DICHLOROBENZIDINE	0.42 U	0.51 U	0.52 U	0.56 U
3-NITROANILINE	0.42 U	0.51 U	0.52 U	0.56 U
4,6-DINITRO-2-METHYLPHENOL	0.42 U	0.51 U	0.52 U	0.56 U
4-BROMOPHENYL PHENYL ETHER	0.22 U	0.26 U	0.27 U	0.29 U
4-CHLORO-3-METHYLPHENOL	0.22 U	0.26 U	0.27 U	0.29 U
4-CHLOROANILINE	0.42 U	0.51 U	0.52 U	0.56 U
4-CHLOROPHENYL PHENYL ETHER	0.22 U	0.26 U	0.27 U	0.29 U
4-NITROANILINE	0.42 U	0.51 U	0.52 U	0.56 U
4-NITROPHENOL	0.42 U	0.51 U	0.52 U	0.56 U

TABLE 17

SEDIMENT ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-105	SD-106	SW/SD333	SW/SD334
SAMPLE ID	SEC-SD-105	SEC-SD-106	SD333-20191210	SD334-20191210
SAMPLE DATE	20180628	20180628	20191210	20191210
DUPLICATE				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential (Railroad)	Residential (Railroad)	Residential	Residential
SUBMATRIX	NA	NA	NA	NA
TOP DEPTH	0	0	0	0
BOTTOM DEPTH	6	6	0.5	0.5
ACENAPHTHENE	0.18 J	0.26 U	0.27 U	0.29 U
ACENAPHTHYLENE	0.12 J	0.26 U	0.27 U	0.29 U
ACETOPHENONE	0.42 U	0.51 U	0.52 U	0.56 U
ANTHRACENE	0.13 J	0.26 U	0.27 U	0.29 U
ATRAZINE	0.42 U	0.51 U	0.52 U	0.56 U
BAP EQUIVALENT-HALFND	0.62477	0.62221	0.27 U	0.254595
BAP EQUIVALENT-POS	0.62477	0.49221	0.27 U	0.079
BENZALDEHYDE	0.42 U	0.51 U	0.52 U	0.56 U
BENZO(A)ANTHRACENE	0.43	0.33	0.27 U	0.29 U
BENZO(A)PYRENE	0.41	0.37	0.27 U	0.066 J
BENZO(B)FLUORANTHENE	0.82	0.66	0.27 U	0.13 J
BENZO(G,H,I)PERYLENE	0.22	0.2 J	0.27 U	0.29 U
BENZO(K)FLUORANTHENE	0.23	0.18 J	0.27 U	0.29 U
BIS(2-CHLOROETHOXY)METHANE	0.22 U	0.26 U	0.27 U	0.29 U
BIS(2-CHLOROETHYL)ETHER	0.42 U	0.51 U	0.52 U	0.56 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.42	1.2	0.27 U	0.29 U
BUTYL BENZYL PHTHALATE	0.22 U	0.26 U	0.27 U	0.29 U
CAPROLACTAM	0.42 U	0.51 U	0.52 U	0.56 U
CARBAZOLE	0.42 UJ	0.51 UJ	0.52 U	0.56 U
CHRYSENE	0.47	0.41	0.27 U	0.29 U
DIBENZO(A,H)ANTHRACENE	0.063 J	0.26 U	0.27 U	0.29 U
DIBENZOFURAN	0.091 J	0.26 U	0.27 U	0.29 U
DIETHYL PHTHALATE	0.22 U	0.26 U	0.27 U	0.29 U
DIMETHYL PHTHALATE	0.22 U	0.26 U	0.22 J	0.29
DI-N-BUTYL PHTHALATE	0.22 U	0.26 U	0.27 U	0.29 U
DI-N-OCTYL PHTHALATE	0.42 U	0.51 U	0.52 U	0.56 U
FLUORANTHENE	1.2	0.9	0.52 U	0.56 U
FLUORENE	0.13 J	0.26 U	0.27 U	0.29 U
HEXACHLOROBENZENE	0.22 U	0.26 U	0.27 U	0.29 U
HEXACHLOROBUTADIENE	0.22 U	0.26 U	0.27 U	0.29 U
HEXACHLOROCYCLOPENTADIENE	0.42 UJ	0.51 UJ	0.52 U	0.56 U
HEXACHLOROETHANE	0.22 UJ	0.26 UJ	0.27 U	0.29 U
HIGH MOLECULAR WEIGHT PAHS	3.773	2.97	0 U	0.196
INDENO(1,2,3-CD)PYRENE	0.24	0.21 J	0.27 U	0.29 U
ISOPHORONE	0.22 U	0.26 U	0.27 U	0.29 U
LOW MOLECULAR WEIGHT PAHS	2.157	1.28	0 U	0 U
NAPHTHALENE	0.077 J	0.26 U	0.27 U	0.29 U
NITROBENZENE	0.22 U	0.26 U	0.27 U	0.29 U
N-NITROSO-DI-N-PROPYLAMINE	0.22 U	0.26 U	0.27 U	0.29 U
N-NITROSODIPHENYLAMINE	0.22 U	0.26 U	0.27 U	0.29 U
PENTACHLOROPHENOL	0.42 U	0.51 U	0.52 U	0.56 U
PHENANTHRENE	0.32	0.38	0.27 U	0.29 U
PHENOL	0.42 U	0.51 U	0.13 J	0.14 J
PYRENE	0.89	0.61	0.27 U	0.29 U
TOTAL PAHS	5.93	4.25	0 U	0.196
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K				
2-METHYLNAPHTHALENE	0.063	0.017	0.0068	0.011
ACENAPHTHENE	0.19	0.013	0.0052 U	0.0056 U
ACENAPHTHYLENE	0.15	0.044	0.0052 U	0.0095
ANTHRACENE	0.19	0.069	0.0052 U	0.026
BAP EQUIVALENT-HALFND	0.73501	0.62425	0.005888	0.077709
BAP EQUIVALENT-POS	0.73501	0.62425	0.000142	0.077709
BENZO(A)ANTHRACENE	0.51 J	0.39	0.0014 J	0.014
BENZO(A)PYRENE	0.5 J	0.43 J	0.0052 U	0.053
BENZO(B)FLUORANTHENE	0.81 J	0.62 J	0.0052 U	0.1
BENZO(G,H,I)PERYLENE	0.31	0.29	0.0052 U	0.025
BENZO(K)FLUORANTHENE	0.25	0.18	0.0052 U	0.04
CHRYSENE	0.51 J	0.45 J	0.002 J	0.0098
DIBENZO(A,H)ANTHRACENE	0.061	0.056	0.0052 U	0.01
FLUORANTHENE	1.2 J	0.95 J	0.0017 J	0.009
FLUORENE	0.15	0.024	0.0052 U	0.0017 J
HIGH MOLECULAR WEIGHT PAHS	4.171	3.306	0.0053	0.2928
INDENO(1,2,3-CD)PYRENE	0.39 J	0.35	0.0052 U	0.029
LOW MOLECULAR WEIGHT PAHS	2.316	1.522	0.0189	0.0832
NAPHTHALENE	0.086	0.012	0.01	0.02
PENTACHLOROPHENOL	0.0028 J	0.0024 J	0.011 U	0.011 U
PHENANTHRENE	0.35	0.41	0.0072	0.017
PYRENE	0.83 J	0.54 J	0.0019 J	0.012
TOTAL PAHS	0.51	0.45	0.002	0.0098
PESTICIDES (MG/KG)				
4,4'-DDD	0.0043 U	0.0051 U	0.00065 J	0.00043 J
4,4'-DDE	0.0011 R	0.0086	0.0053 U	0.0055 U
4,4'-DDT	0.013 J	0.013 J	0.0053 U	0.0055 U
ALDRIN	0.0022 U	0.00045 J	0.0027 U	0.0029 U
ALPHA-BHC	0.0022 U	0.0026 U	0.0027 U	0.0029 U
ALPHA-CHLORDANE	0.0022 U	0.0013 J	0.0027 U	0.0029 U
BETA-BHC	0.00067 R	0.00049 R	0.0027 U	0.0029 U
DELTA-BHC	0.00083 J	0.00075 J	0.0027 U	0.0029 U
DIELDRIN	0.00088 R	0.00082 R	0.0053 U	0.0055 U
ENDOSULFAN I	0.00034 R	0.0028 U	0.0027 U	0.0029 U
ENDOSULFAN II	0.00045 R	0.00071 R	0.0053 U	0.0055 U

TABLE 17

SEDIMENT ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-105	SD-106	SW/SD333	SW/SD334
SAMPLE ID	SEC-SD-105	SEC-SD-106	SD333-20191210	SD334-20191210
SAMPLE DATE	20180628	20180628	20191210	20191210
DUPLICATE				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential (Railroad)	Residential (Railroad)	Residential	Residential
SUBMATRIX	NA	NA	NA	NA
TOP DEPTH	0	0	0	0
BOTTOM DEPTH	6	6	0.5	0.5
ENDOSULFAN SULFATE	0.0019 J	0.0013 R	0.0053 U	0.0055 U
ENDRIN	0.0082 R	0.0087 R	0.0053 U	0.0055 U
ENDRIN ALDEHYDE	0.0043 U	0.0051 U	0.0053 U	0.0055 U
ENDRIN KETONE	0.0013 R	0.01	0.0053 U	0.0055 U
GAMMA-BHC (LINDANE)	0.0022 U	0.0026 U	0.00053 J	0.00049 J
GAMMA-CHLORDANE	0.0041 J	0.0033 J	0.0027 U	0.0029 U
HEPTACHLOR	0.00032 J	0.0026 U	0.0027 U	0.0029 U
HEPTACHLOR EPOXIDE	0.00084 J	0.0012 J	0.0027 U	0.0029 U
METHOXYCHLOR	0.0018 R	0.0015 R	0.027 U	0.029 U
TOXAPHENE	0.22 U	0.26 U	0.27 U	0.29 U
PCBS (MG/KG)				
AROCLOR-1016	0.043 U	0.051 U	0.053 U	0.056 U
AROCLOR-1221	0.043 U	0.051 U	0.053 U	0.056 U
AROCLOR-1232	0.043 U	0.051 U	0.053 U	0.056 U
AROCLOR-1242	0.043 U	0.051 U	0.053 U	0.056 U
AROCLOR-1248	0.043 U	0.051 U	0.053 U	0.056 U
AROCLOR-1254	0.043 U	0.051 U	0.053 U	0.056 U
AROCLOR-1260	0.043 U	0.051 U	0.053 U	0.056 U
AROCLOR-1262	0.043 U	0.051 U	0.053 U	0.056 U
AROCLOR-1268	0.043 U	0.051 U	0.053 U	0.056 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U
TOTAL AROCLOR HALFND	0.1935	0.2295	0.2385	0.252
PCB CONGENERS (MG/KG)				
PCB-105	--	--	0.0000191	0.0000171
PCB-114	--	--	0.000000868 J	0.000000762 J
PCB-118	--	--	0.000038	0.0000367
PCB-123	--	--	0.000000892 J	0.000000883 J
PCB-126	--	--	0.000000654 J	0.000000979 J
PCB-128/166	--	--	0.0000191 J	0.0000115 J
PCB-129/138/163	--	--	0.000128	0.000148
PCB-153/168	--	--	0.0000948	0.000149
PCB-156	--	--	0.0000145 J	0.00000981 J
PCB-167	--	--	0.00000517 J	0.00000455 J
PCB-169	--	--	0.000000519 Z	0.0000114 U
PCB-170	--	--	0.0000273	0.0000329
PCB-18/30	--	--	0.00000391 J	0.00000158 J
PCB-180/193	--	--	0.0000833	0.000114
PCB-187	--	--	0.000045	0.0000788
PCB-189	--	--	0.00000154 J	0.00000174 J
PCB-195	--	--	0.00000711 J	0.0000114 J
PCB-20/28	--	--	0.0000145 J	0.00000699 J
PCB-206	--	--	0.000036	0.000102
PCB-209	--	--	0.0000232	0.000132 J
PCB-44/47/65	--	--	0.0000111 J	0.00000643 J
PCB-52	--	--	0.0000152	0.0000106 J
PCB-66	--	--	0.0000146 J	0.0000094 J
PCB-77	--	--	0.00000363 J	0.00000344 J
PCB-8	--	--	0.00000791 J	0.00000196 Z
PCB-81	--	--	0.000000269 J	0.000000345 Z
PCB-90/101/113	--	--	0.000033	0.000043
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	2.78219E-07	3.07604E-07
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	2.78219E-07	3.13304E-07
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	4.189E-09	5.765E-09
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	4.189E-09	6.05E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	8.3814E-08	1.00491E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	8.3814E-08	2.71491E-07
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	0.000085142	0.000076309
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	0.00056403	0.00085956
TOTAL PCB CONGENERS ZEROND	--	--	0.000649172	0.000935869
TOTAL PCB CONGENERS-NOAA	--	--	0.00062113	0.00091336
TOTAL PCB CONGENERS-NOAA HALFND	--	--	0.000649172	0.000941569
TOTAL PCB CONGENERS-NOAA X2	--	--	0.00124226	0.00182672
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	0.00124226	0.00182672
DIOXINS/FURANS (NG/KG)				
1,2,3,4,6,7,8,9-OCDD	--	--	72.5	179
1,2,3,4,6,7,8,9-OCDF	--	--	9.93 U	4.3 J
1,2,3,4,6,7,8-HPCDD	--	--	2.01 J	7.96
1,2,3,4,6,7,8-HPCDF	--	--	4.97 U	4.98 U
1,2,3,4,7,8,9-HPCDF	--	--	4.97 U	4.98 U
1,2,3,4,7,8-HXCDD	--	--	4.97 U	0.259 J
1,2,3,4,7,8-HXCDF	--	--	4.97 U	4.98 U
1,2,3,6,7,8-HXCDD	--	--	0.266 JZ	0.624 JZ
1,2,3,6,7,8-HXCDF	--	--	4.97 U	4.98 U
1,2,3,7,8,9-HXCDD	--	--	4.97 U	4.98 U
1,2,3,7,8,9-HXCDF	--	--	4.97 U	4.98 U
1,2,3,7,8-PECDD	--	--	4.97 U	4.98 U
1,2,3,7,8-PECDF	--	--	4.97 U	4.98 U
2,3,4,6,7,8-HXCDF	--	--	0.133 JZ	0.319 JZ
2,3,4,7,8-PECDF	--	--	0.211 J	0.468 JZ
2,3,7,8-TCDD	--	--	0.993 U	0.997 U
2,3,7,8-TCDF	--	--	0.993 U	0.997 U

TABLE 17

SEDIMENT ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-105	SD-106	SW/SD333	SW/SD334
SAMPLE ID	SEC-SD-105	SEC-SD-106	SD333-20191210	SD334-20191210
SAMPLE DATE	20180628	20180628	20191210	20191210
DUPLICATE				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential (Railroad)	Residential (Railroad)	Residential	Residential
SUBMATRIX	NA	NA	NA	NA
TOP DEPTH	0	0	0	0
BOTTOM DEPTH	6	6	0.5	0.5
TEQ DIOXINS (BIRD)	--	--	0.23622	0.54538
TEQ DIOXINS (BIRD) HALFND	--	--	5.1311665	5.32718
TEQ DIOXINS (FISH)	--	--	0.13072	0.42793
TEQ DIOXINS (FISH) HALFND	--	--	5.3243415	4.387555
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	0.14505	0.39519
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	4.5444395	4.55404
TOTAL HPCDD	--	--	3.69 J	19.3 J
TOTAL HPCDF	--	--	0.87 J	2.73 J
TOTAL HXCDD	--	--	3.86 J	11.6 J
TOTAL HXCDF	--	--	0.495 J	3.22 J
TOTAL PECDD	--	--	3.93 J	9.57 J
TOTAL PECDF	--	--	1.64 J	4.75 J
TOTAL TCDD	--	--	4.99 J	8.57 J
TOTAL TCDF	--	--	2.97 J	7.02 J
METALS (MG/KG)				
ALUMINUM	902	3570	5140	6960
ANTIMONY	6.7 U	7.2 U	1.1 U	1.5 U
ARSENIC	3	7.1	5.5	12.4
BARIUM	18.9 J	55.6	61.3	200
BERYLLIUM	1	0.58 J	0.98	7
CADMIUM	0.56 U	0.25 J	0.55 UJ	7
CALCIUM	624	76300	2480	33800
CHROMIUM	5.3	10	9.9	8.8
COBALT	2.8 J	7.3	16.1	177
COPPER	12.6	13.8	45.5	71.9
CYANIDE	--	--	0.56 J	1
IRON	4720	12400	9400	11600
LEAD	7.3	19.8	89.2	26.5
MAGNESIUM	200 J	7740	861	3990
MANGANESE	59	239	204	36900
MERCURY	--	--	0.14 U	0.17 U
NICKEL	6.8	14.1	55.1	590
POTASSIUM	207 J	739	643	850
SELENIUM	3.9 U	4.2 U	0.52 J	2 J
SILVER	1.1 U	1.2 U	0.55 U	0.75 U
SODIUM	560 U	601 U	111 J	156 J
THALLIUM	2.8 U	3 U	0.55 U	1.4
VANADIUM	13.1	7.9	10	8.6
ZINC	17.9	--	226	1000
MISCELLANEOUS (%)				
TOTAL SOLIDS	--	--	59	--
MISCELLANEOUS (MG/KG)				
TOTAL ORGANIC CARBON	--	--	181000	--

TABLE 18

WIPE ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R01-WP-01	R01-WP-02	R02-WP-01	R02-WP-02	R04-WP-01	R04-WP-02	R05-WP-01	R05-WP-02	R07-WP-01
SAMPLE ID	R1-WP-01	R1-WP-02	R2-WP-01	R2-WP-02	R4-WP-01	R4-WP-02	R5-WP-01	R5-WP-02	R7-WP-01
SAMPLE DATE	20191118	20191118	20191118	20191118	20191119	20191119	20191119	20191119	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	WP	WP	WP	WP	WP	WP	WP	WP	WP
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
PCB CONGENERS (PG)									
DICHLOROBIPHENYLS	570 J	570 J	810 J	680 J	520 J	600 J	610 J	660 J	450 J
HEPTACHLOROBIPHENYLS	120 J	88 J	390 J	190 J	250 J	280 J	150 J	160 J	100 J
HEXACHLOROBIPHENYLS	190 J	160 J	1700 J	780 J	330 J	740 J	330 J	280 J	230 J
MONOCHLOROBIPHENYLS	37 J	26 J	53 J	38 J	37 J	0 U	18 J	45 J	24 J
NONACHLOROBIPHENYLS	3.2 J	3.5 J	8.2 J	8.2 J	23 J	25 J	4.9 J	0 U	0 U
OCTACHLOROBIPHENYLS	26 J	6.9 J	70 J	55 J	89 J	110 J	42 J	49 J	9.6 J
PCB-1	17 J	20 U	20 J	16 J	13 J	20 U	20 U	16 J	20 U
PCB-10	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-103	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-104	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-105	20 U	20 U	250 J+	120 J+	20 U	77 U	38 U	46 U	26 U
PCB-106	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-107	20 U	20 U	31	20 U	20 U	20 U	20 U	20 U	20 U
PCB-108/124	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U
PCB-11	400	430	600	500	390	430	470	480	340
PCB-110/115	40 U	40 U	630	280	40 U	190 U	81 U	78 U	70 U
PCB-111	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-112	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-114	3.6 U	3.2 U	20 U	20 U	2.5 U	20 U	3.3 U	3.2 U	2.6 U
PCB-118	31 U	23 U	550 J+	250 J+	27 U	170 U	71 U	84 U	55 U
PCB-12/13	12 J	40 U	22 J	19 J	17 J	40 U	20 J	26 J	40 U
PCB-120	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-121	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-122	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-123	3.5 U	3.1 U	9.8 J	3.9 U	2.5 U	3 U	3.1 U	3.1 U	2.6 U
PCB-126	3.9 U	3.5 U	4.5 U	4.4 U	3 U	3.5 U	3.5 U	3.6 U	2.8 U
PCB-127	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-128/166	40 U	40 U	57	40 U	40 U	40 U	40 U	40 U	40 U
PCB-129/138/163	60 U	60 U	430	200	84 U	200	96 U	86 U	64 U
PCB-130	20 U	20 U	24	20 U	20 U	20 U	20 U	20 U	20 U
PCB-131	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-132	20 U	20 U	160	63	21 U	58 U	26 U	25 U	20 U
PCB-133	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-134	20 U	20 U	28	14 J	20 U	20 U	20 U	20 U	20 U
PCB-135/151	40 U	40 U	120	48	40 U	42	40 U	40 U	40 U
PCB-136	5.1 J	4.8 J	51	22	8.2 J	13 J	8.6 J	6.4 J	8.4 J
PCB-137	20 U	20 U	24	11 J	20 U	12 J	20 U	20 U	20 U
PCB-139/140	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U
PCB-14	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-141	20 U	20 U	69	29	20 U	34	20 U	20 U	20 U
PCB-142	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-143	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-144	20 U	20 U	16 J	8.7 J	20 U	20 U	20 U	20 U	20 U
PCB-145	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-146	20 U	20 U	43	20 U	20 U	20 U	20 U	20 U	20 U
PCB-147/149	40 U	40 U	300	120	58 U	110	53 U	47 U	45 U
PCB-148	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-15	32	33 U	54	44	31	36	38	37	30
PCB-150	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-152	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-153/168	47 U	40 U	320	140	76 U	140	67 U	63 U	45 U
PCB-154	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-155	20 U	20 U	3.7 J	20 U	20 U	20 U	20 U	20 U	20 U
PCB-156/157	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U
PCB-158	20 U	20 U	43	21	20 U	20	20 U	20 U	20 U
PCB-159	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-16	22	17 J	35	27	19 J	23	22	22	15 J
PCB-160	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-161	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-162	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-164	20 U	20 U	23	20 U	20 U	20 U	20 U	20 U	20 U
PCB-165	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-167	3.9 U	3.6 U	20 U	20 U	3.3 U	20 U	20 U	20 U	20 U
PCB-169	4.5 U	4.1 U	4.9 U	5.2 U	3.8 U	4.1 U	4 U	4.7 U	3.1 U
PCB-17	24	19 J	35	30	23	27	27	26	21
PCB-170	20 U	20 U	33	24	34	32	20 U	20 U	20 U
PCB-171/173	40 U	40 U	40 U	9.5 J	40 U	12 J	40 U	7 J	4.4 J
PCB-172	20 U	20 U	20 U	20 U	5 J	5.4 J	20 U	20 U	20 U
PCB-174	20 U	20 U	52	25	32	31	20 U	20	20 U
PCB-175	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-176	20 U	20 U	10 J	4.4 J	4.2 J	20 U	3.6 J	20 U	20 U
PCB-177	8.7 J	8 J	29	20 U	18 J	18 J	12 J	11 J	9 J
PCB-178	20 U	20 U	13 J	6.2 J	20 U	7 J	20 U	4.4 J	20 U
PCB-179	20 U	20 U	31	20 U	20 U	20 U	20 U	20 U	20 U
PCB-18/30	40 U	40 U	60	48	40 U	46	48	48	40 U
PCB-180/193	40 U	40 U	91	54	79	86	43	45	40 U
PCB-181	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-182	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-183/185	12 J	9 J	42	20 J	23 J	28 J	15 J	19 J	12 J
PCB-184	20 U	20 U	4.6	20 U	20 U	20 U	20 U	20 U	20 U
PCB-186	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-187	20 U	20 U	72	31	39	44	25	26	20 U
PCB-188	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U

TABLE 18

WIPE ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R01-WP-01	R01-WP-02	R02-WP-01	R02-WP-02	R04-WP-01	R04-WP-02	R05-WP-01	R05-WP-02	R07-WP-01
SAMPLE ID	R1-WP-01	R1-WP-02	R2-WP-01	R2-WP-02	R4-WP-01	R4-WP-02	R5-WP-01	R5-WP-02	R7-WP-01
SAMPLE DATE	20191118	20191118	20191118	20191118	20191119	20191119	20191119	20191119	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	WP	WP	WP	WP	WP	WP	WP	WP	WP
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
PCB-189	4.7 U	4.4 U	5.4 U	5.2 U	3.5 U	3.3 U	4.3 U	4.3 U	3.9 U
PCB-19	4.1 J	20 U	20 U	4.4 J	20 U	20 U	20 U	20 U	20 U
PCB-190	20 U	20 U	7.3 J	20 U	8.1 J	5.9 J	4.4 J	20 U	20 U
PCB-191	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-192	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-194	7.9 J	20 U	13 J	14 J	23	21	8.9 J	7.5 J	20 U
PCB-195	20 U	20 U	6.3 J	6.6 J	9.6 J	8.2 J	4.3 J	3.7 J	20 U
PCB-196	3.9 J	20 U	8.7 J	6.7 J	20 U	14 J	20 U	5.5 J	20 U
PCB-197/200	40 U	40 U	4.8 J	3 J	4.2 J	4.4 J	2.9 J	3.8 J	40 U
PCB-198/199	9.4 J	6.9 J	20 J	14 J	28 J	32 J	13 J	15 J	5.8 J
PCB-2	20 U	8.4 J	11 J	20 U	7 J	20 U	20 U	9.3 J	6.6 J
PCB-20/28	140	130	210	180	130	140	140	150	110
PCB-201	20 U	20 U	4.4 J	20 U	3 J	3.4 J	20 U	20 U	20 U
PCB-202	20 U	20 U	20 U	20 U	20 U	20 U	3.9 J	4.2 J	20 U
PCB-203	20 U	20 U	20 U	20 U	21	26	20 U	20 U	20 U
PCB-204	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-205	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-206	3.2 J	3.5 J	4.8 J	8.2 J	15 J	21	4.9 J	20 U	20 U
PCB-207	20 U	20 U	20 U	20 U	2.4 J	3.7 J	20 U	20 U	20 U
PCB-208	20 U	20 U	3.4 J	20 U	4.9 J	20 U	20 U	20 U	20 U
PCB-209	4.4 J	20 U	7.2 J	20 U	4 J	8.5 J	2.9 J	9.1 J	20 U
PCB-21/33	77	73 U	120	110	73	83	78	88	64
PCB-22	44	43 U	80	65	43	49	47	49	37
PCB-23	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-24	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-25	9.3 J	8.9 J	15 J	14 J	9.2 J	10 J	9.8 J	9.8 J	8.1 J
PCB-26/29	21 J	19 J	31 J	26 J	20 J	22 J	23 J	25 J	16 J
PCB-27	4 J	3.2 J	5.3 J	5 J	20 U	5 J	20 U	20 U	3.4 J
PCB-3	20 J	17 J	23	22	16 J	20 U	18 J	20 J	17 J
PCB-31	110	100	170	150	110	120	120	130	96
PCB-32	17 J	13 J	25	22	16 J	19 J	21	18 J	15 J
PCB-34	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-35	5 J	4.8 J	20 U	20 U	4.2 J	5.2 J	5.6 J	20 U	20 U
PCB-36	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-37	20 U	20 U	58 J+	35 J+	20 U	25 J+	27 J+	31 J+	20 J+
PCB-38	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-39	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-4	20 J	15 J	20 U	20 U	20 U	19 J	20 U	20 U	20 U
PCB-40/71	21 J	18 J	63	43	19 J	30 J	24 J	28 J	20 J
PCB-41	6.4 J	20 U	18 J	9.5 J	6.1 J	9.6 J	20 U	9.7 J	6.4 J
PCB-42	15 J	11 J	37	26	13 J	19 J	16 J	20 U	13 J
PCB-43	20 U	20 U	5.2 J	20 U	20 U	20 U	20 U	20 U	20 U
PCB-44/47/65	60 U	60 U	390	210	60 U	78	65	68	60 U
PCB-45/51	8.7 J	5.6 J	61	32 J	7.9 J	9.8 J	40 U	9.5 J	7.4 J
PCB-46	2.5 J	20 U	6.5 J	20 U	2.6 J	3.2 J	20 U	20 U	20 U
PCB-48	13 J	9.6 J	25	19 J	11 J	17 J	15 J	20 U	12 J
PCB-49/69	31 J	26 J	77	52	28 J	44	36 J	37 J	30 J
PCB-5	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-50/53	4.2 J	3.5 J	11 J	6.5 J	4.3 J	5.5 J	6.2 J	4.8 J	4.2 J
PCB-52	55	47	190	110	55	90	75	70	62
PCB-54	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-55	20 U	20 U	3.5 J	3.5 J	20 U	20 U	20 U	20 U	20 U
PCB-56	20	20 J	110	59	20 U	36	28	35	23
PCB-57	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-58	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-59/62/75	6 J	60 U	60 U	8.8 J	60 U	60 U	6.5 J	60 U	5.1 J
PCB-6	17 J	14 J	23	23	17 J	19 J	20 U	20	16 J
PCB-60	20 U	20 UJ	63	35	20 U	21	20 U	21	20 U
PCB-61/70/74/76	80 U	80 U	400	230	80 U	160	100 U	120	94 U
PCB-63	20 U	20 U	20 U	20 U	20 U	3.7 J	3.1 J	3.4 J	2.8 J
PCB-64	23	21	72	47	22	32	28	31	23
PCB-66	40 J	36	180	110	37	70	51	60	40
PCB-67	20 U	20 U	4.7 J	20 U	20 U	3 J	2.6 J	3.2 J	20 U
PCB-68	20 U	20 U	54	26	20 U	20 U	20 U	20 U	20 U
PCB-7	20 U	20 U	6 J	20 U	20 U	20 U	20 U	20 U	20 U
PCB-72	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-73	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-77	2.6 U	20 U	23 J+	20 U	20 U	20 U	20 U	20 U	20 U
PCB-78	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-79	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-8	90	72 U	100	97	73	89	82	94	71
PCB-80	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-81	2.6 U	2.3 U	3.4 U	2.9 U	2.1 U	2.6 U	2.6 U	2.9 U	2.4 U
PCB-82	20 U	20 U	75	33	20 U	20 U	20 U	20 U	20 U
PCB-83	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-84	20 U	20 U	120	51	20 U	28	20 U	20 U	20 U
PCB-85/116/117	60 U	60 U	83	39 J	5.6 J	26 J	11 J	14 J	11 J
PCB-86/87/97/109/119/125	120 U	120 U	380	170	120 U	120 U	120 U	120 U	120 U
PCB-88/91	40 U	40 U	41	40 U	40 U	40 U	40 U	40 U	40 U
PCB-89	20 U	20 U	4.7 J	20 U	20 U	20 U	20 U	20 U	20 U
PCB-9	8.2 J	20 U	8.5 J	20 U	20 U	20 U	20 U	20 U	20 U
PCB-90/101/113	60 U	60 U	380	190	60 U	130 U	60 U	60 U	60 U
PCB-92	20 U	20 U	56	30	20 U	20 U	20 U	20 U	20 U
PCB-93/100	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U

TABLE 18

WIPE ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R01-WP-01	R01-WP-02	R02-WP-01	R02-WP-02	R04-WP-01	R04-WP-02	R05-WP-01	R05-WP-02	R07-WP-01
SAMPLE ID	R1-WP-01	R1-WP-02	R2-WP-01	R2-WP-02	R4-WP-01	R4-WP-02	R5-WP-01	R5-WP-02	R7-WP-01
SAMPLE DATE	20191118	20191118	20191118	20191118	20191119	20191119	20191119	20191119	20191120
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	WP	WP	WP	WP	WP	WP	WP	WP	WP
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
PCB-94	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-95	27 U	21 U	250	120	29 U	74	40 U	33 U	40 U
PCB-96	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PCB-98/102	40 U	40 U	6.3 J	40 U	40 U	40 U	40 U	40 U	40 U
PCB-99	20 U	20 U	170	80	20 U	61 U	20 U	23 U	21 U
PENTACHLOROBIPHENYLS	190 J	150 J	3100 J	1400 J	200 J	960 J	390 J	420 J	370 J
TEQ DIOXIN-LIKE PCBs (BIRD)	20 U	20 U	1.180598	0.0145	20 U	77 U	38 U	46 U	26 U
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	20 U	20 U	1.581175	0.8852455	20 U	77 U	38 U	46 U	26 U
TEQ DIOXIN-LIKE PCBs (FISH)	20 U	20 U	0.006349	0.00185	20 U	77 U	38 U	46 U	26 U
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	20 U	20 U	0.018785	0.01492775	20 U	77 U	38 U	46 U	26 U
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	20 U	20 U	0.026594	0.0111	20 U	77 U	38 U	46 U	26 U
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	20 U	20 U	0.326885	0.3118715	20 U	77 U	38 U	46 U	26 U
TETRACHLOROBIPHENYLS	390 J	330 J	1800 J	1000 J	360 J	640 J	460 J	500 J	410 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0 U	0 U	832.8	370	0 U	0 U	0 U	0 U	0 U
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	1394	1029.2	7878.9	4361	1588.5	2909.5	1716.2	2001.3	1185.6
TOTAL PCB CONGENERS ZEROND	1394	1029.2	8711.7	4731	1588.5	2909.5	1716.2	2001.3	1185.6
TOTAL PCB CONGENERS-NOAA	332.6	216.5	3331.3	1778.8	475.6	1052.7	541.1	573.8	283
TOTAL PCB CONGENERS-NOAA HALFND	2891.15	2753.8	9470.8	5691.8	3026.35	4300.75	3242.6	3444.7	2784.3
TOTAL PCB CONGENERS-NOAA X2	665.2	433	6662.6	3557.6	951.2	2105.4	1082.2	1147.6	566
TOTAL PCB CONGENERS-NOAA X2 HALFND	1123.2	968	6662.6	3617.6	1358.2	2522.4	1474.2	1566.6	1096
TRICHLOROBIPHENYLS	540 J	480 J	850 J	720 J	500 J	580 J	560 J	600 J	440 J

TABLE 18

WIPE ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R07-WP-02	R08-WP-01	R08-WP-02	R09-WP-01	R09-WP-02
SAMPLE ID	R7-WP-02	R8-WP-01	R8-WP-02	R9-WP-01	R9-WP-02
SAMPLE DATE	20191120	20191120	20191120	20191120	20191120
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	WP	WP	WP	WP	WP
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential
PCB CONGENERS (PG)					
DICHLOROBIPHENYLS	510 J	580 J	700 J	480 J	600 J
HEPTACHLOROBIPHENYLS	210 J	210 J	220 J	120 J	89 J
HEXACHLOROBIPHENYLS	390 J	400 J	760 J	390 J	210 J
MONOCHLOROBIPHENYLS	47 J	43 J	38 J	37 J	18 J
NONACHLOROBIPHENYLS	14 J	4.7 J	0 U	0 U	0 U
OCTACHLOROBIPHENYLS	42 J	36 J	13 J	12 J	12 J
PCB-1	17 J	16 J	17 J	15 J	20 U
PCB-10	20 U	20 U	20 U	20 U	20 U
PCB-103	20 U	20 U	20 U	20 U	20 U
PCB-104	20 U	20 U	20 U	20 U	20 U
PCB-105	40 U	36 U	30 U	48 U	20 U
PCB-106	20 U	20 U	20 U	20 U	20 U
PCB-107	20 U	20 U	20 U	20 U	20 U
PCB-108/124	40 U	40 U	40 U	40 U	40 U
PCB-11	370	430	500 J	340	420
PCB-110/115	88 U	65 U	110 U	110 U	58 U
PCB-111	20 U	20 U	20 U	20 U	20 U
PCB-112	20 U	20 U	20 U	20 U	20 U
PCB-114	20 U	2.5 U	2.5 U	20 U	1.6 U
PCB-118	84 U	64 U	83 U	86 U	43 U
PCB-12/13	40 U	16 J	21 J	12 J	14 J
PCB-120	20 U	20 U	20 U	20 U	20 U
PCB-121	20 U	20 U	20 U	20 U	20 U
PCB-122	20 U	20 U	20 U	20 U	20 U
PCB-123	2.8 U	3 JZ	2.5 U	2.1 U	1.5 U
PCB-126	3.1 U	2.7 U	2.9 U	2.4 U	2.1 U
PCB-127	20 U	20 U	20 U	20 U	20 U
PCB-128/166	40 U	40 U	40 U	40 U	40 U
PCB-129/138/163	96 U	120 U	180 J	100 U	60 U
PCB-130	20 U	20 U	20 U	20 U	20 U
PCB-131	20 U	20 U	20 U	20 U	20 U
PCB-132	30 U	31 U	67 J	34 U	21 U
PCB-133	20 U	20 U	20 U	20 U	20 U
PCB-134	20 U	20 U	11 J	20 U	20 U
PCB-135/151	40 U	40 U	50	40 U	40 U
PCB-136	10 J	8.2 J	19 J	10 J	20 U
PCB-137	20 U	20 U	20 U	20 U	20 U
PCB-139/140	40 U	40 U	40 U	40 U	40 U
PCB-14	20 U	20 U	20 U	20 U	20 U
PCB-141	20 U	22 U	43 J	20 U	20 U
PCB-142	20 U	20 U	20 U	20 U	20 U
PCB-143	20 U	20 U	20 U	20 U	20 U
PCB-144	6.6 J	4.1 J	10 J	4.8 J	20 U
PCB-145	20 U	20 U	20 U	20 U	20 U
PCB-146	20 U	20 U	20 U	20 U	20 U
PCB-147/149	69 U	55 U	140 J	63 U	41 U
PCB-148	20 U	20 U	20 U	20 U	20 U
PCB-15	37	36	42	29 J	38
PCB-150	20 U	20 U	20 U	20 U	20 U
PCB-152	20 U	20 U	20 U	20 U	20 U
PCB-153/168	81 U	85 U	150 J	65 U	45 U
PCB-154	20 U	20 U	20 U	20 U	20 U
PCB-155	2.9 J	3 J	3.8 J	20 U	20 U
PCB-156/157	40 U	40 U	40 U	40 U	40 U
PCB-158	20 U	20 U	20 U	20 U	20 U
PCB-159	20 U	20 U	20 U	20 U	20 U
PCB-16	21	18 J	23	24 J	19 J
PCB-160	20 U	20 U	20 U	20 U	20 U
PCB-161	20 U	20 U	20 U	20 U	20 U
PCB-162	20 U	20 U	20 U	20 U	20 U
PCB-164	20 U	20 U	20 U	20 U	20 U
PCB-165	20 U	20 U	20 U	20 U	20 U
PCB-167	20 U	20 U	20 U	20 U	2.1 U
PCB-169	3.9 U	3 U	3.8 U	3 U	2.6 U
PCB-17	27	23	28	27 J	26
PCB-170	20 U	20 U	20 U	20 U	20 U
PCB-171/173	7.8 J	9 J	11 J	5.3 J	40 U
PCB-172	20 U	20 U	20 U	20 U	20 U
PCB-174	29	33	34 J	20 U	20 U
PCB-175	20 U	20 U	3.2 J	20 U	20 U
PCB-176	20 U	3.7 J	6.7 J	20 U	20 U
PCB-177	16 J	19 J	18 J	9.2 J	8 J
PCB-178	6.8 J	20 U	8 J	3.9 J	3.6 J
PCB-179	20 U	20 U	20 U	20 U	20 U
PCB-18/30	46	40 U	49 J	47	44
PCB-180/193	55	57	44 J	40 U	40 U
PCB-181	20 U	20 U	20 U	20 U	20 U
PCB-182	20 U	20 U	20 U	20 U	20 U
PCB-183/185	24 J	24 J	25 J	12 J	11 J
PCB-184	20 U	20 U	20 U	20 U	20 U
PCB-186	20 U	20 U	20 U	20 U	20 U
PCB-187	43	37	37 J	20 U	20 U
PCB-188	20 U	20 U	20 U	20 U	20 U

TABLE 18

WIPE ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R07-WP-02	R08-WP-01	R08-WP-02	R09-WP-01	R09-WP-02
SAMPLE ID	R7-WP-02	R8-WP-01	R8-WP-02	R9-WP-01	R9-WP-02
SAMPLE DATE	20191120	20191120	20191120	20191120	20191120
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	WP	WP	WP	WP	WP
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential
PCB-189	5 U	4.6 U	4.9 U	3.5 U	3.1 U
PCB-19	20 U	20 U	20 U	4.8 J	20 U
PCB-190	20 U	20 U	20 U	20 U	20 U
PCB-191	20 U	20 U	20 U	20 U	20 U
PCB-192	20 U	20 U	20 U	20 U	20 U
PCB-194	10 J	6.4 J	5 J	5.6 J	4.8 J
PCB-195	20 U	20 U	20 U	20 U	1.9 J
PCB-196	20 U	20 U	20 U	20 U	20 U
PCB-197/200	3.8 J	3.1 J	2.1 J	40 U	40 U
PCB-198/199	14 J	13 J	6.1 J	40 U	40 U
PCB-2	7.7 J	7.3 J	20 U	6.5 J	20 U
PCB-20/28	130	130	140 J	120	130
PCB-201	3.3 J	2.5 J	20 U	20 U	20 U
PCB-202	20 U	3.5 J	20 U	1.8 J	1.9 J
PCB-203	20 U	20 U	20 U	20 U	20 U
PCB-204	20 U	20 U	20 U	20 U	20 U
PCB-205	20 U	20 U	20 U	20 U	20 U
PCB-206	14 J	4.7 J	20 U	20 U	20 U
PCB-207	20 U	20 U	20 U	20 U	20 U
PCB-208	20 U	20 U	20 U	20 U	20 U
PCB-209	10 J	5.1 J	3.7 J	4.4 J	2.5 J
PCB-21/33	76	72	82	76 J	80
PCB-22	39	41	47	47 J	46
PCB-23	20 U	20 U	20 U	20 U	20 U
PCB-24	20 U	20 U	20 U	20 U	20 U
PCB-25	9.3 J	9.2 J	10 J	8.9 J	9.4 J
PCB-26/29	22 J	20 J	23 J	21 J	23 J
PCB-27	4.3 J	20 U	3.8 J	4.1 J	3.6 J
PCB-3	22	19 J	21	16 J	18 J
PCB-31	110	110	120 J	110	120
PCB-32	18 J	17 J	20 J	18 J	19 J
PCB-34	20 U	20 U	20 U	20 U	20 U
PCB-35	20 U	7.6 J	7.5 J	4.9 J	5.9 J
PCB-36	20 U	20 U	20 U	20 U	20 U
PCB-37	32 J+	22 J+	25 J+	43 J+	27 J+
PCB-38	20 U	20 U	20 U	20 U	20 U
PCB-39	20 U	20 U	20 U	20 U	20 U
PCB-4	20 U	17 J	20 J	20 U	19 J
PCB-40/71	28 J	40 U	26 J	42 J	28 J
PCB-41	9.3 J	20 U	7.9 J	12 J	11 J
PCB-42	16 J	13 J	20 U	22	17 J
PCB-43	20 U	20 U	20 U	3.4 J	20 U
PCB-44/47/65	72	60 U	63 J	73	61
PCB-45/51	10 J	9.1 J	11 J	12 J	10 J
PCB-46	3.5 J	2.3 J	3.2 J	4 J	2.8 J
PCB-48	15 J	12 J	13 J	19 J	14 J
PCB-49/69	37 J	31 J	34 J	39 J	32 J
PCB-5	20 U	20 U	20 U	20 U	20 U
PCB-50/53	6.1 J	4.4 J	5.6 J	6.8 J	5.6 J
PCB-52	82	67	86 J	85	77
PCB-54	20 U	20 U	20 U	20 U	20 U
PCB-55	20 U	1.9 J	20 U	3.1 J	20 U
PCB-56	38	20	27 J	69	29
PCB-57	20 U	20 U	20 U	20 U	20 U
PCB-58	20 U	20 U	20 U	20 U	20 U
PCB-59/62/75	5.9 J	4.3 J	60 U	8 J	60 U
PCB-6	19 J	20 U	19 J	16 J	21
PCB-60	22	20 U	20 U	37	20 U
PCB-61/70/74/76	140	89 U	120 J	200	110
PCB-63	20 U	1.9 J	20 U	20 U	20 U
PCB-64	30	23	29 J	39	31
PCB-66	69	42	56 J	110	58
PCB-67	20 U	1.9 J	20 U	20 U	20 U
PCB-68	20 U	2.4 J	3.1 J	20 U	2.3 J
PCB-7	20 U	20 U	20 U	4.6 J	20 U
PCB-72	20 U	20 U	20 U	20 U	20 U
PCB-73	20 U	20 U	20 U	20 U	20 U
PCB-77	20 U	20 U	20 U	20 U	20 U
PCB-78	20 U	20 U	20 U	20 U	20 U
PCB-79	20 U	20 U	20 U	20 U	20 U
PCB-8	85	85	94	79 J	90
PCB-80	20 U	20 U	20 U	20 U	20 U
PCB-81	3.8 U	1.9 U	1.9 U	2.1 U	1.3 U
PCB-82	20 U	20 U	20 U	20 U	20 U
PCB-83	20 U	20 U	20 U	20 U	20 U
PCB-84	20 U	20 U	20 U	23 U	20 U
PCB-85/116/117	11 J	8.8 J	13 J	17 J	9.2 J
PCB-86/87/97/109/119/125	120 U	120 U	120 U	120 U	120 U
PCB-88/91	40 U	40 U	40 U	40 U	40 U
PCB-89	20 U	20 U	20 U	20 U	20 U
PCB-9	20 U	20 U	8.5 J	20 U	20 U
PCB-90/101/113	71 U	60 U	82 U	78 U	60 U
PCB-92	20 U	20 U	20 U	20 U	20 U
PCB-93/100	40 U	40 U	40 U	40 U	40 U

TABLE 18

WIPE ANALYTICAL DATA - RESIDENTIAL AREAS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	R07-WP-02	R08-WP-01	R08-WP-02	R09-WP-01	R09-WP-02
SAMPLE ID	R7-WP-02	R8-WP-01	R8-WP-02	R9-WP-01	R9-WP-02
SAMPLE DATE	20191120	20191120	20191120	20191120	20191120
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	WP	WP	WP	WP	WP
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Residential	Residential	Residential	Residential	Residential
PCB-94	20 U	20 U	20 U	20 U	20 U
PCB-95	47 U	33 U	56 U	51 U	37 U
PCB-96	20 U	20 U	20 U	20 U	20 U
PCB-98/102	40 U	40 U	40 U	40 U	40 U
PCB-99	31 U	20 U	29 U	34 U	21 U
PENTACHLOROBIPHENYLS	460 J	350 J	510 J	570 J	320 J
TEQ DIOXIN-LIKE PCBs (BIRD)	40 U	0.00003	30 U	48 U	20 U
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	40 U	0.735898	30 U	48 U	20 U
TEQ DIOXIN-LIKE PCBs (FISH)	40 U	0.000015	30 U	48 U	20 U
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	40 U	0.00873275	30 U	48 U	20 U
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	40 U	0.00009	30 U	48 U	20 U
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	40 U	0.1838815	30 U	48 U	20 U
TETRACHLOROBIPHENYLS	590 J	400 J	500 J	790 J	510 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0 U	3	0 U	0 U	0 U
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	1943.3	1577.4	2696.2	1932.1	1704.5
TOTAL PCB CONGENERS ZEROND	1943.3	1580.4	2696.2	1932.1	1704.5
TOTAL PCB CONGENERS-NOAA	606	427.8	902.7	518.4	464.4
TOTAL PCB CONGENERS-NOAA HALFND	3401.1	3057.75	3980.45	3434.65	3164.65
TOTAL PCB CONGENERS-NOAA X2	1212	855.6	1805.4	1036.8	928.8
TOTAL PCB CONGENERS-NOAA X2 HALFND	1664	1400.6	2100.4	1573.8	1296.8
TRICHLOROBIPHENYLS	530 J	500 J	580 J	550 J	560 J

APPENDIX G.9

ARBUCKLE CREEK AND WETLAND ANALYTICAL DATA

TABLE 19

SOIL ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SS-T1-04	SEC-SS-T1-05	SEC-SS-T2-04	SEC-SS-T2-05	SEC-SS-T3-04	SEC-SS-T3-05	SEC-SS-T4-04	SEC-SS-T4-05	SEC-SS-T5-04	SEC-SS-T5-04	SEC-SS-T5-05
SAMPLE ID	SEC-SS-T1-04	SEC-SS-T1-05	SEC-SS-T2-04	SEC-SS-T2-05	SEC-SS-T3-04	SEC-SS-T3-05	SEC-SS-T4-04	SEC-SS-T4-05	SEC-SS-T5-04	SEC-SS-T5-04-D	SEC-SS-T5-05
SAMPLE DATE	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171213	20171213	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCBS (MG/KG)											
AROCLOR-1016	0.043 U	0.044 U	0.042 U	0.038 U	0.045 U	0.048 UJ	0.04 U	0.047 UJ	0.041 U	0.042 U	0.041 U
AROCLOR-1221	0.043 U	0.044 U	0.042 U	0.038 U	0.045 U	0.048 UJ	0.04 U	0.047 UJ	0.041 U	0.042 U	0.041 U
AROCLOR-1232	0.043 U	0.044 U	0.042 U	0.038 U	0.045 U	0.048 UJ	0.04 U	0.047 UJ	0.041 U	0.042 U	0.041 U
AROCLOR-1242	0.043 U	0.044 U	0.042 U	0.038 U	0.045 U	0.048 UJ	0.04 U	0.047 UJ	0.041 U	0.042 U	0.041 U
AROCLOR-1248	0.043 U	0.044 U	0.042 U	0.038 U	0.045 U	0.048 UJ	0.04 U	0.047 UJ	0.041 U	0.042 U	0.041 U
AROCLOR-1254	0.043 U	0.044 U	0.042 U	0.038 U	0.045 U	0.048 UJ	0.04 U	0.047 UJ	0.041 U	0.042 U	0.041 U
AROCLOR-1260	0.043 U	0.027 J	0.042 U	0.028 J	0.0082 J	0.042 J	0.04 U	0.13 J	0.15	0.38	0.29
AROCLOR-1262	0.043 U	0.044 U	0.042 U	0.038 U	0.045 U	0.048 UJ	0.04 U	0.047 UJ	0.041 U	0.042 U	0.041 U
AROCLOR-1268	0.043 U	0.044 U	0.042 U	0.038 U	0.045 U	0.048 UJ	0.04 U	0.047 UJ	0.041 U	0.042 U	0.041 U
TOTAL AROCLOR	0 U	0.027	0 U	0.028	0.0082	0.042	0 U	0.13	0.15	0.38	0.29
TOTAL AROCLOR HALFND	0.1935	0.203	0.189	0.18	0.1882	0.234	0.18	0.318	0.314	0.548	0.454

TABLE 19

SOIL ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SS-T6-05	SEC-SS-T6-05	SEC-SS-T7-04	SEC-SS-T7-05	SEC-SS-T8-04	SEC-SS-T8-05	SEC-SS-TL-43	SEC-SS-TL-43	SEC-SS-TL-43	SEC-SS-TL-43
SAMPLE ID	SEC-SS-T6-05	SEC-SS-T6-05-D	SEC-SS-T7-04	SEC-SS-T7-05	SEC-SS-T8-04	SEC-SS-T8-05	SEC-SS-TL-43	SEC-SS-TL-43-A	SEC-SS-TL-43-B	SEC-SS-TL-43-C
SAMPLE DATE	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213
DUPLICATE										
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6
PCBS (MG/KG)										
AROCLOR-1016	0.047 U	0.047 U	0.048 U	0.04 U	0.043 U	0.042 U	0.045 U	0.059 U	0.064 UJ	0.048 UJ
AROCLOR-1221	0.047 U	0.047 U	0.048 U	0.04 U	0.043 U	0.042 U	0.045 U	0.059 U	0.064 UJ	0.048 UJ
AROCLOR-1232	0.047 U	0.047 U	0.048 U	0.04 U	0.043 U	0.042 U	0.045 U	0.059 U	0.064 UJ	0.048 UJ
AROCLOR-1242	0.047 U	0.047 U	0.048 U	0.04 U	0.043 U	0.042 U	0.045 U	0.059 U	0.064 UJ	0.048 UJ
AROCLOR-1248	0.047 U	0.047 U	0.048 U	0.04 U	0.043 U	0.042 U	0.045 U	0.059 U	0.064 UJ	0.048 UJ
AROCLOR-1254	0.047 U	0.047 U	0.048 U	0.04 U	0.043 U	0.042 U	0.045 U	0.059 U	0.064 UJ	0.048 UJ
AROCLOR-1260	0.1	0.12	0.012 J	0.055	0.17	0.051	0.097 J	0.016 J	0.0079 J	0.036 J
AROCLOR-1262	0.047 U	0.047 U	0.048 U	0.04 U	0.043 U	0.042 U	0.045 U	0.059 U	0.064 UJ	0.048 UJ
AROCLOR-1268	0.047 U	0.047 U	0.048 U	0.04 U	0.043 U	0.042 U	0.045 U	0.059 U	0.064 UJ	0.048 UJ
TOTAL AROCLOR	0.1	0.12	0.012	0.055	0.17	0.051	0.097	0.016	0.0079	0.036
TOTAL AROCLOR HALFND	0.288	0.308	0.204	0.215	0.342	0.219	0.277	0.252	0.2639	0.228

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD300	SW/SD300	SW/SD301	SW/SD301	SW/SD302	SW/SD302	SW/SD303
SAMPLE ID	SW300-20191206	SW300-20191206-F	SW301-20191206	SW301-20191206-F	SW302-20191206	SW302-20191206-F	SW303-20191206
SAMPLE DATE	20191206	20191206	20191206	20191206	20191206	20191206	20191206
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek
VOLATILES (UG/L)							
1,1,1-TRICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U
1,1,2,2-TETRACHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U
1,1,2-TRICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	--	5 U	--	5 U	--	5 U
1,1-DICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U
1,1-DICHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U
1,2,3-TRICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U
1,2,4-TRICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U
1,2-DIBROMO-3-CHLOROPROPANE	5 U	--	5 U	--	5 U	--	5 U
1,2-DIBROMOETHANE	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROPROPANE	5 U	--	5 U	--	5 U	--	5 U
1,3-DICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U
1,4-DICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U
2-BUTANONE	10 U	--	10 U	--	10 U	--	10 U
2-HEXANONE	10 U	--	10 U	--	10 U	--	10 U
4-METHYL-2-PENTANONE	10 U	--	10 U	--	10 U	--	10 U
ACETONE	10 U	--	10 U	--	19	--	22
BENZENE	5 U	--	5 U	--	5 U	--	5 U
BROMOCHLOROMETHANE	5 U	--	5 U	--	5 U	--	5 U
BROMODICHLOROMETHANE	5 U	--	5 U	--	5 U	--	5 U
BROMOFORM	5 U	--	5 U	--	5 U	--	5 U
BROMOMETHANE	5 U	--	5 U	--	5 U	--	5 U
CARBON DISULFIDE	5 U	--	5 U	--	5 U	--	5 U
CARBON TETRACHLORIDE	5 U	--	5 U	--	5 U	--	5 U
CHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U
CHLORODIBROMOMETHANE	5 U	--	5 U	--	5 U	--	5 U
CHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U
CHLOROFORM	5 U	--	5 U	--	5 U	--	5 U
CHLOROMETHANE	5 U	--	5 U	--	5 U	--	5 U
CIS-1,2-DICHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U
CIS-1,3-DICHLOROPROPENE	5 U	--	5 U	--	5 U	--	5 U
CYCLOHEXANE	5 U	--	5 U	--	5 U	--	5 U
DICHLORODIFLUOROMETHANE	5 U	--	5 U	--	5 U	--	5 U
ETHYLBENZENE	5 U	--	5 UJ	--	5 U	--	5 U
ISOPROPYLBENZENE	5 U	--	5 UJ	--	5 U	--	5 U
M+P-XYLENES	5 U	--	5 UJ	--	5 U	--	5 U
METHYL ACETATE	5 U	--	5 U	--	5 U	--	5 U
METHYL CYCLOHEXANE	5 U	--	5 U	--	5 U	--	5 U
METHYL TERT-BUTYL ETHER	5 U	--	5 U	--	5 U	--	5 U
METHYLENE CHLORIDE	5 U	--	5 U	--	5 U	--	5 U
O-XYLENE	5 U	--	5 UJ	--	5 U	--	5 U
STYRENE	5 U	--	5 UJ	--	5 U	--	5 U
TETRACHLOROETHENE	5 U	--	5 UJ	--	5 U	--	5 U
TOLUENE	3.1 J	--	5 UJ	--	5 U	--	5 U
TRANS-1,2-DICHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U
TRANS-1,3-DICHLOROPROPENE	5 U	--	5 U	--	5 U	--	5 U
TRICHLOROETHENE	5 U	--	5 UJ	--	5 U	--	5 U
TRICHLOROFLUOROMETHANE	5 U	--	5 U	--	5 U	--	5 U
VINYL CHLORIDE	5 U	--	5 U	--	5 U	--	5 U
VOLATILES-TRACE (UG/L)							
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD300	SW/SD300	SW/SD301	SW/SD301	SW/SD302	SW/SD302	SW/SD303
SAMPLE ID	SW300-20191206	SW300-20191206-F	SW301-20191206	SW301-20191206-F	SW302-20191206	SW302-20191206-F	SW303-20191206
SAMPLE DATE	20191206	20191206	20191206	20191206	20191206	20191206	20191206
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek
ACETONE	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,1-BIPHENYL	5 U	--	5 U	--	5 U	--	5 U
1,2,4,5-TETRACHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U
1,4-DIOXANE	2 U	--	2 U	--	2 U	--	2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	--	10 U	--	10 U	--	10 U
2,3,4,6-TETRACHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U
2,4,5-TRICHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U
2,4,6-TRICHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U
2,4-DICHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U
2,4-DIMETHYLPHENOL	5 U	--	5 U	--	5 U	--	5 U
2,4-DINITROPHENOL	10 R	--	10 R	--	10 R	--	10 R
2,4-DINITROTOLUENE	5 U	--	5 U	--	5 U	--	5 U
2,6-DINITROTOLUENE	5 U	--	5 U	--	5 U	--	5 U
2-CHLORONAPHTHALENE	5 U	--	5 U	--	5 U	--	5 U
2-CHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U
2-METHYLNAPHTHALENE	5 U	--	5 U	--	5 U	--	5 U
2-METHYLPHENOL	10 U	--	10 U	--	10 U	--	10 U
2-NITROANILINE	5 R	--	5 R	--	5 R	--	5 R
2-NITROPHENOL	5 U	--	5 U	--	5 U	--	5 U
3&4-METHYLPHENOL	10 U	--	10 U	--	10 U	--	10 U
3,3'-DICHLOROBENZIDINE	10 U	--	10 U	--	10 U	--	10 U
3-NITROANILINE	10 R	--	10 R	--	10 R	--	10 R
4,6-DINITRO-2-METHYLPHENOL	10 U	--	10 U	--	10 U	--	10 U
4-BROMOPHENYL PHENYL ETHER	5 U	--	5 U	--	5 U	--	5 U
4-CHLORO-3-METHYLPHENOL	5 U	--	5 U	--	5 U	--	5 U
4-CHLOROANILINE	10 U	--	10 U	--	10 U	--	10 U
4-CHLOROPHENYL PHENYL ETHER	5 U	--	5 U	--	5 U	--	5 U
4-NITROANILINE	10 R	--	10 R	--	10 R	--	10 R
4-NITROPHENOL	10 R	--	10 R	--	10 R	--	10 R
ACENAPHTHENE	5 U	--	5 U	--	5 U	--	5 U
ACENAPHTHYLENE	5 U	--	5 U	--	5 U	--	5 U
ACETOPHENONE	10 U	--	10 U	--	10 U	--	10 U
ANTHRACENE	5 U	--	5 U	--	5 U	--	5 U
ATRAZINE	10 U	--	10 U	--	10 U	--	10 U
BAP EQUIVALENT-HALFND	5 U	--	5 U	--	5 U	--	5 U
BAP EQUIVALENT-POS	5 U	--	5 U	--	5 U	--	5 U
BENZALDEHYDE	10 U	--	10 U	--	10 U	--	10 U
BENZO(A)ANTHRACENE	5 U	--	5 U	--	5 U	--	5 U
BENZO(A)PYRENE	5 U	--	5 U	--	5 U	--	5 U
BENZO(B)FLUORANTHENE	5 U	--	5 U	--	5 U	--	5 U
BENZO(G,H,I)PERYLENE	5 U	--	5 U	--	5 U	--	5 U
BENZO(K)FLUORANTHENE	5 U	--	5 U	--	5 U	--	5 U
BIS(2-CHLOROETHOXY)METHANE	5 U	--	5 U	--	5 U	--	5 U

LOCATION	SW/SD300	SW/SD300	SW/SD301	SW/SD301	SW/SD302	SW/SD302	SW/SD303
SAMPLE ID	SW300-20191206	SW300-20191206-F	SW301-20191206	SW301-20191206-F	SW302-20191206	SW302-20191206-F	SW303-20191206
SAMPLE DATE	20191206	20191206	20191206	20191206	20191206	20191206	20191206
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek
BIS(2-CHLOROETHYL)ETHER	10 U	--	10 U	--	10 U	--	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	5 U	--	5 U	--	5 U	--	5 U
BUTYL BENZYL PHTHALATE	5 U	--	5 U	--	5 U	--	5 U
CAPROLACTAM	10 U	--	10 U	--	10 U	--	10 U
CARBAZOLE	10 U	--	10 U	--	10 U	--	10 U
CHRYSENE	5 U	--	5 U	--	5 U	--	5 U
DIBENZO(A,H)ANTHRACENE	5 U	--	5 U	--	5 U	--	5 U
DIBENZOFURAN	5 U	--	5 U	--	5 U	--	5 U
DIETHYL PHTHALATE	5 U	--	5 U	--	5 U	--	5 U
DIMETHYL PHTHALATE	5 U	--	1.4 J	--	1.7 J	--	1 J
DI-N-BUTYL PHTHALATE	5 U	--	5 U	--	5 U	--	5 U
DI-N-OCTYL PHTHALATE	10 U	--	10 U	--	10 U	--	10 U
FLUORANTHENE	10 U	--	10 U	--	10 U	--	10 U
FLUORENE	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROBUTADIENE	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROCYCLOPENTADIENE	10 U	--	10 U	--	10 U	--	10 U
HEXACHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0 U	--	0 U
INDENO(1,2,3-CD)PYRENE	5 U	--	5 U	--	5 U	--	5 U
ISOPHORONE	5 U	--	5 U	--	5 U	--	5 U
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0 U	--	0 U
NAPHTHALENE	5 U	--	5 U	--	5 U	--	5 U
NITROBENZENE	5 U	--	5 U	--	5 U	--	5 U
N-NITROSO-DI-N-PROPYLAMINE	5 U	--	5 U	--	5 U	--	5 U
N-NITROSODIPHENYLAMINE	5 U	--	5 U	--	5 U	--	5 U
PENTACHLOROPHENOL	10 U	--	10 U	--	10 U	--	10 U
PHENANTHRENE	5 U	--	5 U	--	5 U	--	5 U
PHENOL	10 U	--	10 U	--	10 U	--	10 U
PYRENE	5 U	--	5 U	--	5 U	--	5 U
TOTAL PAHS	0 U	--	0 U	--	0 U	--	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L							
2-METHYLNAPHTHALENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ACENAPHTHENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ACENAPHTHYLENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ANTHRACENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BAP EQUIVALENT-HALFND	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BAP EQUIVALENT-POS	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(A)ANTHRACENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(A)PYRENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(B)FLUORANTHENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(G,H,I)PERYLENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(K)FLUORANTHENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
CHRYSENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
DIBENZO(A,H)ANTHRACENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
FLUORANTHENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
FLUORENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0 U	--	0 U
INDENO(1,2,3-CD)PYRENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0 U	--	0 U
NAPHTHALENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
PENTACHLOROPHENOL	0.2 U	--	0.2 U	--	0.2 U	--	0.2 U
PHENANTHRENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
PYRENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
TOTAL PAHS	0.1	--	0.1	--	0.1	--	0.1
PESTICIDES (UG/L)							
4,4'-DDD	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
4,4'-DDE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
4,4'-DDT	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ALDRIN	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ALPHA-BHC	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ALPHA-CHLORDANE	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
BETA-BHC	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
DELTA-BHC	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
DIELDRIN	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDOSULFAN I	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ENDOSULFAN II	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDOSULFAN SULFATE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN ALDEHYDE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN KETONE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
GAMMA-BHC (LINDANE)	0.007 J	--	0.05 U	--	0.0079 J	--	0.05 U
GAMMA-CHLORDANE	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
HEPTACHLOR	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD300	SW/SD300	SW/SD301	SW/SD301	SW/SD302	SW/SD302	SW/SD303
SAMPLE ID	SW300-20191206	SW300-20191206-F	SW301-20191206	SW301-20191206-F	SW302-20191206	SW302-20191206-F	SW303-20191206
SAMPLE DATE	20191206	20191206	20191206	20191206	20191206	20191206	20191206
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek
HEPTACHLOR EPOXIDE	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
METHOXYCHLOR	0.011 J	--	0.5 U	--	0.011 J	--	0.5 U
TOXAPHENE	5 U	--	5 U	--	5 U	--	5 U
PCBS (UG/L)							
AROCLOR-1016	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1221	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1232	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1242	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1248	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1254	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1260	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1262	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1268	1 U	--	1 U	--	1 U	--	1 U
TOTAL AROCLOR	0 U	--	0 U	--	0 U	--	0 U
TOTAL AROCLOR HALFND	4.5	--	4.5	--	4.5	--	4.5
PCB CONGENERS (UG/L)							
DICHLOROBIPHENYLS	0.00038 J	--	0 UJ	--	0.00029 J	--	0.00031 J
HEPTACHLOROBIPHENYLS	0.0011 J	--	0 UJ	--	0.00011 J	--	0.000022 J
HEXACHLOROBIPHENYLS	0.0019 J	--	0.00012 J	--	0.00036 J	--	0.00016 J
MONOCHLOROBIPHENYLS	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
NONACHLOROBIPHENYLS	0.00006 J	--	0 UJ	--	0 UJ	--	0 UJ
OCTACHLOROBIPHENYLS	0.0003 J	--	0 UJ	--	0 UJ	--	0 UJ
PCB-1	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-10	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-100	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-101/90	0.00025	--	0.000039 J	--	0.0001	--	0.000068
PCB-103	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-104	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-105	0.000084	--	0.000012 U	--	0.000039	--	0.000025
PCB-106	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--
PCB-108/107	0.000017 J	--	0.000043 U	--	0.00004 U	--	0.000043 U
PCB-108/124	--	--	--	--	--	--	--
PCB-109	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-11	0.00036	--	0.000021 U	--	0.00026	--	0.00025
PCB-110	0.00023	--	0.000036	--	0.000097	--	0.000055
PCB-110/115	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--
PCB-111/115	0.000041 U	--	0.000043 U	--	0.00004 U	--	0.000043 U
PCB-112	--	--	--	--	--	--	--
PCB-113	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-114	0.00001 U	--	0.00001 U	--	0.000011 U	--	0.0000091 U
PCB-118	--	--	--	--	--	--	--
PCB-118/106	0.0002	--	0.000036 J	--	0.000087	--	0.000052
PCB-119	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-12	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-12/13	--	--	--	--	--	--	--
PCB-120	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-121	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-122	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-123	0.0000074 U	--	0.0000083 U	--	0.0000083 U	--	0.0000062 U
PCB-124	0.000015 J	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-126	0.000019 U	--	0.000019 U	--	0.000018 U	--	0.000013 U
PCB-127	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-128/162	0.000086	--	0.000043 U	--	0.000021 J	--	0.000043 U
PCB-128/166	--	--	--	--	--	--	--
PCB-129	0.00003	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-129/138/163	--	--	--	--	--	--	--
PCB-13	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-130	0.00003	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-131	--	--	--	--	--	--	--
PCB-131/133	0.000016 J	--	0.000043 U	--	0.00004 U	--	0.000043 U
PCB-132	--	--	--	--	--	--	--
PCB-132/161	0.00013	--	0.000043 U	--	0.00003 J	--	0.000018 J
PCB-133	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--
PCB-134/143	0.00003 J	--	0.000043 U	--	0.00004 U	--	0.000043 U
PCB-135	0.000055	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-135/151	--	--	--	--	--	--	--
PCB-136	0.000062	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-137	0.000037	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-138/163/164	0.00038	--	0.000045 J	--	0.0001	--	0.000056 J
PCB-139/140	--	--	--	--	--	--	--
PCB-139/149	0.00029	--	0.000028 J	--	0.000062	--	0.000034 J
PCB-14	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-140	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-141	0.000096	--	0.000021 U	--	0.00002	--	0.000022 U
PCB-142	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-143	--	--	--	--	--	--	--
PCB-144	0.000023	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-145	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-146	--	--	--	--	--	--	--
PCB-146/165	0.000047	--	0.000043 U	--	0.000015 J	--	0.000043 U
PCB-147	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-147/149	--	--	--	--	--	--	--
PCB-148	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-15	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000021 J
PCB-150	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-151	0.000079	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-152	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD300	SW/SD300	SW/SD301	SW/SD301	SW/SD302	SW/SD302	SW/SD303
SAMPLE ID	SW300-20191206	SW300-20191206-F	SW301-20191206	SW301-20191206-F	SW302-20191206	SW302-20191206-F	SW303-20191206
SAMPLE DATE	20191206	20191206	20191206	20191206	20191206	20191206	20191206
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek
PCB-153	0.00031	--	0.000046	--	0.000083	--	0.000049
PCB-153/168	--	--	--	--	--	--	--
PCB-154	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-155	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-156	0.00006	--	0.000015 U	--	0.000017 J	--	0.000012 U
PCB-156/157	--	--	--	--	--	--	--
PCB-157	0.000015 J	--	0.000013 U	--	0.00001 U	--	0.000011 U
PCB-158	--	--	--	--	--	--	--
PCB-158/160	0.000062	--	0.000043 U	--	0.000011 J	--	0.000043 U
PCB-159	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-16	0.00002 U	--	0.000021 U	--	0.0000096 J	--	0.000022 U
PCB-160	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--
PCB-166	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-167	0.000022	--	0.000016 U	--	0.000011 U	--	0.000011 U
PCB-168	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-169	0.000013 U	--	0.000018 U	--	0.000013 U	--	0.000012 U
PCB-17	0.000014 J	--	0.000021 U	--	0.000014 J	--	0.000019 J
PCB-170	0.00015	--	0.000021 U	--	0.000023	--	0.000022 U
PCB-171	0.000046	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-171/173	--	--	--	--	--	--	--
PCB-172	0.00003	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-173	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-174	0.00014	--	0.000021 U	--	0.00002	--	0.000022 U
PCB-175	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-176	0.000026	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-177	0.000079	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-178	0.000042	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-179	0.000058	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-18	0.000043	--	0.000021 U	--	0.00003	--	0.000032
PCB-18/30	--	--	--	--	--	--	--
PCB-180	0.00022	--	0.000021 U	--	0.00003	--	0.000022
PCB-180/193	--	--	--	--	--	--	--
PCB-181	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-182	--	--	--	--	--	--	--
PCB-182/187	0.00014	--	0.000043 U	--	0.000019 J	--	0.000043 U
PCB-183	0.000091	--	0.000021 U	--	0.000017 J	--	0.000022 U
PCB-183/185	--	--	--	--	--	--	--
PCB-184	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-185	0.000023	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-186	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-187	--	--	--	--	--	--	--
PCB-188	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-189	0.000011 U	--	0.000012 U	--	0.0000077 U	--	0.000012 U
PCB-19	0.00002 U	--	0.000021 U	--	0.0000088 J	--	0.000022 U
PCB-190	0.000034	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-191	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-192	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-193	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-194	0.000064	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-195	0.000029	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-196	--	--	--	--	--	--	--
PCB-196/203	0.000087	--	0.000043 U	--	0.00004 U	--	0.000043 U
PCB-197	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-197/200	--	--	--	--	--	--	--
PCB-198	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-198/199	--	--	--	--	--	--	--
PCB-199	0.000087	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-2	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-20/21/33	0.000037 J	--	0.000064 U	--	0.000029 J	--	0.00002 J
PCB-20/28	--	--	--	--	--	--	--
PCB-200	0.000018 J	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-201	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-202	0.000015 J	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-203	--	--	--	--	--	--	--
PCB-204	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-205	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-206	0.000045	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-207	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-208	0.000015 J	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-209	0.000014 J	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-21/33	--	--	--	--	--	--	--
PCB-22	0.000029	--	0.000021 U	--	0.000023	--	0.000017 J
PCB-23	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-24	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-25	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-26	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-26/29	--	--	--	--	--	--	--
PCB-27	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-28	0.000073	--	0.000021 U	--	0.00007	--	0.000053
PCB-29	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-3	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-30	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-31	0.000064	--	0.000021 U	--	0.000041	--	0.000042

LOCATION	SW/SD300	SW/SD300	SW/SD301	SW/SD301	SW/SD302	SW/SD302	SW/SD303
SAMPLE ID	SW300-20191206	SW300-20191206-F	SW301-20191206	SW301-20191206-F	SW302-20191206	SW302-20191206-F	SW303-20191206
SAMPLE DATE	20191206	20191206	20191206	20191206	20191206	20191206	20191206
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek
PCB-32	0.00002	--	0.000021 U	--	0.000013 J	--	0.000015 J
PCB-34	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-35	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-36	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-37	0.000021	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-38	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-39	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-4	0.000015 J	--	0.000021 U	--	0.000018 J	--	0.000018 J
PCB-40	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-40/71	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--
PCB-41/64/71/72	0.000039 J	--	0.000085 U	--	0.000027 J	--	0.000024 J
PCB-42	--	--	--	--	--	--	--
PCB-42/59	0.000015 J	--	0.000043 U	--	0.0000097 J	--	0.00001 J
PCB-43	--	--	--	--	--	--	--
PCB-43/49	0.000043	--	0.000043 U	--	0.00003 J	--	0.000024 J
PCB-44	0.000056	--	0.000021 U	--	0.000038	--	0.000028
PCB-44/47/65	--	--	--	--	--	--	--
PCB-45	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-45/51	--	--	--	--	--	--	--
PCB-46	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-47	0.000027	--	0.000021 U	--	0.000016 J	--	0.000019 J
PCB-48	--	--	--	--	--	--	--
PCB-48/75	0.000041 U	--	0.000043 U	--	0.0000092 J	--	0.0000087 J
PCB-49/69	--	--	--	--	--	--	--
PCB-5	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-50	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-50/53	--	--	--	--	--	--	--
PCB-51	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-52	--	--	--	--	--	--	--
PCB-52/69	0.000087	--	0.000022 J	--	0.000052	--	0.000043
PCB-53	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-54	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-55	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-56	--	--	--	--	--	--	--
PCB-56/60	0.00004 J	--	0.000043 U	--	0.000032 J	--	0.000022 J
PCB-57	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-58	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-59/62/75	--	--	--	--	--	--	--
PCB-6	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-60	--	--	--	--	--	--	--
PCB-61/70	0.000088	--	0.000043 U	--	0.000047	--	0.000041 J
PCB-61/70/74/76	--	--	--	--	--	--	--
PCB-62	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-63	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-64	--	--	--	--	--	--	--
PCB-65	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-66	--	--	--	--	--	--	--
PCB-66/76	0.000063	--	0.000043 U	--	0.000041	--	0.00003 J
PCB-67	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-68	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-7	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-72	--	--	--	--	--	--	--
PCB-73	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-74	0.000024	--	0.000021 U	--	0.000017 J	--	0.000015 J
PCB-77	0.000016 U	--	0.000018 U	--	0.000017 U	--	0.000016 U
PCB-78	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-79	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-8	0.00002 U	--	0.000021 U	--	0.000016 J	--	0.000022
PCB-80	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-81	0.000011 U	--	0.000013 U	--	0.000012 U	--	0.000012 U
PCB-82	0.000038	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-83	--	--	--	--	--	--	--
PCB-83/112	0.000041 U	--	0.000043 U	--	0.00004 U	--	0.000043 U
PCB-84	--	--	--	--	--	--	--
PCB-84/92	0.00011	--	0.000043 U	--	0.000041	--	0.000024 J
PCB-85/116	0.00004 J	--	0.000043 U	--	0.00004 U	--	0.000043 U
PCB-85/116/117	--	--	--	--	--	--	--
PCB-86	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--
PCB-87/117/125	0.00012	--	0.000064 U	--	0.00005 J	--	0.000027 J
PCB-88/91	0.000025 J	--	0.000043 U	--	0.00004 U	--	0.000043 U
PCB-89	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-9	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-90/101/113	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--
PCB-93	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-93/100	--	--	--	--	--	--	--
PCB-94	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U

LOCATION	SW/SD300	SW/SD300	SW/SD301	SW/SD301	SW/SD302	SW/SD302	SW/SD303
SAMPLE ID	SW300-20191206	SW300-20191206-F	SW301-20191206	SW301-20191206-F	SW302-20191206	SW302-20191206-F	SW303-20191206
SAMPLE DATE	20191206	20191206	20191206	20191206	20191206	20191206	20191206
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek
PCB-95	0.00016	--	0.00003	--	0.000063	--	0.000041
PCB-96	0.00002 U	--	0.000021 U	--	0.00002 U	--	0.000022 U
PCB-97	0.00006	--	0.000021 U	--	0.000027	--	0.00002 J
PCB-98/102	0.000041 U	--	0.000043 U	--	0.00004 U	--	0.000043 U
PCB-99	0.000077	--	0.000021 U	--	0.000039	--	0.000025
PENTACHLOROBIPHENYLS	0.0014 J	--	0.00014 J	--	0.00054 J	--	0.00034 J
TEQ DIOXIN-LIKE PCBs (BIRD)	1.612E-08	--	0.000012 U	--	5.6E-09	--	2.5E-09
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.92321E-06	--	0.000012 U	--	1.93828E-06	--	1.66025E-06
TEQ DIOXIN-LIKE PCBs (FISH)	9.05E-10	--	0.000012 U	--	2.8E-10	--	1.25E-10
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	5.235E-08	--	0.000012 U	--	4.9573E-08	--	3.6876E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	5.43E-09	--	0.000012 U	--	1.68E-09	--	7.5E-10
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	1.15331E-06	--	0.000012 U	--	1.10005E-06	--	8.34269E-07
TETRACHLOROBIPHENYLS	0.00048 J	--	0.000022 J	--	0.00032 J	--	0.00026 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.000181	--	0 U	--	0.000056	--	0.000025
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.005716	--	0.000282	--	0.0018063	--	0.0012647
TOTAL PCB CONGENERS ZEROND	0.005897	--	0.000282	--	0.0018623	--	0.0012897
TOTAL PCB CONGENERS-NOAA	0.00223	--	0.000188	--	0.000749	--	0.00048
TOTAL PCB CONGENERS-NOAA HALFND	0.0069027	--	0.00230315	--	0.0032063	--	0.00290235
TOTAL PCB CONGENERS-NOAA X2	0.00446	--	0.000376	--	0.001498	--	0.00096
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.00448	--	0.000706	--	0.001558	--	0.001134
TRICHLOROBIPHENYLS	0.0003 J	--	0 UJ	--	0.00024 J	--	0.0002 J
DIOXINS/FURANS (PG/L)							
1,2,3,4,6,7,8,9-OCDD	36 J	--	17 J	--	24 J	--	14 J
1,2,3,4,6,7,8,9-OCDF	4.7 U	--	3.5 U	--	3.6 U	--	3.4 U
1,2,3,4,6,7,8-HPCDD	5 J	--	2.7 U	--	3.3 J	--	2.4 U
1,2,3,4,6,7,8-HPCDF	3 U	--	1.5 U	--	1.8 U	--	1.5 U
1,2,3,4,7,8,9-HPCDF	3.5 U	--	2.8 U	--	2.8 U	--	2.7 U
1,2,3,4,7,8-HXCDD	3.1 U	--	3.1 U	--	3.1 U	--	3 U
1,2,3,4,7,8-HXCDF	2.4 U	--	2.4 U	--	2.4 U	--	2.3 U
1,2,3,6,7,8-HXCDD	2.3 U	--	2.1 U	--	2.5 U	--	2.2 U
1,2,3,6,7,8-HXCDF	1.8 U	--	1.8 U	--	1.9 U	--	1.8 U
1,2,3,7,8,9-HXCDD	2.1 U	--	1.8 U	--	2.2 U	--	1.9 U
1,2,3,7,8,9-HXCDF	2.2 U	--	1.8 U	--	1.4 U	--	1.6 U
1,2,3,7,8-PECDD	2.1 U	--	2.1 U	--	2.1 U	--	2 U
1,2,3,7,8-PECDF	1.7 U	--	1.3 U	--	1.3 U	--	1.4 U
2,3,4,6,7,8-HXCDF	1.9 U	--	1.7 U	--	1.3 U	--	1.3 U
2,3,4,7,8-PECDF	1.9 U	--	1.5 U	--	1.6 U	--	1.5 U
2,3,7,8-TCDD	1.1 U	--	1.1 U	--	1.2 U	--	0.93 U
2,3,7,8-TCDF	1.6 U	--	1.3 U	--	1.3 U	--	0.96 U
TEQ DIOXINS (BIRD)	0.0086	--	0.0017	--	0.0057	--	0.0014
TEQ DIOXINS (BIRD) HALFND	4.085335	--	3.652725	--	3.74388	--	3.31977
TEQ DIOXINS (FISH)	0.0086	--	0.0017	--	0.0057	--	0.0014
TEQ DIOXINS (FISH) HALFND	3.410835	--	3.244225	--	3.29238	--	3.04327
TEQ DIOXINS (HUMANS/MAMMALS)	0.0608	--	0.0051	--	0.0402	--	0.0042
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	2.874505	--	2.685125	--	2.77824	--	2.50171
TOTAL HPCDD	8.8 J	--	0 UJ	--	6.4 J	--	0 UJ
TOTAL HPCDF	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
TOTAL HXCDD	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
TOTAL HXCDF	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
TOTAL PECDD	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
TOTAL PECDF	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
TOTAL TCDD	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
TOTAL TCDF	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
METALS (UG/L)							
ALUMINUM	50.1	20 U	33.2	20 U	39.3	20 U	25.6
ANTIMONY	2 U	2 U	2 U	2 U	2 U	2 U	2 U
ARSENIC	0.46 J	0.46 J	0.37 J	0.31 J	0.42 J	0.33 J	0.43 J
BARIUM	26	20	23.7	21.8	24.3	21.3	25.9
BERYLLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM	23600	23600	24600	23900	24000	23600	24400
CHROMIUM	0.09 J	2 U	0.14 J	2 U	0.11 J	2 U	0.24 J
COBALT	0.63 J	0.5 J	0.36 J	0.29 J	0.48 J	0.42 J	0.46 J
COPPER	4	2 U	2 U	2 U	2.6	2 U	2.1
CYANIDE	10 U	--	10 U	--	10 U	--	10 U
IRON	334	200 U	216	200 U	291	200 U	248
LEAD	0.87 J	1 U	1 U	1 U	1 U	1 U	1 U
MAGNESIUM	4590	4640	4510	4480	4480	4500	4750
MANGANESE	52.6	37.4	22.2	17.6	30	21.9	29.9
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.018 J	0.2 U	0.2 U
NICKEL	1.9	1.4	1.7	1.4	1.7	1.4	1.8
POTASSIUM	5460	5440	4290	4370	4920	4920	4610
SELENIUM	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SILVER	1 U	1 U	1 U	1 U	1 U	1 U	1 U
SODIUM	23900	24500	21000	21500	23700	23500	24500
THALLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VANADIUM	0.18 J	0.13 J	0.21 J	0.12 J	0.21 J	0.12 J	0.19 J
ZINC	90.6	36.2	28.5	29.6	41.7	33.3	33.9

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD303	SW/SD304	SW/SD304	SW/SD305	SW/SD305	SW/SD318	SW/SD318	SW/SD319
SAMPLE ID	SW303-20191206-F	SW304-20191206	SW304-20191206-F	SW305-20191205	SW305-20191205-F	SW318-20191205	SW318-20191205-F	SW319-20191205
SAMPLE DATE	20191206	20191206	20191206	20191205	20191205	20191205	20191205	20191205
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
VOLATILES (UG/L)								
1,1,1-TRICHLOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
1,1,2,2-TETRACHLOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
1,1,2-TRICHLOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
1,1-DICHLOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
1,1-DICHLOROETHENE	--	5 U	--	5 U	--	5 U	--	5 U
1,2,3-TRICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
1,2,4-TRICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DIBROMO-3-CHLOROPROPANE	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DIBROMOETHANE	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROPROPANE	--	5 U	--	5 U	--	5 U	--	5 U
1,3-DICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
1,4-DICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
2-BUTANONE	--	10 U	--	10 U	--	10 U	--	10 U
2-HEXANONE	--	10 U	--	10 U	--	10 U	--	10 U
4-METHYL-2-PENTANONE	--	10 U	--	10 U	--	10 U	--	10 U
ACETONE	--	16	--	10 U	--	10 U	--	10 U
BENZENE	--	5 U	--	5 U	--	5 U	--	5 U
BROMOCHLOROMETHANE	--	5 U	--	5 U	--	5 U	--	5 U
BROMODICHLOROMETHANE	--	5 U	--	5 U	--	5 U	--	5 U
BROMOFORM	--	5 U	--	5 U	--	5 U	--	5 U
BROMOMETHANE	--	5 U	--	5 U	--	5 U	--	5 U
CARBON DISULFIDE	--	5 U	--	5 U	--	5 U	--	5 U
CARBON TETRACHLORIDE	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
CHLORODIBROMOMETHANE	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROFORM	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROMETHANE	--	5 U	--	5 U	--	5 U	--	5 U
CIS-1,2-DICHLOROETHENE	--	5 U	--	5 U	--	5 U	--	5 U
CIS-1,3-DICHLOROPROPENE	--	5 U	--	5 U	--	5 U	--	5 U
CYCLOHEXANE	--	5 U	--	5 U	--	5 U	--	5 U
DICHLORODIFLUOROMETHANE	--	5 U	--	5 U	--	5 U	--	5 U
ETHYLBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
ISOPROPYLBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
M+P-XYLENES	--	5 U	--	5 U	--	5 U	--	5 U
METHYL ACETATE	--	5 U	--	5 U	--	5 U	--	5 U
METHYL CYCLOHEXANE	--	5 U	--	5 U	--	5 U	--	5 U
METHYL TERT-BUTYL ETHER	--	5 U	--	5 U	--	5 U	--	5 U
METHYLENE CHLORIDE	--	5 U	--	5 U	--	5 U	--	5 U
O-XYLENE	--	5 U	--	5 U	--	5 U	--	5 U
STYRENE	--	5 U	--	5 U	--	5 U	--	5 U
TETRACHLOROETHENE	--	5 U	--	5 U	--	5 U	--	5 U
TOLUENE	--	5 U	--	5 U	--	5 U	--	5 U
TRANS-1,2-DICHLOROETHENE	--	5 U	--	5 U	--	5 U	--	5 U
TRANS-1,3-DICHLOROPROPENE	--	5 U	--	5 U	--	5 U	--	5 U
TRICHLOROETHENE	--	5 U	--	5 U	--	5 U	--	5 U
TRICHLOROFLUOROMETHANE	--	5 U	--	5 U	--	5 U	--	5 U
VINYL CHLORIDE	--	5 U	--	5 U	--	5 U	--	5 U
VOLATILES-TRACE (UG/L)								
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--

LOCATION	SW/SD303	SW/SD304	SW/SD304	SW/SD305	SW/SD305	SW/SD318	SW/SD318	SW/SD319
SAMPLE ID	SW303-20191206-F	SW304-20191206	SW304-20191206-F	SW305-20191205	SW305-20191205-F	SW318-20191205	SW318-20191205-F	SW319-20191205
SAMPLE DATE	20191206	20191206	20191206	20191205	20191205	20191205	20191205	20191205
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
ACETONE	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)								
1,1-BIPHENYL	--	5 U	--	5 U	--	5 U	--	5 U
1,2,4,5-TETRACHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
1,4-DIOXANE	--	2 U	--	2 U	--	2 U	--	2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	--	10 U	--	10 U	--	10 U	--	10 U
2,3,4,6-TETRACHLOROPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
2,4,5-TRICHLOROPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
2,4,6-TRICHLOROPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
2,4-DICHLOROPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
2,4-DIMETHYLPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
2,4-DINITROPHENOL	--	10 R	--	10 R	--	10 R	--	10 U
2,4-DINITROTOLUENE	--	5 U	--	5 U	--	5 U	--	5 U
2,6-DINITROTOLUENE	--	5 U	--	5 U	--	5 U	--	5 U
2-CHLORONAPHTHALENE	--	5 U	--	5 U	--	5 U	--	5 U
2-CHLOROPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
2-METHYLNAPHTHALENE	--	5 U	--	5 U	--	5 U	--	5 U
2-METHYLPHENOL	--	10 U	--	10 U	--	10 U	--	10 U
2-NITROANILINE	--	5 R	--	5 R	--	5 R	--	5 U
2-NITROPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
3&4-METHYLPHENOL	--	10 U	--	10 U	--	10 U	--	10 U
3,3'-DICHLOROBENZIDINE	--	10 U	--	10 U	--	10 U	--	10 U
3-NITROANILINE	--	10 R	--	10 R	--	10 R	--	10 U
4,6-DINITRO-2-METHYLPHENOL	--	10 U	--	10 U	--	10 U	--	10 U
4-BROMOPHENYL PHENYL ETHER	--	5 U	--	5 U	--	5 U	--	5 U
4-CHLORO-3-METHYLPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
4-CHLOROANILINE	--	10 U	--	10 U	--	10 U	--	10 U
4-CHLOROPHENYL PHENYL ETHER	--	5 U	--	5 U	--	5 U	--	5 U
4-NITROANILINE	--	10 R	--	10 R	--	10 R	--	10 U
4-NITROPHENOL	--	10 R	--	10 R	--	10 R	--	10 U
ACENAPHTHENE	--	5 U	--	5 U	--	5 U	--	5 U
ACENAPHTHYLENE	--	5 U	--	5 U	--	5 U	--	5 U
ACETOPHENONE	--	10 U	--	10 U	--	10 U	--	10 U
ANTHRACENE	--	5 U	--	5 U	--	5 U	--	5 U
ATRAZINE	--	10 U	--	10 U	--	10 U	--	10 U
BAP EQUIVALENT-HALFND	--	5 U	--	5 U	--	5 U	--	5 U
BAP EQUIVALENT-POS	--	5 U	--	5 U	--	5 U	--	5 U
BENZALDEHYDE	--	10 U	--	10 U	--	10 U	--	10 U
BENZO(A)ANTHRACENE	--	5 U	--	5 U	--	5 U	--	5 U
BENZO(A)PYRENE	--	5 U	--	5 U	--	5 U	--	5 U
BENZO(B)FLUORANTHENE	--	5 U	--	5 U	--	5 U	--	5 U
BENZO(G,H,I)PERYLENE	--	5 U	--	5 U	--	5 U	--	5 U
BENZO(K)FLUORANTHENE	--	5 U	--	5 U	--	5 U	--	5 U
BIS(2-CHLOROETHOXY)METHANE	--	5 U	--	5 U	--	5 U	--	5 U

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD303	SW/SD304	SW/SD304	SW/SD305	SW/SD305	SW/SD318	SW/SD318	SW/SD319
SAMPLE ID	SW303-20191206-F	SW304-20191206	SW304-20191206-F	SW305-20191205	SW305-20191205-F	SW318-20191205	SW318-20191205-F	SW319-20191205
SAMPLE DATE	20191206	20191206	20191206	20191205	20191205	20191205	20191205	20191205
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
BIS(2-CHLOROETHYL)ETHER	--	10 U	--	10 U	--	10 U	--	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	--	5 U	--	5 U	--	5 U	--	5 U
BUTYL BENZYL PHTHALATE	--	5 U	--	5 U	--	5 U	--	5 U
CAPROLACTAM	--	10 U	--	10 U	--	10 U	--	10 U
CARBAZOLE	--	10 U	--	10 U	--	10 U	--	10 U
CHRYSENE	--	5 U	--	5 U	--	5 U	--	5 U
DIBENZO(A,H)ANTHRACENE	--	5 U	--	5 U	--	5 U	--	5 U
DIBENZOFURAN	--	5 U	--	5 U	--	5 U	--	5 U
DIETHYL PHTHALATE	--	5 U	--	5 U	--	5 U	--	5 U
DIMETHYL PHTHALATE	--	1.3 J	--	2 J	--	1.2 J	--	1.5 J
DI-N-BUTYL PHTHALATE	--	5 U	--	5 U	--	5 U	--	5 U
DI-N-OCTYL PHTHALATE	--	10 U	--	10 U	--	10 U	--	10 U
FLUORANTHENE	--	10 U	--	10 U	--	10 U	--	10 U
FLUORENE	--	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROBUTADIENE	--	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROCYCLOPENTADIENE	--	10 U	--	10 U	--	10 U	--	10 U
HEXACHLOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
HIGH MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--	0 U	--	0 U
INDENO(1,2,3-CD)PYRENE	--	5 U	--	5 U	--	5 U	--	5 U
ISOPHORONE	--	5 U	--	5 U	--	5 U	--	5 U
LOW MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--	0 U	--	0 U
NAPHTHALENE	--	5 U	--	5 U	--	5 U	--	5 U
NITROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
N-NITROSO-DI-N-PROPYLAMINE	--	5 U	--	5 U	--	5 U	--	5 U
N-NITROSODIPHENYLAMINE	--	5 U	--	5 U	--	5 U	--	5 U
PENTACHLOROPHENOL	--	10 U	--	10 U	--	10 U	--	10 U
PHENANTHRENE	--	5 U	--	5 U	--	5 U	--	5 U
PHENOL	--	10 U	--	10 U	--	10 U	--	10 U
PYRENE	--	5 U	--	5 U	--	5 U	--	5 U
TOTAL PAHS	--	0 U	--	0 U	--	0 U	--	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L)								
2-METHYLNAPHTHALENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ACENAPHTHENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ACENAPHTHYLENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ANTHRACENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BAP EQUIVALENT-HALFND	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BAP EQUIVALENT-POS	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(A)ANTHRACENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(A)PYRENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(B)FLUORANTHENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(G,H,I)PERYLENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(K)FLUORANTHENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
CHRYSENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
DIBENZO(A,H)ANTHRACENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
FLUORANTHENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
FLUORENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
HIGH MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--	0 U	--	0 U
INDENO(1,2,3-CD)PYRENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
LOW MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--	0 U	--	0 U
NAPHTHALENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
PENTACHLOROPHENOL	--	0.2 U	--	0.2 U	--	0.2 U	--	0.2 U
PHENANTHRENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
PYRENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
TOTAL PAHS	--	0.1	--	0.1	--	0.1	--	0.1
PESTICIDES (UG/L)								
4,4'-DDD	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
4,4'-DDE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
4,4'-DDT	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ALDRIN	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ALPHA-BHC	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ALPHA-CHLORDANE	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
BETA-BHC	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
DELTA-BHC	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
DIELDRIN	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDOSULFAN I	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ENDOSULFAN II	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDOSULFAN SULFATE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN ALDEHYDE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN KETONE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
GAMMA-BHC (LINDANE)	--	0.05 U	--	0.0053 J	--	0.05 U	--	0.05 U
GAMMA-CHLORDANE	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
HEPTACHLOR	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U

LOCATION	SW/SD303	SW/SD304	SW/SD304	SW/SD305	SW/SD305	SW/SD318	SW/SD318	SW/SD319
SAMPLE ID	SW303-20191206-F	SW304-20191206	SW304-20191206-F	SW305-20191205	SW305-20191205-F	SW318-20191205	SW318-20191205-F	SW319-20191205
SAMPLE DATE	20191206	20191206	20191206	20191205	20191205	20191205	20191205	20191205
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
HEPTACHLOR EPOXIDE	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
METHOXYCHLOR	--	0.5 U	--	0.5 U	--	0.5 U	--	0.5 U
TOXAPHENE	--	5 U	--	5 U	--	5 U	--	5 U
PCBS (UG/L)								
AROCLOR-1016	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1221	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1232	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1242	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1248	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1254	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1260	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1262	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1268	--	1 U	--	1 U	--	1 U	--	1 U
TOTAL AROCLOR	--	0 U	--	0 U	--	0 U	--	0 U
TOTAL AROCLOR HALFND	--	4.5	--	4.5	--	4.5	--	4.5
PCB CONGENERS (UG/L)								
DICHLOROBIPHENYLS	--	0.00038 J	--	0.00045 J	--	0.00061 J	--	0.00012 J
HEPTACHLOROBIPHENYLS	--	0.00016 J	--	0.00021 J	--	0.0003 J	--	0.0013 J
HEXACHLOROBIPHENYLS	--	0.00037 J	--	0.00045 J	--	0.00058 J	--	0.0014 J
MONOCHLOROBIPHENYLS	--	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
NONACHLOROBIPHENYLS	--	0 UJ	--	0 UJ	--	0 UJ	--	0.000017 J
OCTACHLOROBIPHENYLS	--	0 UJ	--	0.000029 J	--	0.000057 J	--	0.00024 J
PCB-1	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-10	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-100	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-101/90	--	0.00011	--	0.00011	--	0.00014	--	0.00015
PCB-103	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-104	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-105	--	0.000041	--	0.000033	--	0.000046	--	0.000021
PCB-106	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--
PCB-108/107	--	0.000041 U	--	0.00004 U	--	0.000041 U	--	0.000039 U
PCB-108/124	--	--	--	--	--	--	--	--
PCB-109	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-11	--	0.00032	--	0.0004	--	0.00051	--	0.000028
PCB-110	--	0.000085	--	0.00007	--	0.000099	--	0.000092
PCB-110/115	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--
PCB-111/115	--	0.000041 U	--	0.00004 U	--	0.000041 U	--	0.000039 U
PCB-112	--	--	--	--	--	--	--	--
PCB-113	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-114	--	0.000009 U	--	0.000012 U	--	0.0000086 U	--	0.0000094 U
PCB-118	--	--	--	--	--	--	--	--
PCB-118/106	--	0.000083	--	0.000067	--	0.0001	--	0.000062
PCB-119	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-12	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-12/13	--	--	--	--	--	--	--	--
PCB-120	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-121	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-122	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-123	--	0.0000069 U	--	0.0000089 U	--	0.0000063 U	--	0.000011 U
PCB-124	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-126	--	0.000014 U	--	0.00002 U	--	0.000012 U	--	0.000015 U
PCB-127	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-128/162	--	0.000019 J	--	0.000019 J	--	0.00002 J	--	0.00003 J
PCB-128/166	--	--	--	--	--	--	--	--
PCB-129	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-129/138/163	--	--	--	--	--	--	--	--
PCB-13	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-130	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-131	--	--	--	--	--	--	--	--
PCB-131/133	--	0.000041 U	--	0.00004 U	--	0.000041 U	--	0.000039 U
PCB-132	--	--	--	--	--	--	--	--
PCB-132/161	--	0.000028 J	--	0.000025 J	--	0.00003 J	--	0.000031 J
PCB-133	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--
PCB-134/143	--	0.000041 U	--	0.00004 U	--	0.000041 U	--	0.000039 U
PCB-135	--	0.000021 U	--	0.000019 J	--	0.000021	--	0.000069
PCB-135/151	--	--	--	--	--	--	--	--
PCB-136	--	0.000024	--	0.000021	--	0.000027	--	0.000055
PCB-137	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-138/163/164	--	0.000095	--	0.000089	--	0.00012	--	0.00026
PCB-139/140	--	--	--	--	--	--	--	--
PCB-139/149	--	0.000075	--	0.000086	--	0.00011	--	0.00029
PCB-14	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-140	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-141	--	0.000021 U	--	0.000026	--	0.000029	--	0.000081
PCB-142	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-143	--	--	--	--	--	--	--	--
PCB-144	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-145	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-146	--	--	--	--	--	--	--	--
PCB-146/165	--	0.000041 U	--	0.000019 J	--	0.000021 J	--	0.000039
PCB-147	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-147/149	--	--	--	--	--	--	--	--
PCB-148	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-15	--	0.000021 U	--	0.00002 U	--	0.000046	--	0.000024
PCB-150	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-151	--	0.000028	--	0.00003	--	0.000037	--	0.00012
PCB-152	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD303	SW/SD304	SW/SD304	SW/SD305	SW/SD305	SW/SD318	SW/SD318	SW/SD319
SAMPLE ID	SW303-20191206-F	SW304-20191206	SW304-20191206-F	SW305-20191205	SW305-20191205-F	SW318-20191205	SW318-20191205-F	SW319-20191205
SAMPLE DATE	20191206	20191206	20191206	20191205	20191205	20191205	20191205	20191205
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-153	--	0.000088	--	0.000098	--	0.00013	--	0.00038
PCB-153/168	--	--	--	--	--	--	--	--
PCB-154	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-155	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-156	--	0.000012 U	--	0.000013 U	--	0.000019 J	--	0.000019 J
PCB-156/157	--	--	--	--	--	--	--	--
PCB-157	--	0.000012 U	--	0.000012 U	--	0.000011 U	--	0.0000096 U
PCB-158	--	--	--	--	--	--	--	--
PCB-158/160	--	0.000012 J	--	0.000013 J	--	0.000018 J	--	0.000039
PCB-159	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-16	--	0.000015 J	--	0.00002 U	--	0.000015 J	--	0.000018 J
PCB-160	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--
PCB-166	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-167	--	0.000012 U	--	0.000012 U	--	0.00001 U	--	0.000013 J
PCB-168	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-169	--	0.000014 U	--	0.000014 U	--	0.000012 U	--	0.000011 U
PCB-17	--	0.000025	--	0.00002 U	--	0.000025	--	0.000027
PCB-170	--	0.000026	--	0.000033	--	0.000038	--	0.00014
PCB-171	--	0.000021 U	--	0.00002 U	--	0.000017 J	--	0.000037
PCB-171/173	--	--	--	--	--	--	--	--
PCB-172	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.000035
PCB-173	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-174	--	0.00002 J	--	0.000033	--	0.000042	--	0.00017
PCB-175	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-176	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.000027
PCB-177	--	0.000019 J	--	0.00002	--	0.000025	--	0.000097
PCB-178	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.000045
PCB-179	--	0.000021 U	--	0.000018 J	--	0.000026	--	0.000075
PCB-18	--	0.000043	--	0.000028	--	0.000047	--	0.000052
PCB-18/30	--	--	--	--	--	--	--	--
PCB-180	--	0.000043	--	0.000052	--	0.000067	--	0.00027
PCB-180/193	--	--	--	--	--	--	--	--
PCB-181	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-182	--	--	--	--	--	--	--	--
PCB-182/187	--	0.00003 J	--	0.000031 J	--	0.000054	--	0.00019
PCB-183	--	0.00002 J	--	0.000025	--	0.000031	--	0.000091
PCB-183/185	--	--	--	--	--	--	--	--
PCB-184	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-185	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00003
PCB-186	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-187	--	--	--	--	--	--	--	--
PCB-188	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-189	--	0.0000087 U	--	0.0000079 U	--	0.0000071 U	--	0.0000085 U
PCB-19	--	0.000016 J	--	0.00002 U	--	0.000012 J	--	0.000012 J
PCB-190	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.000033
PCB-191	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-192	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-193	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.000031
PCB-194	--	0.000021 U	--	0.000014 J	--	0.000017 J	--	0.000058
PCB-195	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00003
PCB-196	--	--	--	--	--	--	--	--
PCB-196/203	--	0.000041 U	--	0.000015 J	--	0.000021 J	--	0.000078
PCB-197	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-197/200	--	--	--	--	--	--	--	--
PCB-198	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-198/199	--	--	--	--	--	--	--	--
PCB-199	--	0.000021 U	--	0.00002 U	--	0.000019 J	--	0.00007
PCB-2	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-20/21/33	--	0.000035 J	--	0.00003 J	--	0.000043 J	--	0.000047 J
PCB-20/28	--	--	--	--	--	--	--	--
PCB-200	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-201	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-202	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-203	--	--	--	--	--	--	--	--
PCB-204	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-205	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-206	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.000017 J
PCB-207	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-208	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-209	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-21/33	--	--	--	--	--	--	--	--
PCB-22	--	0.00002 J	--	0.000019 J	--	0.000024	--	0.000024
PCB-23	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-24	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-25	--	0.000021 U	--	0.00002 U	--	0.0000093 J	--	0.00002 U
PCB-26	--	0.000021 U	--	0.00002 U	--	0.000016 J	--	0.000014 J
PCB-26/29	--	--	--	--	--	--	--	--
PCB-27	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-28	--	0.000068	--	0.000057	--	0.000077	--	0.000067
PCB-29	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-3	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-30	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-31	--	0.000062	--	0.000045	--	0.000064	--	0.000077

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD303	SW/SD304	SW/SD304	SW/SD305	SW/SD305	SW/SD318	SW/SD318	SW/SD319
SAMPLE ID	SW303-20191206-F	SW304-20191206	SW304-20191206-F	SW305-20191205	SW305-20191205-F	SW318-20191205	SW318-20191205-F	SW319-20191205
SAMPLE DATE	20191206	20191206	20191206	20191205	20191205	20191205	20191205	20191205
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-32	--	0.000016 J	--	0.00002 U	--	0.000019 J	--	0.000016 J
PCB-34	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-35	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-36	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-37	--	0.000021 U	--	0.00002 U	--	0.000022	--	0.000013 J
PCB-38	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-39	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-4	--	0.000034	--	0.000025	--	0.000019 J	--	0.000017 J
PCB-40	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-40/71	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	0.000029 J	--	0.000029 J	--	0.000045 J	--	0.000031 J
PCB-42	--	--	--	--	--	--	--	--
PCB-42/59	--	0.000014 J	--	0.00004 U	--	0.000017 J	--	0.000013 J
PCB-43	--	--	--	--	--	--	--	--
PCB-43/49	--	0.000044	--	0.000038 J	--	0.000056	--	0.000039
PCB-44	--	0.000037	--	0.000034	--	0.000051	--	0.000034
PCB-44/47/65	--	--	--	--	--	--	--	--
PCB-45	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-45/51	--	--	--	--	--	--	--	--
PCB-46	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-47	--	0.000022	--	0.000027	--	0.000038	--	0.000026
PCB-48	--	--	--	--	--	--	--	--
PCB-48/75	--	0.000041 U	--	0.00004 U	--	0.000011 J	--	0.000039 U
PCB-49/69	--	--	--	--	--	--	--	--
PCB-5	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-50	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-50/53	--	--	--	--	--	--	--	--
PCB-51	--	0.000021 U	--	0.00002 U	--	0.000012 J	--	0.000012 J
PCB-52	--	--	--	--	--	--	--	--
PCB-52/69	--	0.000084	--	0.000068	--	0.000094	--	0.00007
PCB-53	--	0.000021 U	--	0.00002 U	--	0.000013 J	--	0.000016 J
PCB-54	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-55	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-56	--	--	--	--	--	--	--	--
PCB-56/60	--	0.000028 J	--	0.000026 J	--	0.000036 J	--	0.000039 U
PCB-57	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-58	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-59/62/75	--	--	--	--	--	--	--	--
PCB-6	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.0000093 J
PCB-60	--	--	--	--	--	--	--	--
PCB-61/70	--	0.00006	--	0.000047	--	0.000087	--	0.000031 J
PCB-61/70/74/76	--	--	--	--	--	--	--	--
PCB-62	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-63	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-64	--	--	--	--	--	--	--	--
PCB-65	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-66	--	--	--	--	--	--	--	--
PCB-66/76	--	0.00005	--	0.00003 J	--	0.000065	--	0.000023 J
PCB-67	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-68	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-7	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-72	--	--	--	--	--	--	--	--
PCB-73	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-74	--	0.000024	--	0.000018 J	--	0.000031	--	0.000011 J
PCB-77	--	0.000017 U	--	0.000015 U	--	0.000015 U	--	0.000015 U
PCB-78	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-79	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-8	--	0.00003	--	0.000023	--	0.000036	--	0.000039
PCB-80	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-81	--	0.000013 U	--	0.000011 U	--	0.000011 U	--	0.00001 U
PCB-82	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-83	--	--	--	--	--	--	--	--
PCB-83/112	--	0.000041 U	--	0.00004 U	--	0.000041 U	--	0.000039 U
PCB-84	--	--	--	--	--	--	--	--
PCB-84/92	--	0.000042	--	0.00004	--	0.000048	--	0.000045
PCB-85/116	--	0.000041 U	--	0.00004 U	--	0.000018 J	--	0.000039 U
PCB-85/116/117	--	--	--	--	--	--	--	--
PCB-86	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--
PCB-87/117/125	--	0.000049 J	--	0.000035 J	--	0.000048 J	--	0.000036 J
PCB-88/91	--	0.000041 U	--	0.00004 U	--	0.000016 J	--	0.000039 U
PCB-89	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-9	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-90/101/113	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--
PCB-93	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-93/100	--	--	--	--	--	--	--	--
PCB-94	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD303	SW/SD304	SW/SD304	SW/SD305	SW/SD305	SW/SD318	SW/SD318	SW/SD319
SAMPLE ID	SW303-20191206-F	SW304-20191206	SW304-20191206-F	SW305-20191205	SW305-20191205-F	SW318-20191205	SW318-20191205-F	SW319-20191205
SAMPLE DATE	20191206	20191206	20191206	20191205	20191205	20191205	20191205	20191205
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-95	--	0.0001	--	0.000076	--	0.00009	--	0.00012
PCB-96	--	0.000021 U	--	0.00002 U	--	0.00002 U	--	0.00002 U
PCB-97	--	0.000028	--	0.000019 J	--	0.00003	--	0.000017 J
PCB-98/102	--	0.000041 U	--	0.00004 U	--	0.000041 U	--	0.000039 U
PCB-99	--	0.000037	--	0.000035	--	0.00005	--	0.000036
PENTACHLOROBIPHENYLS	--	0.00058 J	--	0.00049 J	--	0.00069 J	--	0.00058 J
TEQ DIOXIN-LIKE PCBs (BIRD)	--	4.1E-09	--	3.3E-09	--	6.5E-09	--	4.13E-09
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	1.78789E-06	--	1.93729E-06	--	1.5386E-06	--	1.63568E-06
TEQ DIOXIN-LIKE PCBs (FISH)	--	2.05E-10	--	1.65E-10	--	3.25E-10	--	2.65E-10
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	3.9805E-08	--	5.4178E-08	--	3.423E-08	--	4.1385E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	1.23E-09	--	9.9E-10	--	1.95E-09	--	1.59E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	9.14938E-07	--	1.21438E-06	--	7.84994E-07	--	9.19417E-07
TETRACHLOROBIPHENYLS	--	0.00039 J	--	0.00032 J	--	0.00056 J	--	0.00031 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	0.000041	--	0.000033	--	0.000065	--	0.000053
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	0.002137	--	0.002082	--	0.0030993	--	0.0042663
TOTAL PCB CONGENERS ZEROND	--	0.002178	--	0.002115	--	0.0031643	--	0.0043193
TOTAL PCB CONGENERS-NOAA	--	0.000847	--	0.000772	--	0.001085	--	0.001835
TOTAL PCB CONGENERS-NOAA HALFND	--	0.0036073	--	0.0034679	--	0.0043038	--	0.00544905
TOTAL PCB CONGENERS-NOAA X2	--	0.001694	--	0.001544	--	0.00217	--	0.00367
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	0.001757	--	0.001604	--	0.00223	--	0.00369
TRICHLOROBIPHENYLS	--	0.0003 J	--	0.00018 J	--	0.00037 J	--	0.00037 J
DIOXINS/FURANS (PG/L)								
1,2,3,4,6,7,8,9-OCDD	--	28 J	--	16 J	--	35 J	--	26 J
1,2,3,4,6,7,8,9-OCDF	--	3.5 U	--	3.4 U	--	3.6 U	--	3.5 U
1,2,3,4,6,7,8-HPCDD	--	3 J	--	3.3 U	--	3.2 J	--	2.7 J
1,2,3,4,6,7,8-HPCDF	--	2.6 U	--	1.8 U	--	2.3 U	--	1.9 U
1,2,3,4,7,8,9-HPCDF	--	3.3 U	--	2.7 U	--	3.2 U	--	2.7 U
1,2,3,4,7,8-HXCDD	--	3.1 U	--	3 U	--	3.2 U	--	3 U
1,2,3,4,7,8-HXCDF	--	2.4 U	--	2.3 U	--	2.4 U	--	2.3 U
1,2,3,6,7,8-HXCDD	--	2.1 U	--	2.3 U	--	2.3 U	--	2.1 U
1,2,3,6,7,8-HXCDF	--	1.9 U	--	1.8 U	--	1.9 U	--	1.8 U
1,2,3,7,8,9-HXCDD	--	1.9 U	--	2 U	--	2.1 U	--	1.9 U
1,2,3,7,8,9-HXCDF	--	1.9 U	--	1.5 U	--	2.6 U	--	2 U
1,2,3,7,8-PECDD	--	2.1 U	--	2 U	--	2.1 U	--	2 U
1,2,3,7,8-PECDF	--	1.3 U	--	1.5 U	--	1.9 U	--	1.6 U
2,3,4,6,7,8-HXCDF	--	1.4 U	--	1.3 U	--	1.9 U	--	1.5 U
2,3,4,7,8-PECDF	--	1.5 U	--	1.5 U	--	1.7 U	--	1.5 U
2,3,7,8-TCDD	--	0.86 U	--	0.87 U	--	0.86 U	--	0.96 U
2,3,7,8-TCDF	--	1.2 U	--	1.2 U	--	0.99 U	--	0.99 U
TEQ DIOXINS (BIRD)	--	0.0058	--	0.0016	--	0.0067	--	0.0053
TEQ DIOXINS (BIRD) HALFND	--	3.493475	--	3.41742	--	3.59088	--	3.393975
TEQ DIOXINS (FISH)	--	0.0058	--	0.0016	--	0.0067	--	0.0053
TEQ DIOXINS (FISH) HALFND	--	3.127975	--	3.01992	--	3.27363	--	3.098225
TEQ DIOXINS (HUMANS/MAMMALS)	--	0.0384	--	0.0048	--	0.0425	--	0.0348
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	2.587925	--	2.49681	--	2.70354	--	2.566825
TOTAL HPCDD	--	6.7 J	--	0 UJ	--	8.1 J	--	6.5 J
TOTAL HPCDF	--	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
TOTAL HXCDD	--	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
TOTAL HXCDF	--	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
TOTAL PECDD	--	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
TOTAL PECDF	--	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
TOTAL TCDD	--	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
TOTAL TCDF	--	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ
METALS (UG/L)								
ALUMINUM	20 U	52.1	20 U	40.3	20 U	62.8	20 U	37.6
ANTIMONY	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
ARSENIC	0.36 J	0.39 J	0.31 J	0.45 J	0.4 J	0.38 J	0.31 J	0.37 J
BARIUM	23.7	27.9	24.7	27.3	25.1	27.8	24.6	29
BERYLLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM	23500	25000	23900	23500	22800	24100	23400	23700
CHROMIUM	2 U	0.18 J	2 U	0.4 J	2 U	0.18 J	2 U	0.16 J
COBALT	0.49 J	0.38 J	0.3 J	0.38 J	0.33 J	0.36 J	0.17 J	0.43 J
COPPER	2 U	2.7	2 U	2.4	2.2	2.7	2 U	2.2
CYANIDE	--	10 U	--	10 U	--	10 U	--	10 U
IRON	200 U	347	200 U	276	200 U	368	200 U	286
LEAD	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
MAGNESIUM	4470	4650	4440	4380	4470	4400	4260	4480
MANGANESE	24	37.8	25.2	30.1	22.3	36.3	17.3	45.8
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	1.4	1.6	1.3	1.8	1.4	2	1.3	1.7
POTASSIUM	4410	3470	3200	4050	4100	3110	2920	3790
SELENIUM	0.6 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SILVER	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
SODIUM	23300	19600	18300	21300	22000	17800	17300	21700
THALLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VANADIUM	0.13 J	0.18 J	0.1 J	0.21 J	0.13 J	0.27 J	0.13 J	0.21 J
ZINC	28.6	26.9	19.5	27.9	23.5	21.9	14.5	31.8

LOCATION	SW/SD319	SW/SD320	SW/SD320	SW/SD321	SW/SD321	SW/SD322	SW/SD322
SAMPLE ID	SW319-20191205-F	SW320-20191205	SW320-20191205-F	SW321-20191204	SW321-20191204-F	SW322-20191204	SW322-20191204-F
SAMPLE DATE	20191205	20191205	20191205	20191204	20191204	20191204	20191204
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
VOLATILES (UG/L)							
1,1,1-TRICHLOROETHANE	--	5 U	--	5 U	--	5 U	--
1,1,2,2-TETRACHLOROETHANE	--	5 U	--	5 U	--	5 U	--
1,1,2-TRICHLOROETHANE	--	5 U	--	5 U	--	5 U	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	5 U	--	5 U	--	5 U	--
1,1-DICHLOROETHANE	--	5 U	--	5 U	--	5 U	--
1,1-DICHLOROETHENE	--	5 U	--	5 U	--	5 U	--
1,2,3-TRICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--
1,2,4-TRICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--
1,2-DIBROMO-3-CHLOROPROPANE	--	5 U	--	5 U	--	5 U	--
1,2-DIBROMOETHANE	--	5 U	--	5 U	--	5 U	--
1,2-DICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--
1,2-DICHLOROETHANE	--	5 U	--	5 U	--	5 U	--
1,2-DICHLOROPROPANE	--	5 U	--	5 U	--	5 U	--
1,3-DICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--
1,4-DICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--
2-BUTANONE	--	10 U	--	10 U	--	10 U	--
2-HEXANONE	--	10 U	--	10 U	--	10 U	--
4-METHYL-2-PENTANONE	--	10 U	--	10 U	--	10 U	--
ACETONE	--	10 U	--	10 U	--	10 U	--
BENZENE	--	5 U	--	5 U	--	5 U	--
BROMOCHLOROMETHANE	--	5 U	--	5 U	--	5 U	--
BROMODICHLOROMETHANE	--	5 U	--	5 U	--	5 U	--
BROMOFORM	--	5 U	--	5 U	--	5 U	--
BROMOMETHANE	--	5 U	--	5 U	--	5 U	--
CARBON DISULFIDE	--	5 U	--	5 U	--	5 U	--
CARBON TETRACHLORIDE	--	5 U	--	5 U	--	5 U	--
CHLOROBENZENE	--	5 U	--	5 U	--	5 U	--
CHLORODIBROMOMETHANE	--	5 U	--	5 U	--	5 U	--
CHLOROETHANE	--	5 U	--	5 U	--	5 U	--
CHLOROFORM	--	5 U	--	5 U	--	5 U	--
CHLOROMETHANE	--	5 U	--	5 U	--	5 U	--
CIS-1,2-DICHLOROETHENE	--	5 U	--	5 U	--	5 U	--
CIS-1,3-DICHLOROPROPENE	--	5 U	--	5 U	--	5 U	--
CYCLOHEXANE	--	5 U	--	5 U	--	5 U	--
DICHLORODIFLUOROMETHANE	--	5 U	--	5 U	--	5 U	--
ETHYLBENZENE	--	5 U	--	5 U	--	5 U	--
ISOPROPYLBENZENE	--	5 U	--	5 U	--	5 U	--
M+P-XYLENES	--	5 U	--	5 U	--	5 U	--
METHYL ACETATE	--	5 U	--	5 U	--	5 U	--
METHYL CYCLOHEXANE	--	5 U	--	5 U	--	5 U	--
METHYL TERT-BUTYL ETHER	--	5 U	--	5 U	--	5 U	--
METHYLENE CHLORIDE	--	5 U	--	5 U	--	5 U	--
O-XYLENE	--	5 U	--	5 U	--	5 U	--
STYRENE	--	5 U	--	5 U	--	5 U	--
TETRACHLOROETHENE	--	5 U	--	5 U	--	5 U	--
TOLUENE	--	5 U	--	5 U	--	5 U	--
TRANS-1,2-DICHLOROETHENE	--	5 U	--	5 U	--	5 U	--
TRANS-1,3-DICHLOROPROPENE	--	5 U	--	5 U	--	5 U	--
TRICHLOROETHENE	--	5 U	--	5 U	--	5 U	--
TRICHLOROFLUOROMETHANE	--	5 U	--	5 U	--	5 U	--
VINYL CHLORIDE	--	5 U	--	5 U	--	5 U	--
VOLATILES-TRACE (UG/L)							
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD319	SW/SD320	SW/SD320	SW/SD321	SW/SD321	SW/SD322	SW/SD322
SAMPLE ID	SW319-20191205-F	SW320-20191205	SW320-20191205-F	SW321-20191204	SW321-20191204-F	SW322-20191204	SW322-20191204-F
SAMPLE DATE	20191205	20191205	20191205	20191204	20191204	20191204	20191204
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
ACETONE	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,1-BIPHENYL	--	5 U	--	5 U	--	5 U	--
1,2,4,5-TETRACHLOROBENZENE	--	5 U	--	5 U	--	5 U	--
1,4-DIOXANE	--	2 U	--	2 U	--	2 U	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	10 U	--	10 U	--	10 U	--
2,3,4,6-TETRACHLOROPHENOL	--	5 U	--	5 U	--	5 U	--
2,4,5-TRICHLOROPHENOL	--	5 U	--	5 U	--	5 U	--
2,4,6-TRICHLOROPHENOL	--	5 U	--	5 U	--	5 U	--
2,4-DICHLOROPHENOL	--	5 U	--	5 U	--	5 U	--
2,4-DIMETHYLPHENOL	--	5 U	--	5 U	--	5 U	--
2,4-DINITROPHENOL	--	10 U	--	10 U	--	10 U	--
2,4-DINITROTOLUENE	--	5 U	--	5 U	--	5 U	--
2,6-DINITROTOLUENE	--	5 U	--	5 U	--	5 U	--
2-CHLORONAPHTHALENE	--	5 U	--	5 U	--	5 U	--
2-CHLOROPHENOL	--	5 U	--	5 U	--	5 U	--
2-METHYLNAPHTHALENE	--	5 U	--	5 U	--	5 U	--
2-METHYLPHENOL	--	10 U	--	10 U	--	10 U	--
2-NITROANILINE	--	5 U	--	5 U	--	5 U	--
2-NITROPHENOL	--	5 U	--	5 U	--	5 U	--
3&4-METHYLPHENOL	--	10 U	--	10 U	--	10 U	--
3,3'-DICHLOROBENZIDINE	--	10 U	--	10 U	--	10 U	--
3-NITROANILINE	--	10 U	--	10 U	--	10 U	--
4,6-DINITRO-2-METHYLPHENOL	--	10 U	--	10 U	--	10 U	--
4-BROMOPHENYL PHENYL ETHER	--	5 U	--	5 U	--	5 U	--
4-CHLORO-3-METHYLPHENOL	--	5 U	--	5 U	--	5 U	--
4-CHLOROANILINE	--	10 U	--	10 U	--	10 U	--
4-CHLOROPHENYL PHENYL ETHER	--	5 U	--	5 U	--	5 U	--
4-NITROANILINE	--	10 U	--	10 U	--	10 U	--
4-NITROPHENOL	--	10 U	--	10 U	--	10 U	--
ACENAPHTHENE	--	5 U	--	5 U	--	5 U	--
ACENAPHTHYLENE	--	5 U	--	5 U	--	5 U	--
ACETOPHENONE	--	10 U	--	10 U	--	10 U	--
ANTHRACENE	--	5 U	--	5 U	--	5 U	--
ATRAZINE	--	10 U	--	10 U	--	10 U	--
BAP EQUIVALENT-HALFND	--	5 U	--	5 U	--	5 U	--
BAP EQUIVALENT-POS	--	5 U	--	5 U	--	5 U	--
BENZALDEHYDE	--	10 U	--	10 U	--	10 U	--
BENZO(A)ANTHRACENE	--	5 U	--	5 U	--	5 U	--
BENZO(A)PYRENE	--	5 U	--	5 U	--	5 U	--
BENZO(B)FLUORANTHENE	--	5 U	--	5 U	--	5 U	--
BENZO(G,H,I)PERYLENE	--	5 U	--	5 U	--	5 U	--
BENZO(K)FLUORANTHENE	--	5 U	--	5 U	--	5 U	--
BIS(2-CHLOROETHOXY)METHANE	--	5 U	--	5 U	--	5 U	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD319	SW/SD320	SW/SD320	SW/SD321	SW/SD321	SW/SD322	SW/SD322
SAMPLE ID	SW319-20191205-F	SW320-20191205	SW320-20191205-F	SW321-20191204	SW321-20191204-F	SW322-20191204	SW322-20191204-F
SAMPLE DATE	20191205	20191205	20191205	20191204	20191204	20191204	20191204
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
BIS(2-CHLOROETHYL)ETHER	--	10 U	--	10 U	--	10 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	5 U	--	5 U	--	5 U	--
BUTYL BENZYL PHTHALATE	--	5 U	--	5 U	--	5 U	--
CAPROLACTAM	--	10 U	--	10 U	--	10 U	--
CARBAZOLE	--	10 U	--	10 U	--	10 U	--
CHRYSENE	--	5 U	--	5 U	--	5 U	--
DIBENZO(A,H)ANTHRACENE	--	5 U	--	5 U	--	5 U	--
DIBENZOFURAN	--	5 U	--	5 U	--	5 U	--
DIETHYL PHTHALATE	--	5 U	--	5 U	--	5 U	--
DIMETHYL PHTHALATE	--	5 U	--	5 U	--	5 U	--
DI-N-BUTYL PHTHALATE	--	5 U	--	5 U	--	5 U	--
DI-N-OCTYL PHTHALATE	--	10 U	--	10 U	--	10 U	--
FLUORANTHENE	--	10 U	--	10 U	--	10 U	--
FLUORENE	--	5 U	--	5 U	--	5 U	--
HEXACHLOROBENZENE	--	5 U	--	5 U	--	5 U	--
HEXACHLOROBUTADIENE	--	5 U	--	5 U	--	5 U	--
HEXACHLOROCYCLOPENTADIENE	--	10 U	--	10 U	--	10 U	--
HEXACHLOROETHANE	--	5 U	--	5 U	--	5 U	--
HIGH MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--	0 U	--
INDENO(1,2,3-CD)PYRENE	--	5 U	--	5 U	--	5 U	--
ISOPHORONE	--	5 U	--	5 U	--	5 U	--
LOW MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--	0 U	--
NAPHTHALENE	--	5 U	--	5 U	--	5 U	--
NITROBENZENE	--	5 U	--	5 U	--	5 U	--
N-NITROSO-DI-N-PROPYLAMINE	--	5 U	--	5 U	--	5 U	--
N-NITROSODIPHENYLAMINE	--	5 U	--	5 U	--	5 U	--
PENTACHLOROPHENOL	--	10 U	--	10 U	--	10 U	--
PHENANTHRENE	--	5 U	--	5 U	--	5 U	--
PHENOL	--	10 U	--	10 U	--	10 U	--
PYRENE	--	5 U	--	5 U	--	5 U	--
TOTAL PAHS	--	0 U	--	0 U	--	0 U	--
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L							
2-METHYLNAPHTHALENE	--	0.1 U	--	0.1 U	--	0.1 U	--
ACENAPHTHENE	--	0.1 U	--	0.1 U	--	0.1 U	--
ACENAPHTHYLENE	--	0.1 U	--	0.1 U	--	0.1 U	--
ANTHRACENE	--	0.1 U	--	0.1 U	--	0.1 U	--
BAP EQUIVALENT-HALFND	--	0.1 U	--	0.1 U	--	0.1 U	--
BAP EQUIVALENT-POS	--	0.1 U	--	0.1 U	--	0.1 U	--
BENZO(A)ANTHRACENE	--	0.1 U	--	0.1 U	--	0.1 U	--
BENZO(A)PYRENE	--	0.1 U	--	0.1 U	--	0.1 U	--
BENZO(B)FLUORANTHENE	--	0.1 U	--	0.1 U	--	0.1 U	--
BENZO(G,H,I)PERYLENE	--	0.1 U	--	0.1 U	--	0.1 U	--
BENZO(K)FLUORANTHENE	--	0.1 U	--	0.1 U	--	0.1 U	--
CHRYSENE	--	0.1 U	--	0.1 U	--	0.1 U	--
DIBENZO(A,H)ANTHRACENE	--	0.1 U	--	0.1 U	--	0.1 U	--
FLUORANTHENE	--	0.1 U	--	0.1 U	--	0.1 U	--
FLUORENE	--	0.1 U	--	0.1 U	--	0.1 U	--
HIGH MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--	0 U	--
INDENO(1,2,3-CD)PYRENE	--	0.1 U	--	0.1 U	--	0.1 U	--
LOW MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--	0 U	--
NAPHTHALENE	--	0.1 U	--	0.1 U	--	0.1 U	--
PENTACHLOROPHENOL	--	0.2 U	--	0.2 U	--	0.2 U	--
PHENANTHRENE	--	0.1 U	--	0.1 U	--	0.1 U	--
PYRENE	--	0.1 U	--	0.1 U	--	0.1 U	--
TOTAL PAHS	--	0.1	--	0.1	--	0.1	--
PESTICIDES (UG/L)							
4,4'-DDD	--	0.1 U	--	0.1 U	--	0.1 U	--
4,4'-DDE	--	0.1 U	--	0.1 U	--	0.1 U	--
4,4'-DDT	--	0.1 U	--	0.1 U	--	0.1 U	--
ALDRIN	--	0.05 U	--	0.05 U	--	0.05 U	--
ALPHA-BHC	--	0.05 U	--	0.05 U	--	0.05 U	--
ALPHA-CHLORDANE	--	0.05 U	--	0.05 U	--	0.05 U	--
BETA-BHC	--	0.05 U	--	0.05 U	--	0.05 U	--
DELTA-BHC	--	0.05 U	--	0.05 U	--	0.05 U	--
DIELDRIN	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDOSULFAN I	--	0.05 U	--	0.05 U	--	0.05 U	--
ENDOSULFAN II	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDOSULFAN SULFATE	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDRIN	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDRIN ALDEHYDE	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDRIN KETONE	--	0.1 U	--	0.1 U	--	0.1 U	--
GAMMA-BHC (LINDANE)	--	0.05 U	--	0.05 U	--	0.05 U	--
GAMMA-CHLORDANE	--	0.05 U	--	0.05 U	--	0.05 U	--
HEPTACHLOR	--	0.05 U	--	0.05 U	--	0.05 U	--

LOCATION	SW/SD319	SW/SD320	SW/SD320	SW/SD321	SW/SD321	SW/SD322	SW/SD322
SAMPLE ID	SW319-20191205-F	SW320-20191205	SW320-20191205-F	SW321-20191204	SW321-20191204-F	SW322-20191204	SW322-20191204-F
SAMPLE DATE	20191205	20191205	20191205	20191204	20191204	20191204	20191204
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
HEPTACHLOR EPOXIDE	--	0.05 U	--	0.05 U	--	0.05 U	--
METHOXYCHLOR	--	0.5 U	--	0.5 U	--	0.5 U	--
TOXAPHENE	--	5 U	--	5 U	--	5 U	--
PCBS (UG/L)							
AROCLOR-1016	--	1 U	--	1 U	--	1 U	--
AROCLOR-1221	--	1 U	--	1 U	--	1 U	--
AROCLOR-1232	--	1 U	--	1 U	--	1 U	--
AROCLOR-1242	--	1 U	--	1 U	--	1 U	--
AROCLOR-1248	--	1 U	--	1 U	--	1 U	--
AROCLOR-1254	--	1 U	--	1 U	--	1 U	--
AROCLOR-1260	--	1 U	--	1 U	--	1 U	--
AROCLOR-1262	--	1 U	--	1 U	--	1 U	--
AROCLOR-1268	--	1 U	--	1 U	--	1 U	--
TOTAL AROCLOR	--	0 U	--	0 U	--	0 U	--
TOTAL AROCLOR HALFND	--	4.5	--	4.5	--	4.5	--
PCB CONGENERS (UG/L)							
DICHLOROBIPHENYLS	--	0 UJ	--	0 UJ	--	0.000045 J	--
HEPTACHLOROBIPHENYLS	--	0.0017 J	--	0.00037 J	--	0.0014 J	--
HEXACHLOROBIPHENYLS	--	0.0023 J	--	0.00071 J	--	0.0021 J	--
MONOCHLOROBIPHENYLS	--	0 UJ	--	0 UJ	--	0 UJ	--
NONACHLOROBIPHENYLS	--	0.000035 J	--	0.000011 J	--	0.000022 J	--
OCTACHLOROBIPHENYLS	--	0.00043 J	--	0.000088 J	--	0.00032 J	--
PCB-1	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-10	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-100	--	0.00002 U	--	0.00002 U	--	--	--
PCB-101/90	--	0.0002	--	0.0001	--	--	--
PCB-103	--	0.00002 U	--	0.00002 U	--	0.0000092 J	--
PCB-104	--	0.00002 U	--	0.00002 U	--	0.0000027 J	--
PCB-105	--	0.000031	--	0.000033	--	0.000037	--
PCB-106	--	--	--	--	--	0.000021 U	--
PCB-107	--	--	--	--	--	0.000006 J	--
PCB-108/107	--	0.000041 U	--	0.000041 U	--	--	--
PCB-108/124	--	--	--	--	--	0.0000047 J	--
PCB-109	--	0.00002 U	--	0.00002 U	--	--	--
PCB-11	--	0.00002 U	--	0.00002 U	--	0.000045 U	--
PCB-110	--	0.00012	--	0.000082	--	--	--
PCB-110/115	--	--	--	--	--	0.00014	--
PCB-111	--	--	--	--	--	0.000021 U	--
PCB-111/115	--	0.000041 U	--	0.000041 U	--	--	--
PCB-112	--	--	--	--	--	0.000021 U	--
PCB-113	--	0.00002 U	--	0.00002 U	--	--	--
PCB-114	--	0.0000085 U	--	0.0000085 U	--	0.0000035 U	--
PCB-118	--	--	--	--	--	0.000095	--
PCB-118/106	--	0.000074	--	0.000072	--	--	--
PCB-119	--	0.00002 U	--	0.00002 U	--	--	--
PCB-12	--	0.00002 U	--	0.00002 U	--	--	--
PCB-12/13	--	--	--	--	--	0.000041 U	--
PCB-120	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-121	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-122	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-123	--	0.0000071 U	--	0.0000074 U	--	0.0000034 U	--
PCB-124	--	0.00002 U	--	0.00002 U	--	--	--
PCB-126	--	0.00001 U	--	0.000011 U	--	0.0000043 U	--
PCB-127	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-128/162	--	0.000039 J	--	0.000021 J	--	--	--
PCB-128/166	--	--	--	--	--	0.000041 U	--
PCB-129	--	0.00002 U	--	0.00002 U	--	--	--
PCB-129/138/163	--	--	--	--	--	0.00046	--
PCB-13	--	0.00002 U	--	0.00002 U	--	--	--
PCB-130	--	0.000033	--	0.00002 U	--	0.000018 J	--
PCB-131	--	--	--	--	--	0.000021 U	--
PCB-131/133	--	0.000041 U	--	0.000041 U	--	--	--
PCB-132	--	--	--	--	--	0.00013	--
PCB-132/161	--	0.000095	--	0.000038 J	--	--	--
PCB-133	--	--	--	--	--	0.0000074 J	--
PCB-134	--	--	--	--	--	0.000021 U	--
PCB-134/143	--	0.000022 J	--	0.000041 U	--	--	--
PCB-135	--	0.000092	--	0.000026	--	--	--
PCB-135/151	--	--	--	--	--	0.00023	--
PCB-136	--	0.000091	--	0.000024	--	0.000072	--
PCB-137	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-138/163/164	--	0.00039	--	0.00014	--	--	--
PCB-139/140	--	--	--	--	--	0.000041 U	--
PCB-139/149	--	0.00043	--	0.00012	--	--	--
PCB-14	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-140	--	0.00002 U	--	0.00002 U	--	--	--
PCB-141	--	0.00013	--	0.000044	--	0.00011	--
PCB-142	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-143	--	--	--	--	--	0.000021 U	--
PCB-144	--	0.000034	--	0.00002 U	--	0.000024	--
PCB-145	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-146	--	--	--	--	--	0.000062	--
PCB-146/165	--	0.000065	--	0.000024 J	--	--	--
PCB-147	--	0.00002 U	--	0.00002 U	--	--	--
PCB-147/149	--	--	--	--	--	0.00042	--
PCB-148	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-15	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-150	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-151	--	0.00021	--	0.00006	--	--	--
PCB-152	--	0.00002 U	--	0.00002 U	--	0.000021 U	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD319	SW/SD320	SW/SD320	SW/SD321	SW/SD321	SW/SD322	SW/SD322
SAMPLE ID	SW319-20191205-F	SW320-20191205	SW320-20191205-F	SW321-20191204	SW321-20191204-F	SW322-20191204	SW322-20191204-F
SAMPLE DATE	20191205	20191205	20191205	20191204	20191204	20191204	20191204
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-153	--	0.00059	--	0.00019	--	--	--
PCB-153/168	--	--	--	--	--	0.00045	--
PCB-154	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-155	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-156	--	0.000029	--	0.000014 U	--	--	--
PCB-156/157	--	--	--	--	--	0.000033 J	--
PCB-157	--	0.0000092 U	--	0.000011 U	--	--	--
PCB-158	--	--	--	--	--	0.000033	--
PCB-158/160	--	0.000049	--	0.000024 J	--	--	--
PCB-159	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-16	--	0.00002 U	--	0.00002 U	--	0.0000071 J	--
PCB-160	--	--	--	--	--	0.000021 U	--
PCB-161	--	--	--	--	--	0.000021 U	--
PCB-162	--	--	--	--	--	0.000021 U	--
PCB-164	--	--	--	--	--	0.000031	--
PCB-165	--	--	--	--	--	0.000021 U	--
PCB-166	--	0.00002 U	--	0.00002 U	--	--	--
PCB-167	--	0.000011 U	--	0.0000089 U	--	0.000012 J	--
PCB-168	--	0.00002 U	--	0.00002 U	--	--	--
PCB-169	--	0.000011 U	--	0.00001 U	--	0.0000042 U	--
PCB-17	--	0.00002 U	--	0.00002 U	--	0.000007 J	--
PCB-170	--	0.00018	--	0.000055	--	0.00015	--
PCB-171	--	0.00006	--	0.00002 U	--	--	--
PCB-171/173	--	--	--	--	--	0.000049	--
PCB-172	--	0.000037	--	0.00002 U	--	0.000029	--
PCB-173	--	0.00002 U	--	0.00002 U	--	--	--
PCB-174	--	0.0002	--	0.000061	--	0.00019	--
PCB-175	--	0.000012 J	--	0.00002 U	--	0.000008 J	--
PCB-176	--	0.000034	--	0.00002 U	--	0.000024	--
PCB-177	--	0.00012	--	0.000035	--	0.00011	--
PCB-178	--	0.000056	--	0.00002 U	--	0.000041	--
PCB-179	--	0.00012	--	0.000027	--	0.000088	--
PCB-18	--	0.000016 J	--	0.000014 J	--	--	--
PCB-18/30	--	--	--	--	--	0.000014 J	--
PCB-180	--	0.00039	--	0.000089	--	--	--
PCB-180/193	--	--	--	--	--	0.00035	--
PCB-181	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-182	--	--	--	--	--	0.000021 U	--
PCB-182/187	--	0.00027	--	0.000064	--	--	--
PCB-183	--	0.00013	--	0.000036	--	--	--
PCB-183/185	--	--	--	--	--	0.00012	--
PCB-184	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-185	--	0.000036	--	0.00002 U	--	--	--
PCB-186	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-187	--	--	--	--	--	0.00023	--
PCB-188	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-189	--	0.0000065 U	--	0.0000073 U	--	0.0000058 J	--
PCB-19	--	0.00002 U	--	0.00002 U	--	0.0000054 J	--
PCB-190	--	0.000042	--	0.00002 U	--	0.000035	--
PCB-191	--	0.00002 U	--	0.00002 U	--	0.0000055 J	--
PCB-192	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-193	--	0.00004	--	0.00002 U	--	--	--
PCB-194	--	0.000095	--	0.000022	--	0.000071	--
PCB-195	--	0.000045	--	0.000013 J	--	0.000032	--
PCB-196	--	--	--	--	--	0.000039	--
PCB-196/203	--	0.00011	--	0.000028 J	--	--	--
PCB-197	--	0.00002 U	--	0.00002 U	--	--	--
PCB-197/200	--	--	--	--	--	0.000015 J	--
PCB-198	--	0.00002 U	--	0.00002 U	--	--	--
PCB-198/199	--	--	--	--	--	0.000088	--
PCB-199	--	0.00012	--	0.000025	--	--	--
PCB-2	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-20/21/33	--	0.000061 U	--	0.000061 U	--	--	--
PCB-20/28	--	--	--	--	--	0.000041 U	--
PCB-200	--	0.000017 J	--	0.00002 U	--	--	--
PCB-201	--	0.000015 J	--	0.00002 U	--	0.000021 U	--
PCB-202	--	0.000024	--	0.00002 U	--	0.000021 U	--
PCB-203	--	--	--	--	--	0.000049	--
PCB-204	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-205	--	0.00002 U	--	0.00002 U	--	0.000004 J	--
PCB-206	--	0.000035	--	0.000011 J	--	0.000021 U	--
PCB-207	--	0.00002 U	--	0.00002 U	--	0.000003 J	--
PCB-208	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-209	--	0.000018 J	--	0.00002 U	--	0.000021 U	--
PCB-21/33	--	--	--	--	--	0.000041 U	--
PCB-22	--	0.00002 U	--	0.00002 U	--	0.0000071 J	--
PCB-23	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-24	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-25	--	0.00002 U	--	0.00002 U	--	0.0000022 J	--
PCB-26	--	0.00002 U	--	0.00002 U	--	--	--
PCB-26/29	--	--	--	--	--	0.0000037 J	--
PCB-27	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-28	--	0.000014 J	--	0.000017 J	--	--	--
PCB-29	--	0.00002 U	--	0.00002 U	--	--	--
PCB-3	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-30	--	0.00002 U	--	0.00002 U	--	--	--
PCB-31	--	0.000017 J	--	0.000016 J	--	0.000015 J	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD319	SW/SD320	SW/SD320	SW/SD321	SW/SD321	SW/SD322	SW/SD322
SAMPLE ID	SW319-20191205-F	SW320-20191205	SW320-20191205-F	SW321-20191204	SW321-20191204-F	SW322-20191204	SW322-20191204-F
SAMPLE DATE	20191205	20191205	20191205	20191204	20191204	20191204	20191204
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-32	--	0.00002 U	--	0.00002 U	--	0.0000057 J	--
PCB-34	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-35	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-36	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-37	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-38	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-39	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-4	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-40	--	0.00002 U	--	0.00002 U	--	--	--
PCB-40/71	--	--	--	--	--	0.000011 J	--
PCB-41	--	--	--	--	--	0.000021 U	--
PCB-41/64/71/72	--	0.000016 J	--	0.000014 J	--	--	--
PCB-42	--	--	--	--	--	0.0000047 J	--
PCB-42/59	--	0.000041 U	--	0.000041 U	--	--	--
PCB-43	--	--	--	--	--	0.000021 U	--
PCB-43/49	--	0.000045	--	0.00002 J	--	--	--
PCB-44	--	0.000019 J	--	0.000017 J	--	--	--
PCB-44/47/65	--	--	--	--	--	0.000077	--
PCB-45	--	0.00002 U	--	0.00002 U	--	--	--
PCB-45/51	--	--	--	--	--	0.000031 J	--
PCB-46	--	0.00002 U	--	0.00002 U	--	0.0000029 J	--
PCB-47	--	0.00003	--	0.000013 J	--	--	--
PCB-48	--	--	--	--	--	0.000021 U	--
PCB-48/75	--	0.000041 U	--	0.000041 U	--	--	--
PCB-49/69	--	--	--	--	--	0.000049	--
PCB-5	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-50	--	0.00002 U	--	0.00002 U	--	--	--
PCB-50/53	--	--	--	--	--	0.000027 J	--
PCB-51	--	0.00002	--	0.00002 U	--	--	--
PCB-52	--	--	--	--	--	0.000082	--
PCB-52/69	--	0.000059	--	0.000045	--	--	--
PCB-53	--	0.000022	--	0.000012 J	--	--	--
PCB-54	--	0.00002 U	--	0.00002 U	--	0.0000062 J	--
PCB-55	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-56	--	--	--	--	--	0.000021 U	--
PCB-56/60	--	0.000041 U	--	0.000041 U	--	--	--
PCB-57	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-58	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-59/62/75	--	--	--	--	--	0.000062 U	--
PCB-6	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-60	--	--	--	--	--	0.0000048 J	--
PCB-61/70	--	0.00002 J	--	0.000027 J	--	--	--
PCB-61/70/74/76	--	--	--	--	--	0.000083 U	--
PCB-62	--	0.00002 U	--	0.00002 U	--	--	--
PCB-63	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-64	--	--	--	--	--	0.0000093 J	--
PCB-65	--	0.00002 U	--	0.00002 U	--	--	--
PCB-66	--	--	--	--	--	0.000021 U	--
PCB-66/76	--	0.000017 J	--	0.000017 J	--	--	--
PCB-67	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-68	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-7	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-72	--	--	--	--	--	0.000021 U	--
PCB-73	--	0.00002 U	--	0.00002 U	--	0.0000036 J	--
PCB-74	--	0.00002 U	--	0.00002 U	--	--	--
PCB-77	--	0.0000097 U	--	0.000014 U	--	0.0000035 U	--
PCB-78	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-79	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-8	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-80	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-81	--	0.0000082 U	--	0.00001 U	--	0.0000033 U	--
PCB-82	--	0.00002 U	--	0.00002 U	--	0.0000083 J	--
PCB-83	--	--	--	--	--	0.000021 U	--
PCB-83/112	--	0.000041 U	--	0.000041 U	--	--	--
PCB-84	--	--	--	--	--	0.000021	--
PCB-84/92	--	0.000057	--	0.000039 J	--	--	--
PCB-85/116	--	0.000013 J	--	0.000041 U	--	--	--
PCB-85/116/117	--	--	--	--	--	0.000012 J	--
PCB-86	--	0.00002 U	--	0.00002 U	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	0.00012 U	--
PCB-87/117/125	--	0.000034 J	--	0.000032 J	--	--	--
PCB-88/91	--	0.000041 U	--	0.000041 U	--	0.000023 J	--
PCB-89	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-9	--	0.00002 U	--	0.00002 U	--	0.000021 U	--
PCB-90/101/113	--	--	--	--	--	0.00019	--
PCB-92	--	--	--	--	--	0.000034	--
PCB-93	--	0.00002 U	--	0.00002 U	--	--	--
PCB-93/100	--	--	--	--	--	0.0000097 J	--
PCB-94	--	0.00002 U	--	0.00002 U	--	0.000021 U	--

LOCATION	SW/SD319	SW/SD320	SW/SD320	SW/SD321	SW/SD321	SW/SD322	SW/SD322
SAMPLE ID	SW319-20191205-F	SW320-20191205	SW320-20191205-F	SW321-20191204	SW321-20191204-F	SW322-20191204	SW322-20191204-F
SAMPLE DATE	20191205	20191205	20191205	20191204	20191204	20191204	20191204
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-95	--	0.00016	--	0.000073	--	0.00017	--
PCB-96	--	0.00002 U	--	0.00002 U	--	0.0000032 J	--
PCB-97	--	0.000016 J	--	0.000021	--	--	--
PCB-98/102	--	0.000041 U	--	0.000041 U	--	0.0000055 J	--
PCB-99	--	0.000038	--	0.000031	--	0.000043	--
PENTACHLOROBIPHENYLS	--	0.00074 J	--	0.00048 J	--	0.00089 J	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	0.000000006	--	3.3E-09	--	8.128E-09	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	1.16501E-06	--	1.41009E-06	--	4.7792E-07	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	3E-10	--	1.65E-10	--	9.14E-10	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	2.8214E-08	--	3.1256E-08	--	1.2785E-08	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	1.8E-09	--	9.9E-10	--	5.484E-09	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	6.69148E-07	--	7.04045E-07	--	2.84257E-07	--
TETRACHLOROBIPHENYLS	--	0.00025 J	--	0.00017 J	--	0.00039 J	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	0.00006	--	0.000033	--	0.0001828	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	0.005483	--	0.001839	--	0.0048359	--
TOTAL PCB CONGENERS ZEROND	--	0.005543	--	0.001872	--	0.0050187	--
TOTAL PCB CONGENERS-NOAA	--	0.002387	--	0.000898	--	0.002167	--
TOTAL PCB CONGENERS-NOAA HALFND	--	0.0067486	--	0.00327905	--	0.0060643	--
TOTAL PCB CONGENERS-NOAA X2	--	0.004774	--	0.001796	--	0.004334	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	0.004794	--	0.001836	--	0.0045	--
TRICHLOROBIPHENYLS	--	0.000047 J	--	0.000047 J	--	0.000074 J	--
DIOXINS/FURANS (PG/L)							
1,2,3,4,6,7,8,9-OCDD	--	20 J	--	32 J	--	17 J	--
1,2,3,4,6,7,8,9-OCDF	--	3.5 U	--	3.8 U	--	5.6 U	--
1,2,3,4,6,7,8-HPCDD	--	3.6 U	--	2.9 J	--	3.8 U	--
1,2,3,4,6,7,8-HPCDF	--	2.2 U	--	2.4 U	--	2.6 U	--
1,2,3,4,7,8,9-HPCDF	--	2.9 U	--	2.9 U	--	4.1 U	--
1,2,3,4,7,8-HXCDD	--	3 U	--	2.9 U	--	1.4 U	--
1,2,3,4,7,8-HXCDF	--	2.3 U	--	2.3 U	--	2.2 U	--
1,2,3,6,7,8-HXCDD	--	2.6 U	--	2.3 U	--	2 U	--
1,2,3,6,7,8-HXCDF	--	1.8 U	--	1.8 U	--	1.7 U	--
1,2,3,7,8,9-HXCDD	--	2.3 U	--	2.1 U	--	2.1 U	--
1,2,3,7,8,9-HXCDF	--	2.1 U	--	2 U	--	3.9 U	--
1,2,3,7,8-PECDD	--	2 U	--	2 U	--	2.3 U	--
1,2,3,7,8-PECDF	--	1.3 U	--	1.7 U	--	2.4 U	--
2,3,4,6,7,8-HXCDF	--	1.5 U	--	1.5 U	--	2.1 U	--
2,3,4,7,8-PECDF	--	1.5 U	--	1.5 U	--	2.7 U	--
2,3,7,8-TCDD	--	1 U	--	0.88 U	--	1.9 U	--
2,3,7,8-TCDF	--	0.93 U	--	1 U	--	1.6 U	--
TEQ DIOXINS (BIRD)	--	0.002	--	0.0061	--	0.0017	--
TEQ DIOXINS (BIRD) HALFND	--	3.397475	--	3.37679	--	5.05238	--
TEQ DIOXINS (FISH)	--	0.002	--	0.0061	--	0.0017	--
TEQ DIOXINS (FISH) HALFND	--	3.119725	--	3.04229	--	3.77788	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	0.006	--	0.0386	--	0.0051	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	2.621025	--	2.55117	--	3.44944	--
TOTAL HPCDD	--	0 UJ	--	5.7 J	--	1.8 J	--
TOTAL HPCDF	--	0 UJ	--	0 UJ	--	2.6 UJ	--
TOTAL HXCDD	--	0 UJ	--	0 UJ	--	1.3 UJ	--
TOTAL HXCDF	--	0 UJ	--	0 UJ	--	1.7 UJ	--
TOTAL PECDD	--	0 UJ	--	0 UJ	--	2.3 UJ	--
TOTAL PECDF	--	0 UJ	--	0 UJ	--	0.83 UJ	--
TOTAL TCDD	--	0 UJ	--	0 UJ	--	1.9 UJ	--
TOTAL TCDF	--	0 UJ	--	0 UJ	--	1.6 UJ	--
METALS (UG/L)							
ALUMINUM	20 U	50	20 U	64.6	20 U	68.1	20 U
ANTIMONY	2 U	2 U	2 U	2 U	2 U	2 U	2 U
ARSENIC	0.35 J	0.4 J	0.32 J	0.36 J	0.27 J	0.44 J	0.37 J
BARIUM	26.3	29.2	26.7	28.6	24.8	28.5	25.7
BERYLLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM	23400	23400	23400	24800	23600	24100	24500
CHROMIUM	2 U	0.13 J	2 U	0.18 J	2 U	0.11 J	2 U
COBALT	0.32 J	0.47 J	0.35 J	0.32 J	0.19 J	0.43 J	0.26 J
COPPER	2 U	2.4	2 U	2.7	2 U	2.5	2 U
CYANIDE	--	10 U	--	10 U	--	10 U	--
IRON	200 U	362	200 U	403	200 U	423	200 U
LEAD	1 U	1 U	1 U	1 U	1 U	1 U	1 U
MAGNESIUM	4470	4490	4550	4640	4440	4700	4670
MANGANESE	24.6	48.9	33.1	41.6	20.1	50.5	28.9
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	1.4	1.8	1.4	2.1	1.3	1.6	1.3
POTASSIUM	3720	3770	3730	3090	2910	3610	3530
SELENIUM	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SILVER	1 U	1 U	1 U	1 U	1 U	1 U	1 U
SODIUM	21800	21100	21200	19000	18300	21100	21000
THALLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VANADIUM	0.11 J	0.21 J	0.11 J	0.25 J	0.11 J	0.25 J	0.1 J
ZINC	23	33.9	24	20.7	15.5	27.2	21.7

LOCATION	SW/SD323	SW/SD323	SW/SD324	SW/SD324	SW/SD325	SW/SD325	SW/SD326	SW/SD326
SAMPLE ID	SW323-20191204	SW323-20191204-F	SW324-20191204	SW324-20191204-F	SW325-20191204	SW325-20191204-F	SW326-20191204	SW326-20191204-F
SAMPLE DATE	20191204	20191204	20191204	20191204	20191204	20191204	20191204	20191204
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
VOLATILES (UG/L)								
1,1,1-TRICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--
1,1,2,2-TETRACHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--
1,1,2-TRICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--
1,1-DICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--
1,1-DICHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U	--
1,2,3-TRICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--
1,2,4-TRICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--
1,2-DIBROMO-3-CHLOROPROPANE	5 U	--	5 U	--	5 U	--	5 U	--
1,2-DIBROMOETHANE	5 U	--	5 U	--	5 U	--	5 U	--
1,2-DICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--
1,2-DICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--
1,2-DICHLOROPROPANE	5 U	--	5 U	--	5 U	--	5 U	--
1,3-DICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--
1,4-DICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--
2-BUTANONE	10 U	--	10 U	--	10 U	--	10 U	--
2-HEXANONE	10 U	--	10 U	--	10 U	--	10 U	--
4-METHYL-2-PENTANONE	10 U	--	10 U	--	10 U	--	10 U	--
ACETONE	10 U	--	10 U	--	10 U	--	10 U	--
BENZENE	5 U	--	5 U	--	5 U	--	5 U	--
BROMOCHLOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--
BROMODICHLOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--
BROMOFORM	5 U	--	5 U	--	5 U	--	5 U	--
BROMOMETHANE	5 U	--	5 U	--	5 U	--	5 U	--
CARBON DISULFIDE	5 U	--	5 U	--	5 U	--	5 U	--
CARBON TETRACHLORIDE	5 U	--	5 U	--	5 U	--	5 U	--
CHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--
CHLORODIBROMOMETHANE	5 U	--	5 U	--	5 U	--	5 U	--
CHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--
CHLOROFORM	5 U	--	5 U	--	5 U	--	5 U	--
CHLOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--
CIS-1,2-DICHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U	--
CIS-1,3-DICHLOROPROPENE	5 U	--	5 U	--	5 U	--	5 U	--
CYCLOHEXANE	5 U	--	5 U	--	5 U	--	5 U	--
DICHLORODIFLUOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--
ETHYLBENZENE	5 U	--	5 U	--	5 U	--	5 U	--
ISOPROPYLBENZENE	5 U	--	5 U	--	5 U	--	5 U	--
M+P-XYLENES	5 U	--	5 U	--	5 U	--	5 U	--
METHYL ACETATE	5 U	--	5 U	--	5 U	--	5 U	--
METHYL CYCLOHEXANE	5 U	--	5 U	--	5 U	--	5 U	--
METHYL TERT-BUTYL ETHER	5 U	--	5 U	--	5 U	--	5 U	--
METHYLENE CHLORIDE	5 U	--	5 U	--	5 U	--	5 U	--
O-XYLENE	5 U	--	5 U	--	5 U	--	5 U	--
STYRENE	5 U	--	5 U	--	5 U	--	5 U	--
TETRACHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U	--
TOLUENE	5 U	--	5 U	--	5 U	--	5 U	--
TRANS-1,2-DICHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U	--
TRANS-1,3-DICHLOROPROPENE	5 U	--	5 U	--	5 U	--	5 U	--
TRICHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U	--
TRICHLOROFLUOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--
VINYL CHLORIDE	5 U	--	5 U	--	5 U	--	5 U	--
VOLATILES-TRACE (UG/L)								
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD323	SW/SD323	SW/SD324	SW/SD324	SW/SD325	SW/SD325	SW/SD326	SW/SD326
SAMPLE ID	SW323-20191204	SW323-20191204-F	SW324-20191204	SW324-20191204-F	SW325-20191204	SW325-20191204-F	SW326-20191204	SW326-20191204-F
SAMPLE DATE	20191204	20191204	20191204	20191204	20191204	20191204	20191204	20191204
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
ACETONE	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)								
1,1-BIPHENYL	5 U	--	5 U	--	5 U	--	5 U	--
1,2,4,5-TETRACHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--
1,4-DIOXANE	2 U	--	2 U	--	2 U	--	2 U	--
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	--	10 U	--	10 U	--	10 U	--
2,3,4,6-TETRACHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--
2,4,5-TRICHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--
2,4,6-TRICHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--
2,4-DICHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--
2,4-DIMETHYLPHENOL	5 U	--	5 U	--	5 U	--	5 U	--
2,4-DINITROPHENOL	10 U	--	10 U	--	10 U	--	10 U	--
2,4-DINITROTOLUENE	5 U	--	5 U	--	5 U	--	5 U	--
2,6-DINITROTOLUENE	5 U	--	5 U	--	5 U	--	5 U	--
2-CHLORONAPHTHALENE	5 U	--	5 U	--	5 U	--	5 U	--
2-CHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--
2-METHYLNAPHTHALENE	5 U	--	5 U	--	5 U	--	5 U	--
2-METHYLPHENOL	10 U	--	10 U	--	10 U	--	10 U	--
2-NITROANILINE	5 U	--	5 U	--	5 U	--	5 U	--
2-NITROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--
3&4-METHYLPHENOL	10 U	--	10 U	--	10 U	--	10 U	--
3,3'-DICHLOROBENZIDINE	10 U	--	10 U	--	10 U	--	10 U	--
3-NITROANILINE	10 U	--	10 U	--	10 U	--	10 U	--
4,6-DINITRO-2-METHYLPHENOL	10 U	--	10 U	--	10 U	--	10 U	--
4-BROMOPHENYL PHENYL ETHER	5 U	--	5 U	--	5 U	--	5 U	--
4-CHLORO-3-METHYLPHENOL	5 U	--	5 U	--	5 U	--	5 U	--
4-CHLOROANILINE	10 U	--	10 U	--	10 U	--	10 U	--
4-CHLOROPHENYL PHENYL ETHER	5 U	--	5 U	--	5 U	--	5 U	--
4-NITROANILINE	10 U	--	10 U	--	10 U	--	10 U	--
4-NITROPHENOL	10 U	--	10 U	--	10 U	--	10 U	--
ACENAPHTHENE	5 U	--	5 U	--	5 U	--	5 U	--
ACENAPHTHYLENE	5 U	--	5 U	--	5 U	--	5 U	--
ACETOPHENONE	10 U	--	10 U	--	10 U	--	10 U	--
ANTHRACENE	5 U	--	5 U	--	5 U	--	5 U	--
ATRAZINE	10 U	--	10 U	--	10 U	--	10 U	--
BAP EQUIVALENT-HALFND	5 U	--	5 U	--	5 U	--	5 U	--
BAP EQUIVALENT-POS	5 U	--	5 U	--	5 U	--	5 U	--
BENZALDEHYDE	10 U	--	10 U	--	10 U	--	10 U	--
BENZO(A)ANTHRACENE	5 U	--	5 U	--	5 U	--	5 U	--
BENZO(A)PYRENE	5 U	--	5 U	--	5 U	--	5 U	--
BENZO(B)FLUORANTHENE	5 U	--	5 U	--	5 U	--	5 U	--
BENZO(G,H,I)PERYLENE	5 U	--	5 U	--	5 U	--	5 U	--
BENZO(K)FLUORANTHENE	5 U	--	5 U	--	5 U	--	5 U	--
BIS(2-CHLOROETHOXY)METHANE	5 U	--	5 U	--	5 U	--	5 U	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD323	SW/SD323	SW/SD324	SW/SD324	SW/SD325	SW/SD325	SW/SD326	SW/SD326
SAMPLE ID	SW323-20191204	SW323-20191204-F	SW324-20191204	SW324-20191204-F	SW325-20191204	SW325-20191204-F	SW326-20191204	SW326-20191204-F
SAMPLE DATE	20191204	20191204	20191204	20191204	20191204	20191204	20191204	20191204
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
BIS(2-CHLOROETHYL)ETHER	10 U	--	10 U	--	10 U	--	10 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	5 U	--	5 U	--	5 U	--	5 U	--
BUTYL BENZYL PHTHALATE	5 U	--	5 U	--	5 U	--	5 U	--
CAPROLACTAM	10 U	--	10 U	--	10 U	--	10 U	--
CARBAZOLE	10 U	--	10 U	--	10 U	--	10 U	--
CHRYSENE	5 U	--	5 U	--	5 U	--	5 U	--
DIBENZO(A,H)ANTHRACENE	5 U	--	5 U	--	5 U	--	5 U	--
DIBENZOFURAN	5 U	--	5 U	--	5 U	--	5 U	--
DIETHYL PHTHALATE	5 U	--	5 U	--	5 U	--	5 U	--
DIMETHYL PHTHALATE	5 U	--	5 U	--	5 U	--	1.2 J	--
DI-N-BUTYL PHTHALATE	5 U	--	5 U	--	5 U	--	5 U	--
DI-N-OCTYL PHTHALATE	10 U	--	10 U	--	10 UJ	--	10 UJ	--
FLUORANTHENE	10 U	--	10 U	--	10 U	--	10 U	--
FLUORENE	5 U	--	5 U	--	5 U	--	5 U	--
HEXACHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--
HEXACHLOROBUTADIENE	5 U	--	5 U	--	5 U	--	5 U	--
HEXACHLOROCYCLOPENTADIENE	10 U	--	10 U	--	10 U	--	10 U	--
HEXACHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0 U	--	0 U	--
INDENO(1,2,3-CD)PYRENE	5 U	--	5 U	--	5 U	--	5 U	--
ISOPHORONE	5 U	--	5 U	--	5 U	--	5 U	--
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0 U	--	0 U	--
NAPHTHALENE	5 U	--	5 U	--	5 U	--	5 U	--
NITROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--
N-NITROSO-DI-N-PROPYLAMINE	5 U	--	5 U	--	5 U	--	5 U	--
N-NITROSODIPHENYLAMINE	5 U	--	5 U	--	5 U	--	5 U	--
PENTACHLOROPHENOL	10 U	--	10 U	--	10 U	--	10 U	--
PHENANTHRENE	5 U	--	5 U	--	5 U	--	5 U	--
PHENOL	10 U	--	10 U	--	10 U	--	10 U	--
PYRENE	5 U	--	5 U	--	5 U	--	5 U	--
TOTAL PAHS	0 U	--	0 U	--	0 U	--	0 U	--
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L)								
2-METHYLNAPHTHALENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ACENAPHTHENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ACENAPHTHYLENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ANTHRACENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
BAP EQUIVALENT-HALFND	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
BAP EQUIVALENT-POS	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
BENZO(A)ANTHRACENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
BENZO(A)PYRENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
BENZO(B)FLUORANTHENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
BENZO(G,H,I)PERYLENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
BENZO(K)FLUORANTHENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
CHRYSENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
DIBENZO(A,H)ANTHRACENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
FLUORANTHENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
FLUORENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0 U	--	0 U	--
INDENO(1,2,3-CD)PYRENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0 U	--	0 U	--
NAPHTHALENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
PENTACHLOROPHENOL	0.2 U	--	0.2 U	--	0.2 U	--	0.2 U	--
PHENANTHRENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
PYRENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
TOTAL PAHS	0.1	--	0.1	--	0.1	--	0.1	--
PESTICIDES (UG/L)								
4,4'-DDD	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
4,4'-DDE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
4,4'-DDT	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ALDRIN	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
ALPHA-BHC	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
ALPHA-CHLORDANE	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
BETA-BHC	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
DELTA-BHC	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
DIELDRIN	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDOSULFAN I	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
ENDOSULFAN II	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDOSULFAN SULFATE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDRIN	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDRIN ALDEHYDE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDRIN KETONE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
GAMMA-BHC (LINDANE)	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
GAMMA-CHLORDANE	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
HEPTACHLOR	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD323	SW/SD323	SW/SD324	SW/SD324	SW/SD325	SW/SD325	SW/SD326	SW/SD326
SAMPLE ID	SW323-20191204	SW323-20191204-F	SW324-20191204	SW324-20191204-F	SW325-20191204	SW325-20191204-F	SW326-20191204	SW326-20191204-F
SAMPLE DATE	20191204	20191204	20191204	20191204	20191204	20191204	20191204	20191204
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
HEPTACHLOR EPOXIDE	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
METHOXYCHLOR	0.5 U	--	0.5 U	--	0.5 U	--	0.5 U	--
TOXAPHENE	5 U	--	5 U	--	5 U	--	5 U	--
PCBS (UG/L)								
AROCLOR-1016	1 U	--	1 U	--	1 U	--	1 U	--
AROCLOR-1221	1 U	--	1 U	--	1 U	--	1 U	--
AROCLOR-1232	1 U	--	1 U	--	1 U	--	1 U	--
AROCLOR-1242	1 U	--	1 U	--	1 U	--	1 U	--
AROCLOR-1248	1 U	--	1 U	--	1 U	--	1 U	--
AROCLOR-1254	0.14 J	--	1 U	--	1 U	--	1 U	--
AROCLOR-1260	1 U	--	1 U	--	1 U	--	1 U	--
AROCLOR-1262	1 U	--	1 U	--	1 U	--	1 U	--
AROCLOR-1268	1 U	--	1 U	--	1 U	--	1 U	--
TOTAL AROCLOR	0.14	--	0 U	--	0 U	--	0 U	--
TOTAL AROCLOR HALFND	4.14	--	4.5	--	4.5	--	4.5	--
PCB CONGENERS (UG/L)								
DICHLOROBIPHENYLS	0.000037 J	--	0.000036 J	--	0 UJ	--	0 UJ	--
HEPTACHLOROBIPHENYLS	0.001 J	--	0.0012 J	--	0.00076 J	--	0.00045 J	--
HEXACHLOROBIPHENYLS	0.0018 J	--	0.0019 J	--	0.0013 J	--	0.00072 J	--
MONOCHLOROBIPHENYLS	0 UJ	--	0 UJ	--	0 UJ	--	0 UJ	--
NONACHLOROBIPHENYLS	0.000018 J	--	0.000021 J	--	0.000018 J	--	0 UJ	--
OCTACHLOROBIPHENYLS	0.00022 J	--	0.00027 J	--	0.00017 J	--	0.000084 J	--
PCB-1	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-10	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-100	--	--	--	--	--	--	0.00002 U	--
PCB-101/90	--	--	--	--	--	--	0.000096	--
PCB-103	0.000022 U	--	0.00001 J	--	0.0000031 J	--	0.00002 U	--
PCB-104	0.000022 U	--	0.00002 U	--	0.0000014 J	--	0.00002 U	--
PCB-105	0.000065	--	0.000044	--	0.000034	--	0.000028	--
PCB-106	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-107	0.0000068 J	--	0.00002 U	--	0.000021 U	--	--	--
PCB-108/107	--	--	--	--	--	--	0.00004 U	--
PCB-108/124	0.000043 U	--	0.0000053 J	--	0.0000043 J	--	--	--
PCB-109	--	--	--	--	--	--	0.00002 U	--
PCB-11	0.000037 U	--	0.000036 U	--	0.000021 U	--	0.00002 U	--
PCB-110	--	--	--	--	--	--	0.000073	--
PCB-110/115	0.0002	--	0.00015	--	0.00011	--	--	--
PCB-111	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-111/115	--	--	--	--	--	--	0.00004 U	--
PCB-112	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-113	--	--	--	--	--	--	0.00002 U	--
PCB-114	0.0000027 U	--	0.0000032 U	--	0.0000029 U	--	0.0000085 U	--
PCB-118	0.00013	--	0.00011	--	0.000077	--	--	--
PCB-118/106	--	--	--	--	--	--	0.000059	--
PCB-119	--	--	--	--	--	--	0.00002 U	--
PCB-12	--	--	--	--	--	--	0.00002 U	--
PCB-12/13	0.000043 U	--	0.00004 U	--	0.000042 U	--	--	--
PCB-120	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-121	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-122	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-123	0.0000026 U	--	0.0000031 U	--	0.0000028 U	--	0.0000056 U	--
PCB-124	--	--	--	--	--	--	0.00002 U	--
PCB-126	0.0000033 U	--	0.0000038 U	--	0.0000035 U	--	0.0000097 U	--
PCB-127	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-128/162	--	--	--	--	--	--	0.000019 J	--
PCB-128/166	0.000051	--	0.00004 U	--	0.000042 U	--	--	--
PCB-129	--	--	--	--	--	--	0.00002 U	--
PCB-129/138/163	0.00042	--	0.00041	--	0.0003	--	--	--
PCB-13	--	--	--	--	--	--	0.00002 U	--
PCB-130	0.000019 J	--	0.000017 J	--	0.000013 J	--	0.00002 U	--
PCB-131	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-131/133	--	--	--	--	--	--	0.00004 U	--
PCB-132	0.00013	--	0.00012	--	0.000083	--	--	--
PCB-132/161	--	--	--	--	--	--	0.000033 J	--
PCB-133	0.0000051 J	--	0.0000078 J	--	0.000021 U	--	--	--
PCB-134	0.000024	--	0.000021	--	0.000014 J	--	--	--
PCB-134/143	--	--	--	--	--	--	0.00004 U	--
PCB-135	--	--	--	--	--	--	0.000028	--
PCB-135/151	0.00016	--	0.00019	--	0.00012	--	--	--
PCB-136	0.000057	--	0.000063	--	0.000039	--	0.000024	--
PCB-137	0.00001 J	--	0.00002 U	--	0.0000072 J	--	0.00002 U	--
PCB-138/163/164	--	--	--	--	--	--	0.00015	--
PCB-139/140	0.0000039 J	--	0.00004 U	--	0.000042 U	--	--	--
PCB-139/149	--	--	--	--	--	--	0.00013	--
PCB-14	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-140	--	--	--	--	--	--	0.00002 U	--
PCB-141	0.000086	--	0.000087	--	0.000062	--	0.000041	--
PCB-142	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-143	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-144	0.000021 J	--	0.000022	--	0.000015 J	--	0.00002 U	--
PCB-145	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-146	0.000051	--	0.000057	--	0.000036	--	--	--
PCB-146/165	--	--	--	--	--	--	0.000023 J	--
PCB-147	--	--	--	--	--	--	0.00002 U	--
PCB-147/149	0.00033	--	0.00035	--	0.00024	--	--	--
PCB-148	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-15	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-150	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-151	--	--	--	--	--	--	0.000057	--
PCB-152	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD323	SW/SD323	SW/SD324	SW/SD324	SW/SD325	SW/SD325	SW/SD326	SW/SD326
SAMPLE ID	SW323-20191204	SW323-20191204-F	SW324-20191204	SW324-20191204-F	SW325-20191204	SW325-20191204-F	SW326-20191204	SW326-20191204-F
SAMPLE DATE	20191204	20191204	20191204	20191204	20191204	20191204	20191204	20191204
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-153	--	--	--	--	--	--	0.00018	--
PCB-153/168	0.00036	--	0.00039	--	0.00027	--	--	--
PCB-154	0.000022 U	--	0.0000056 J	--	0.000021 U	--	0.00002 U	--
PCB-155	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-156	--	--	--	--	--	--	0.000014 J	--
PCB-156/157	0.000038 J	--	0.000035 J	--	0.000027 J	--	--	--
PCB-157	--	--	--	--	--	--	0.0000064 U	--
PCB-158	0.000034	--	0.000032	--	0.000024	--	--	--
PCB-158/160	--	--	--	--	--	--	0.000019 J	--
PCB-159	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-16	0.0000051 J	--	0.00002 U	--	0.0000062 J	--	0.00002 U	--
PCB-160	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-161	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-162	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-164	0.000028	--	0.000029	--	0.00002 J	--	--	--
PCB-165	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-166	--	--	--	--	--	--	0.00002 U	--
PCB-167	0.000012 J	--	0.000014 J	--	0.0000097 J	--	0.0000066 U	--
PCB-168	--	--	--	--	--	--	0.00002 U	--
PCB-169	0.0000034 U	--	0.0000042 U	--	0.0000034 U	--	0.0000082 U	--
PCB-17	0.0000048 J	--	0.0000071 J	--	0.000005 J	--	0.00002 U	--
PCB-170	0.00012	--	0.00013	--	0.000088	--	0.00005	--
PCB-171	--	--	--	--	--	--	0.000019 J	--
PCB-171/173	0.000043 U	--	0.000044	--	0.000042 U	--	--	--
PCB-172	0.000021 J	--	0.000025	--	0.000016 J	--	0.00002 U	--
PCB-173	--	--	--	--	--	--	0.00002 U	--
PCB-174	0.00014	--	0.00015	--	0.0001	--	0.000062	--
PCB-175	0.000022 U	--	0.0000065 J	--	0.0000039 J	--	0.00002 U	--
PCB-176	0.000017 J	--	0.000019 J	--	0.000013 J	--	0.000012 J	--
PCB-177	0.000078	--	0.000087	--	0.000057	--	0.000034	--
PCB-178	0.000029	--	0.000037	--	0.000022	--	0.000019 J	--
PCB-179	0.00006	--	0.000072	--	0.000044	--	0.000027	--
PCB-18	--	--	--	--	--	--	0.000013 J	--
PCB-18/30	0.000011 J	--	0.000015 J	--	0.00001 J	--	--	--
PCB-180	--	--	--	--	--	--	0.00011	--
PCB-180/193	0.00026	--	0.0003	--	0.00019	--	--	--
PCB-181	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-182	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-182/187	--	--	--	--	--	--	0.000065	--
PCB-183	--	--	--	--	--	--	0.000038	--
PCB-183/185	0.000084	--	0.000099	--	0.000062	--	--	--
PCB-184	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-185	--	--	--	--	--	--	0.00002 U	--
PCB-186	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-187	0.00015	--	0.00018	--	0.00012	--	--	--
PCB-188	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-189	0.0000054 J	--	0.000006 J	--	0.0000039 Z	--	0.0000061 U	--
PCB-19	0.0000049 J	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-190	0.000026	--	0.000031	--	0.000019 J	--	0.000013 J	--
PCB-191	0.000022 U	--	0.0000054 J	--	0.000021 U	--	0.00002 U	--
PCB-192	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-193	--	--	--	--	--	--	0.00002 U	--
PCB-194	0.000052	--	0.000062	--	0.00004	--	0.000024	--
PCB-195	0.000024	--	0.000029	--	0.000021 U	--	0.000011 J	--
PCB-196	0.000027	--	0.000031	--	0.000021 U	--	--	--
PCB-196/203	--	--	--	--	--	--	0.000027 J	--
PCB-197	--	--	--	--	--	--	0.00002 U	--
PCB-197/200	0.0000099 J	--	0.000013 J	--	0.0000073 J	--	--	--
PCB-198	--	--	--	--	--	--	0.00002 U	--
PCB-198/199	0.000058	--	0.000073	--	0.000046	--	--	--
PCB-199	--	--	--	--	--	--	0.000022	--
PCB-2	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-20/21/33	--	--	--	--	--	--	0.00006 U	--
PCB-20/28	0.000015 J	--	0.000021 J	--	0.000017 J	--	--	--
PCB-200	--	--	--	--	--	--	0.00002 U	--
PCB-201	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-202	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-203	0.000035	--	0.000041	--	0.000028	--	--	--
PCB-204	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-205	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-206	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-207	0.000022 U	--	0.00002 U	--	0.0000019 J	--	0.00002 U	--
PCB-208	0.0000041 J	--	0.0000046 J	--	0.0000038 J	--	0.00002 U	--
PCB-209	0.0000056 J	--	0.0000081 J	--	0.0000065 J	--	0.00002 U	--
PCB-21/33	0.000043 U	--	0.00004 U	--	0.000042 U	--	--	--
PCB-22	0.000006 J	--	0.0000077 J	--	0.0000061 J	--	0.00002 U	--
PCB-23	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-24	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-25	0.0000022 J	--	0.0000029 J	--	0.0000024 J	--	0.00002 U	--
PCB-26	--	--	--	--	--	--	0.00002 U	--
PCB-26/29	0.0000027 J	--	0.0000041 J	--	0.0000036 J	--	--	--
PCB-27	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-28	--	--	--	--	--	--	0.000014 J	--
PCB-29	--	--	--	--	--	--	0.00002 U	--
PCB-3	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-30	--	--	--	--	--	--	0.00002 U	--
PCB-31	0.000014 J	--	0.000018 J	--	0.000014 J	--	0.000017 J	--

LOCATION	SW/SD323	SW/SD323	SW/SD324	SW/SD324	SW/SD325	SW/SD325	SW/SD326	SW/SD326
SAMPLE ID	SW323-20191204	SW323-20191204-F	SW324-20191204	SW324-20191204-F	SW325-20191204	SW325-20191204-F	SW326-20191204	SW326-20191204-F
SAMPLE DATE	20191204	20191204	20191204	20191204	20191204	20191204	20191204	20191204
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-32	0.000004 J	--	0.0000054 J	--	0.0000039 J	--	0.00002 U	--
PCB-34	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-35	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-36	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-37	0.0000049 J	--	0.0000072 J	--	0.0000051 J	--	0.00002 U	--
PCB-38	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-39	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-4	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-40	--	--	--	--	--	--	0.00002 U	--
PCB-40/71	0.0000087 J	--	0.000011 J	--	0.0000083 J	--	--	--
PCB-41	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	0.000013 J	--
PCB-42	0.000022 U	--	0.000006 J	--	0.000021 U	--	--	--
PCB-42/59	--	--	--	--	--	--	0.00004 U	--
PCB-43	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-43/49	--	--	--	--	--	--	0.000023 J	--
PCB-44	--	--	--	--	--	--	0.000018 J	--
PCB-44/47/65	0.000065 U	--	0.000069	--	0.000063 U	--	--	--
PCB-45	--	--	--	--	--	--	0.00002 U	--
PCB-45/51	0.000012 J	--	0.000026 J	--	0.000009 J	--	--	--
PCB-46	0.000022 U	--	0.0000036 J	--	0.000021 U	--	0.00002 U	--
PCB-47	--	--	--	--	--	--	0.000013 J	--
PCB-48	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-48/75	--	--	--	--	--	--	0.00004 U	--
PCB-49/69	0.000028 J	--	0.000045	--	0.000024 J	--	--	--
PCB-5	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-50	--	--	--	--	--	--	0.00002 U	--
PCB-50/53	0.000012 J	--	0.000024 J	--	0.000012 J	--	--	--
PCB-51	--	--	--	--	--	--	0.00002 U	--
PCB-52	0.00007	--	0.000085	--	0.000059	--	--	--
PCB-52/69	--	--	--	--	--	--	0.000043	--
PCB-53	--	--	--	--	--	--	0.000013 J	--
PCB-54	0.0000027 J	--	0.0000059 J	--	0.0000025 J	--	0.00002 U	--
PCB-55	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-56	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-56/60	--	--	--	--	--	--	0.00004 U	--
PCB-57	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-58	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-59/62/75	0.000065 U	--	0.00006 U	--	0.000063 U	--	--	--
PCB-6	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-60	0.0000046 J	--	0.0000055 J	--	0.0000039 J	--	--	--
PCB-61/70	--	--	--	--	--	--	0.00002 J	--
PCB-61/70/74/76	0.000086 U	--	0.00008 U	--	0.000083 U	--	--	--
PCB-62	--	--	--	--	--	--	0.00002 U	--
PCB-63	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-64	0.0000097 J	--	0.000012 J	--	0.0000078 J	--	--	--
PCB-65	--	--	--	--	--	--	0.00002 U	--
PCB-66	0.000022 U	--	0.000021	--	0.000021 U	--	--	--
PCB-66/76	--	--	--	--	--	--	0.000014 J	--
PCB-67	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-68	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-7	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-72	0.000022 U	--	0.00002 U	--	0.000021 U	--	--	--
PCB-73	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-74	--	--	--	--	--	--	0.00002 U	--
PCB-77	0.0000028 U	--	0.0000034 U	--	0.0000025 Z	--	0.0000099 U	--
PCB-78	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-79	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-8	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-80	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-81	0.0000027 U	--	0.0000032 U	--	0.0000021 U	--	0.0000078 U	--
PCB-82	0.000022 U	--	0.000011 J	--	0.0000081 J	--	0.00002 U	--
PCB-83	0.000022 U	--	0.00002 U	--	0.0000048 J	--	--	--
PCB-83/112	--	--	--	--	--	--	0.00004 U	--
PCB-84	0.000035	--	0.000024	--	0.00002 J	--	--	--
PCB-84/92	--	--	--	--	--	--	0.000031 J	--
PCB-85/116	--	--	--	--	--	--	0.00004 U	--
PCB-85/116/117	0.000021 J	--	0.000013 J	--	0.000063 U	--	--	--
PCB-86	--	--	--	--	--	--	0.00002 U	--
PCB-86/87/97/109/119/125	0.00013 U	--	0.00012 U	--	0.00013 U	--	--	--
PCB-87/117/125	--	--	--	--	--	--	0.000029 J	--
PCB-88/91	0.000019 J	--	0.000025 J	--	0.000012 J	--	0.00004 U	--
PCB-89	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-9	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--
PCB-90/101/113	0.00019	--	0.00018	--	0.00013	--	--	--
PCB-92	0.000033	--	0.000032	--	0.000021	--	--	--
PCB-93	--	--	--	--	--	--	0.00002 U	--
PCB-93/100	0.0000036 J	--	0.0000089 J	--	0.0000034 J	--	--	--
PCB-94	0.000022 U	--	0.00002 U	--	0.000021 U	--	0.00002 U	--

LOCATION	SW/SD323	SW/SD323	SW/SD324	SW/SD324	SW/SD325	SW/SD325	SW/SD326	SW/SD326
SAMPLE ID	SW323-20191204	SW323-20191204-F	SW324-20191204	SW324-20191204-F	SW325-20191204	SW325-20191204-F	SW326-20191204	SW326-20191204-F
SAMPLE DATE	20191204	20191204	20191204	20191204	20191204	20191204	20191204	20191204
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-95	0.00016	--	0.00016	--	0.00011	--	0.00008	--
PCB-96	0.0000015 J	--	0.0000045 J	--	0.000021 U	--	0.00002 U	--
PCB-97	--	--	--	--	--	--	0.000018 J	--
PCB-98/102	0.0000041 J	--	0.0000054 J	--	0.000042 U	--	0.00004 U	--
PCB-99	0.000051	--	0.000048	--	0.000033	--	0.000028	--
PENTACHLOROBIPHENYLS	0.001 J	--	0.00091 J	--	0.00063 J	--	0.00044 J	--
TEQ DIOXIN-LIKE PCBs (BIRD)	1.1774E-08	--	9.2E-09	--	1.32006E-07	--	4.2E-09	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	3.83622E-07	--	4.46475E-07	--	4.13865E-07	--	1.13164E-06	--
TEQ DIOXIN-LIKE PCBs (FISH)	1.252E-09	--	1.045E-09	--	1.007E-09	--	2.1E-10	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	1.0414E-08	--	1.1635E-08	--	1.0381E-08	--	2.7192E-08	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	7.512E-09	--	6.27E-09	--	4.798E-09	--	1.26E-09	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	2.24136E-07	--	2.60014E-07	--	2.31198E-07	--	6.11422E-07	--
TETRACHLOROBIPHENYLS	0.00028 J	--	0.00038 J	--	0.00022 J	--	0.00016 J	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0002504	--	0.000209	--	0.0001541	--	0.000042	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.0039379	--	0.0043285	--	0.0027725	--	0.001852	--
TOTAL PCB CONGENERS ZEROND	0.0041883	--	0.0045375	--	0.0029266	--	0.001894	--
TOTAL PCB CONGENERS-NOAA	0.0018716	--	0.0019921	--	0.0013015	--	0.00087	--
TOTAL PCB CONGENERS-NOAA HALFND	0.00534355	--	0.00552595	--	0.00410095	--	0.0032484	--
TOTAL PCB CONGENERS-NOAA X2	0.0037432	--	0.0039842	--	0.002603	--	0.00174	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0038742	--	0.0040642	--	0.002792	--	0.0018	--
TRICHLOROBIPHENYLS	0.000075 J	--	0.000089 J	--	0.000079 J	--	0.000044 J	--
DIOXINS/FURANS (PG/L)								
1,2,3,4,6,7,8,9-OCDD	21 J	--	18 J	--	16 J	--	19 J	--
1,2,3,4,6,7,8,9-OCDF	5.8 U	--	5.5 U	--	5.5 U	--	3.5 U	--
1,2,3,4,6,7,8-HPCDD	4 U	--	3.7 U	--	3.8 U	--	3.9 U	--
1,2,3,4,6,7,8-HPCDF	2.7 U	--	2.5 U	--	2.5 U	--	2.1 U	--
1,2,3,4,7,8,9-HPCDF	4.3 U	--	4.1 U	--	4.1 U	--	2.8 U	--
1,2,3,4,7,8-HXCDD	1.8 U	--	1.7 U	--	1.6 U	--	3 U	--
1,2,3,4,7,8-HXCDF	2.2 U	--	2.1 U	--	2.1 U	--	2.3 U	--
1,2,3,6,7,8-HXCDD	2 U	--	1.9 U	--	1.9 U	--	2.3 U	--
1,2,3,6,7,8-HXCDF	1.8 U	--	1.7 U	--	1.7 U	--	1.8 U	--
1,2,3,7,8,9-HXCDD	2.2 U	--	2.1 U	--	2.1 U	--	2 U	--
1,2,3,7,8,9-HXCDF	4.1 U	--	3.8 U	--	3.9 U	--	2.2 U	--
1,2,3,7,8-PECDD	2.4 U	--	2.2 U	--	2.3 U	--	2 U	--
1,2,3,7,8-PECDF	2.5 U	--	2.3 U	--	2.3 U	--	1.6 U	--
2,3,4,6,7,8-HXCDF	2.1 U	--	2 U	--	2 U	--	1.6 U	--
2,3,4,7,8-PECDF	2.8 U	--	2.6 U	--	2.6 U	--	1.5 U	--
2,3,7,8-TCDD	2 U	--	1.6 U	--	2 U	--	1 U	--
2,3,7,8-TCDF	1.8 U	--	1.7 U	--	1.8 U	--	1 U	--
TEQ DIOXINS (BIRD)	0.0021	--	0.0018	--	0.0016	--	0.0019	--
TEQ DIOXINS (BIRD) HALFND	5.33939	--	4.838925	--	5.141275	--	3.440025	--
TEQ DIOXINS (FISH)	0.0021	--	0.0018	--	0.0016	--	0.0019	--
TEQ DIOXINS (FISH) HALFND	4.02789	--	3.611925	--	3.844275	--	3.135025	--
TEQ DIOXINS (HUMANS/MAMMALS)	0.0063	--	0.0054	--	0.0048	--	0.0057	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	3.61967	--	3.232225	--	3.487125	--	2.609225	--
TOTAL HPCDD	3.4 UJ	--	1.8 UJ	--	2.2 UJ	--	0 UJ	--
TOTAL HPCDF	2 UJ	--	1 UJ	--	0.95 UJ	--	0 UJ	--
TOTAL HXCDD	1.7 UJ	--	1.6 UJ	--	1.6 UJ	--	0 UJ	--
TOTAL HXCDF	1.8 UJ	--	0.55 UJ	--	0.75 UJ	--	0 UJ	--
TOTAL PECDD	2.4 UJ	--	2.2 UJ	--	2.3 UJ	--	0 UJ	--
TOTAL PECDF	0.99 UJ	--	0.86 UJ	--	0.9 UJ	--	0 UJ	--
TOTAL TCDD	2 UJ	--	1.6 UJ	--	2 UJ	--	0 UJ	--
TOTAL TCDF	1.8 UJ	--	1.7 UJ	--	1.8 UJ	--	0 UJ	--
METALS (UG/L)								
ALUMINUM	65.8	20 U	67.8	20 U	54.6	20 U	32.1	20 U
ANTIMONY	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
ARSENIC	0.41 J	0.28 J	0.5 J	0.28 J	0.4 J	0.33 J	0.43 J	0.33 J
BARIUM	27.9	25.7	28.9	24.8	27.1	25.2	26.8	25.3
BERYLLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM	24400	24400	24800	23800	25000	24400	24200	23900
CHROMIUM	0.21 J	2 U	0.15 J	2 U	0.11 J	2 U	0.1 J	2 U
COBALT	0.3 J	0.2 J	0.41 J	0.22 J	0.34 J	0.23 J	0.34 J	0.26 J
COPPER	2.3	2 U	2.8	2 U	2.2	2 U	2.1	2 U
CYANIDE	10 U	--	10 U	--	10 U	--	10 U	--
IRON	369	200 U	400	200 U	324	200 U	277	200 U
LEAD	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
MAGNESIUM	4690	4380	4670	4520	4660	4490	4620	4590
MANGANESE	39.4	24.2	42.4	19.6	36.4	22.6	36.3	26.4
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	1.6	1.3	1.6	1.3	1.5	1.3	1.5	1.3
POTASSIUM	2840	2630	3760	3600	3660	3520	3830	3750
SELENIUM	0.56 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SILVER	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
SODIUM	18300	17300	22200	21600	21600	21100	22000	21800
THALLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VANADIUM	0.25 J	0.11 J	0.24 J	0.11 J	0.23 J	0.11 J	0.21 J	0.11 J
ZINC	20.4	15	31.3	23.3	25	20.7	24.8	22.9

LOCATION	SW/SD327	SW/SD327	SW/SD327	SW/SD327	SW/SD328	SW/SD328	SW/SD329
SAMPLE ID	SW327-20191205	SW327-20191205-D	SW327-20191205-F	SW327-20191205-F-D	SW328-20191203	SW328-20191203-F	SW329-20191203
SAMPLE DATE	20191205	20191205	20191205	20191205	20191203	20191203	20191203
DUPLICATE		SW327-20191205		SW327-20191205-F			
SAMPLE CODE	ORIG	DUP	ORIG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
VOLATILES (UG/L)							
1,1,1-TRICHLOROETHANE	5 U	5 U	--	--	5 U	--	5 U
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	--	--	5 U	--	5 U
1,1,2-TRICHLOROETHANE	5 U	5 U	--	--	5 U	--	5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	5 U	--	--	5 U	--	5 U
1,1-DICHLOROETHANE	5 U	5 U	--	--	5 U	--	5 U
1,1-DICHLOROETHENE	5 U	5 U	--	--	5 U	--	5 U
1,2,3-TRICHLOROBENZENE	5 U	5 U	--	--	5 U	--	5 U
1,2,4-TRICHLOROBENZENE	5 U	5 U	--	--	5 U	--	5 U
1,2-DIBROMO-3-CHLOROPROPANE	5 U	5 U	--	--	5 U	--	5 U
1,2-DIBROMOETHANE	5 U	5 U	--	--	5 U	--	5 U
1,2-DICHLOROBENZENE	5 U	5 U	--	--	5 U	--	5 U
1,2-DICHLOROETHANE	5 U	5 U	--	--	5 U	--	5 U
1,2-DICHLOROPROPANE	5 U	5 U	--	--	5 U	--	5 U
1,3-DICHLOROBENZENE	5 U	5 U	--	--	5 U	--	5 U
1,4-DICHLOROBENZENE	5 U	5 U	--	--	5 U	--	5 U
2-BUTANONE	10 U	10 U	--	--	10 U	--	10 U
2-HEXANONE	10 U	10 U	--	--	10 U	--	10 U
4-METHYL-2-PENTANONE	10 U	10 U	--	--	10 U	--	10 U
ACETONE	10 U	10 U	--	--	10 U	--	10 U
BENZENE	5 U	5 U	--	--	5 U	--	5 U
BROMOCHLOROMETHANE	5 U	5 U	--	--	5 U	--	5 U
BROMODICHLOROMETHANE	5 U	5 U	--	--	5 U	--	5 U
BROMOFORM	5 U	5 U	--	--	5 U	--	5 U
BROMOMETHANE	5 U	5 U	--	--	5 U	--	5 U
CARBON DISULFIDE	5 U	5 U	--	--	5 U	--	5 U
CARBON TETRACHLORIDE	5 U	5 U	--	--	5 U	--	5 U
CHLOROBENZENE	5 U	5 U	--	--	5 U	--	5 U
CHLORODIBROMOMETHANE	5 U	5 U	--	--	5 U	--	5 U
CHLOROETHANE	5 U	5 U	--	--	5 U	--	5 U
CHLOROFORM	5 U	5 U	--	--	5 U	--	5 U
CHLOROMETHANE	5 U	5 U	--	--	0.96 J	--	0.91 J
CIS-1,2-DICHLOROETHENE	5 U	5 U	--	--	5 U	--	5 U
CIS-1,3-DICHLOROPROPENE	5 U	5 U	--	--	5 U	--	5 U
CYCLOHEXANE	5 U	5 U	--	--	5 U	--	5 U
DICHLORODIFLUOROMETHANE	5 U	5 U	--	--	5 U	--	5 U
ETHYLBENZENE	5 U	5 U	--	--	5 U	--	5 U
ISOPROPYLBENZENE	5 U	5 U	--	--	5 U	--	5 U
M+P-XYLENES	5 U	5 U	--	--	5 U	--	5 U
METHYL ACETATE	5 U	5 U	--	--	5 U	--	5 U
METHYL CYCLOHEXANE	5 U	5 U	--	--	5 U	--	5 U
METHYL TERT-BUTYL ETHER	5 U	5 U	--	--	5 U	--	5 U
METHYLENE CHLORIDE	5 U	5 U	--	--	5 U	--	5 U
O-XYLENE	5 U	5 U	--	--	5 U	--	5 U
STYRENE	5 U	5 U	--	--	5 U	--	5 U
TETRACHLOROETHENE	5 U	5 U	--	--	5 U	--	5 U
TOLUENE	5 U	5 U	--	--	5 U	--	5 U
TRANS-1,2-DICHLOROETHENE	5 U	5 U	--	--	5 U	--	5 U
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	--	--	5 U	--	5 U
TRICHLOROETHENE	5 U	5 U	--	--	5 U	--	5 U
TRICHLOROFLUOROMETHANE	5 U	5 U	--	--	5 U	--	5 U
VINYL CHLORIDE	5 U	5 U	--	--	5 U	--	5 U
VOLATILES-TRACE (UG/L)							
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD327	SW/SD327	SW/SD327	SW/SD327	SW/SD328	SW/SD328	SW/SD329
SAMPLE ID	SW327-20191205	SW327-20191205-D	SW327-20191205-F	SW327-20191205-F-D	SW328-20191203	SW328-20191203-F	SW329-20191203
SAMPLE DATE	20191205	20191205	20191205	20191205	20191203	20191203	20191203
DUPLICATE		SW327-20191205		SW327-20191205-F			
SAMPLE CODE	ORIG	DUP	ORIG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
ACETONE	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,1-BIPHENYL	5 U	5 U	--	--	5 U	--	5 U
1,2,4,5-TETRACHLOROBENZENE	5 U	5 U	--	--	5 U	--	5 U
1,4-DIOXANE	2 U	2 U	--	--	2 U	--	2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	10 U	--	--	10 U	--	10 U
2,3,4,6-TETRACHLOROPHENOL	5 U	5 U	--	--	5 U	--	5 U
2,4,5-TRICHLOROPHENOL	5 U	5 U	--	--	5 U	--	5 U
2,4,6-TRICHLOROPHENOL	5 U	5 U	--	--	5 U	--	5 U
2,4-DICHLOROPHENOL	5 U	5 U	--	--	5 U	--	5 U
2,4-DIMETHYLPHENOL	5 U	5 U	--	--	5 U	--	5 U
2,4-DINITROPHENOL	10 U	10 U	--	--	10 U	--	10 U
2,4-DINITROTOLUENE	5 U	5 U	--	--	5 U	--	5 U
2,6-DINITROTOLUENE	5 U	5 U	--	--	5 U	--	5 U
2-CHLORONAPHTHALENE	5 U	5 U	--	--	5 U	--	5 U
2-CHLOROPHENOL	5 U	5 U	--	--	5 U	--	5 U
2-METHYLNAPHTHALENE	5 U	5 U	--	--	5 U	--	5 U
2-METHYLPHENOL	10 U	10 U	--	--	10 U	--	10 U
2-NITROANILINE	5 U	5 U	--	--	5 U	--	5 U
2-NITROPHENOL	5 U	5 U	--	--	5 U	--	5 U
3&4-METHYLPHENOL	10 U	10 U	--	--	10 U	--	10 U
3,3'-DICHLOROBENZIDINE	10 U	10 U	--	--	10 U	--	10 U
3-NITROANILINE	10 U	10 U	--	--	10 U	--	10 U
4,6-DINITRO-2-METHYLPHENOL	10 U	10 U	--	--	10 U	--	10 U
4-BROMOPHENYL PHENYL ETHER	5 U	5 U	--	--	5 U	--	5 U
4-CHLORO-3-METHYLPHENOL	5 U	5 U	--	--	5 U	--	5 U
4-CHLOROANILINE	10 U	10 U	--	--	10 U	--	10 U
4-CHLOROPHENYL PHENYL ETHER	5 U	5 U	--	--	5 U	--	5 U
4-NITROANILINE	10 U	10 U	--	--	10 U	--	10 U
4-NITROPHENOL	10 U	10 U	--	--	10 U	--	10 U
ACENAPHTHENE	5 U	5 U	--	--	5 U	--	5 U
ACENAPHTHYLENE	5 U	5 U	--	--	5 U	--	5 U
ACETOPHENONE	10 U	10 U	--	--	10 U	--	10 U
ANTHRACENE	5 U	5 U	--	--	5 U	--	5 U
ATRAZINE	10 U	10 U	--	--	10 U	--	10 U
BAP EQUIVALENT-HALFND	5 U	5 U	--	--	5 U	--	5 U
BAP EQUIVALENT-POS	5 U	5 U	--	--	5 U	--	5 U
BENZALDEHYDE	10 U	10 U	--	--	10 U	--	10 U
BENZO(A)ANTHRACENE	5 U	5 U	--	--	5 U	--	5 U
BENZO(A)PYRENE	5 U	5 U	--	--	5 U	--	5 U
BENZO(B)FLUORANTHENE	5 U	5 U	--	--	5 U	--	5 U
BENZO(G,H,I)PERYLENE	5 U	5 U	--	--	5 U	--	5 U
BENZO(K)FLUORANTHENE	5 U	5 U	--	--	5 U	--	5 U
BIS(2-CHLOROETHOXY)METHANE	5 U	5 U	--	--	5 U	--	5 U

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD327	SW/SD327	SW/SD327	SW/SD327	SW/SD328	SW/SD328	SW/SD329
SAMPLE ID	SW327-20191205	SW327-20191205-D	SW327-20191205-F	SW327-20191205-F-D	SW328-20191203	SW328-20191203-F	SW329-20191203
SAMPLE DATE	20191205	20191205	20191205	20191205	20191203	20191203	20191203
DUPLICATE		SW327-20191205		SW327-20191205-F			
SAMPLE CODE	ORIG	DUP	ORIG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
BIS(2-CHLOROETHYL)ETHER	10 U	10 U	--	--	10 U	--	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	5 U	5 U	--	--	5 U	--	5 U
BUTYL BENZYL PHTHALATE	5 U	5 U	--	--	5 U	--	5 U
CAPROLACTAM	10 U	10 U	--	--	10 U	--	10 U
CARBAZOLE	10 U	10 U	--	--	10 U	--	10 U
CHRYSENE	5 U	5 U	--	--	5 U	--	5 U
DIBENZO(A,H)ANTHRACENE	5 U	5 U	--	--	5 U	--	5 U
DIBENZOFURAN	5 U	5 U	--	--	5 U	--	5 U
DIETHYL PHTHALATE	5 U	5 U	--	--	5 U	--	5 U
DIMETHYL PHTHALATE	5 U	5 U	--	--	5 U	--	5 U
DI-N-BUTYL PHTHALATE	5 U	5 U	--	--	5 U	--	5 U
DI-N-OCTYL PHTHALATE	10 U	10 U	--	--	10 U	--	10 U
FLUORANTHENE	10 U	10 U	--	--	10 U	--	10 U
FLUORENE	5 U	5 U	--	--	5 U	--	5 U
HEXACHLOROBENZENE	5 U	5 U	--	--	5 U	--	5 U
HEXACHLOROBUTADIENE	5 U	5 U	--	--	5 U	--	5 U
HEXACHLOROCYCLOPENTADIENE	10 U	10 U	--	--	10 U	--	10 U
HEXACHLOROETHANE	5 U	5 U	--	--	5 U	--	5 U
HIGH MOLECULAR WEIGHT PAHS	0 U	0 U	--	--	0 U	--	0 U
INDENO(1,2,3-CD)PYRENE	5 U	5 U	--	--	5 U	--	5 U
ISOPHORONE	5 U	5 U	--	--	5 U	--	5 U
LOW MOLECULAR WEIGHT PAHS	0 U	0 U	--	--	0 U	--	0 U
NAPHTHALENE	5 U	5 U	--	--	5 U	--	5 U
NITROBENZENE	5 U	5 U	--	--	5 U	--	5 U
N-NITROSO-DI-N-PROPYLAMINE	5 U	5 U	--	--	5 U	--	5 U
N-NITROSODIPHENYLAMINE	5 U	5 U	--	--	5 U	--	5 U
PENTACHLOROPHENOL	10 U	10 U	--	--	10 U	--	10 U
PHENANTHRENE	5 U	5 U	--	--	5 U	--	5 U
PHENOL	10 U	10 U	--	--	10 U	--	10 U
PYRENE	5 U	5 U	--	--	5 U	--	5 U
TOTAL PAHS	0 U	0 U	--	--	0 U	--	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L							
2-METHYLNAPHTHALENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
ACENAPHTHENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
ACENAPHTHYLENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
ANTHRACENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
BAP EQUIVALENT-HALFND	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
BAP EQUIVALENT-POS	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
BENZO(A)ANTHRACENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
BENZO(A)PYRENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
BENZO(B)FLUORANTHENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
BENZO(G,H,I)PERYLENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
BENZO(K)FLUORANTHENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
CHRYSENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
DIBENZO(A,H)ANTHRACENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
FLUORANTHENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
FLUORENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
HIGH MOLECULAR WEIGHT PAHS	0 U	0 U	--	--	0 U	--	0 U
INDENO(1,2,3-CD)PYRENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
LOW MOLECULAR WEIGHT PAHS	0 U	0 U	--	--	0 U	--	0 U
NAPHTHALENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
PENTACHLOROPHENOL	0.2 U	0.2 U	--	--	0.2 U	--	0.2 U
PHENANTHRENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
PYRENE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
TOTAL PAHS	0.1	0.1	--	--	0.1	--	0.1
PESTICIDES (UG/L)							
4,4'-DDD	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
4,4'-DDE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
4,4'-DDT	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
ALDRIN	0.05 U	0.05 U	--	--	0.05 U	--	0.05 U
ALPHA-BHC	0.05 U	0.05 U	--	--	0.05 U	--	0.05 U
ALPHA-CHLORDANE	0.05 U	0.05 U	--	--	0.05 U	--	0.05 U
BETA-BHC	0.05 U	0.05 U	--	--	0.05 U	--	0.05 U
DELTA-BHC	0.05 U	0.05 U	--	--	0.05 U	--	0.05 U
DIELDRIN	0.1 U	0.1 U	--	--	0.1 U	--	0.0056 J
ENDOSULFAN I	0.05 U	0.05 U	--	--	0.05 U	--	0.05 U
ENDOSULFAN II	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
ENDOSULFAN SULFATE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
ENDRIN	0.1 U	0.1 U	--	--	0.1 U	--	0.0056 J
ENDRIN ALDEHYDE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
ENDRIN KETONE	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U
GAMMA-BHC (LINDANE)	0.05 U	0.05 U	--	--	0.05 U	--	0.05 U
GAMMA-CHLORDANE	0.05 U	0.05 U	--	--	0.05 U	--	0.05 U
HEPTACHLOR	0.05 U	0.05 U	--	--	0.05 U	--	0.05 U

LOCATION	SW/SD327	SW/SD327	SW/SD327	SW/SD327	SW/SD328	SW/SD328	SW/SD329
SAMPLE ID	SW327-20191205	SW327-20191205-D	SW327-20191205-F	SW327-20191205-F-D	SW328-20191203	SW328-20191203-F	SW329-20191203
SAMPLE DATE	20191205	20191205	20191205	20191205	20191203	20191203	20191203
DUPLICATE		SW327-20191205		SW327-20191205-F			
SAMPLE CODE	ORIG	DUP	ORIG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
HEPTACHLOR EPOXIDE	0.05 U	0.05 U	--	--	0.05 U	--	0.05 U
METHOXYCHLOR	0.5 U	0.5 U	--	--	0.5 U	--	0.5 U
TOXAPHENE	5 U	5 U	--	--	5 U	--	5 U
PCBS (UG/L)							
AROCLOR-1016	1 U	1 U	--	--	1 U	--	1 U
AROCLOR-1221	1 U	1 U	--	--	1 U	--	1 U
AROCLOR-1232	1 U	1 U	--	--	1 U	--	1 U
AROCLOR-1242	1 U	1 U	--	--	1 U	--	1 U
AROCLOR-1248	1 U	1 U	--	--	1 U	--	1 U
AROCLOR-1254	1 U	1 U	--	--	1 U	--	1 U
AROCLOR-1260	1 U	1 U	--	--	1 U	--	1 U
AROCLOR-1262	1 U	1 U	--	--	1 U	--	1 U
AROCLOR-1268	1 U	1 U	--	--	1 U	--	1 U
TOTAL AROCLOR	0 U	0 U	--	--	0 U	--	0 U
TOTAL AROCLOR HALFND	4.5	4.5	--	--	4.5	--	4.5
PCB CONGENERS (UG/L)							
DICHLOROBIPHENYLS	0.00049 J	0.00049 J	--	--	0 UJ	--	0 UJ
HEPTACHLOROBIPHENYLS	0.00047 J	0.0012 J	--	--	0.00064 J	--	0.0012 J
HEXACHLOROBIPHENYLS	0.00071 J	0.0014 J	--	--	0.0011 J	--	0.0018 J
MONOCHLOROBIPHENYLS	0 UJ	0 UJ	--	--	0.0000051 J	--	0 UJ
NONACHLOROBIPHENYLS	0 UJ	0.000016 J	--	--	0.000013 J	--	0.000024 J
OCTACHLOROBIPHENYLS	0.0001 J	0.00025 J	--	--	0.00015 J	--	0.00028 J
PCB-1	0.00002 U	0.00002 U	--	--	0.0000051 J	--	0.000021 U
PCB-10	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-100	0.00002 U	0.00002 U	--	--	--	--	--
PCB-101/90	0.00012	0.00019	--	--	--	--	--
PCB-103	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.0000046 J
PCB-104	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-105	0.000032	0.000032	--	--	0.00003	--	0.000039
PCB-106	--	--	--	--	0.00002 U	--	0.000021 U
PCB-107	--	--	--	--	0.0000045 J	--	0.0000063 J
PCB-108/107	0.000041 U	0.00004 U	--	--	--	--	--
PCB-108/124	--	--	--	--	0.000004 J	--	0.0000046 J
PCB-109	0.00002 U	0.00002 U	--	--	--	--	--
PCB-11	0.00031	0.00041	--	--	0.00002 U	--	0.000021 U
PCB-110	0.000075	0.00011	--	--	--	--	--
PCB-110/115	--	--	--	--	0.0001	--	0.00014
PCB-111	--	--	--	--	0.00002 U	--	0.000021 U
PCB-111/115	0.000041 U	0.00004 U	--	--	--	--	--
PCB-112	--	--	--	--	0.00002 U	--	0.000021 U
PCB-113	0.00002 U	0.00002 U	--	--	--	--	--
PCB-114	0.00001 U	0.00001 U	--	--	0.000003 U	--	0.0000028 U
PCB-118	--	--	--	--	0.000077	--	0.000099
PCB-118/106	0.000078	0.000086	--	--	--	--	--
PCB-119	0.00002 U	0.00002 U	--	--	--	--	--
PCB-12	0.00002 U	0.00002 U	--	--	--	--	--
PCB-12/13	--	--	--	--	0.000041 U	--	0.000042 U
PCB-120	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-121	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-122	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-123	0.0000076 U	0.0000076 U	--	--	0.0000029 U	--	0.0000027 U
PCB-124	0.00002 U	0.00002 U	--	--	--	--	--
PCB-126	0.000017 U	0.000017 U	--	--	0.0000036 U	--	0.0000033 U
PCB-127	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-128/162	0.000019 J	0.000026 J	--	--	--	--	--
PCB-128/166	--	--	--	--	0.000041 U	--	0.000042 U
PCB-129	0.00002 U	0.00002 U	--	--	--	--	--
PCB-129/138/163	--	--	--	--	0.00025	--	0.0004
PCB-13	0.00002 U	0.00002 U	--	--	--	--	--
PCB-130	0.00002 U	0.00002 U	--	--	0.000012 J	--	0.000017 J
PCB-131	--	--	--	--	0.00002 U	--	0.000021 U
PCB-131/133	0.000041 U	0.00004 U	--	--	--	--	--
PCB-132	--	--	--	--	0.000068	--	0.00011
PCB-132/161	0.000032 J	0.000066	--	--	--	--	--
PCB-133	--	--	--	--	0.00002 U	--	0.0000065 J
PCB-134	--	--	--	--	0.000013 J	--	0.000021 U
PCB-134/143	0.000041 U	0.000017 J	--	--	--	--	--
PCB-135	0.000034	0.000047	--	--	--	--	--
PCB-135/151	--	--	--	--	0.00011	--	0.00018
PCB-136	0.000028	0.000069	--	--	0.000033	--	0.000056
PCB-137	0.00002 U	0.00002 U	--	--	0.0000063 J	--	0.0000062 J
PCB-138/163/164	0.00014	0.00027	--	--	--	--	--
PCB-139/140	--	--	--	--	0.000041 U	--	0.000042 U
PCB-139/149	0.00014	0.0003	--	--	--	--	--
PCB-14	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-140	0.00002 U	0.00002 U	--	--	--	--	--
PCB-141	0.000041	0.000086	--	--	0.000053	--	0.000087
PCB-142	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-143	--	--	--	--	0.00002 U	--	0.000021 U
PCB-144	0.00002 U	0.000024	--	--	0.000012 J	--	0.000021
PCB-145	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-146	--	--	--	--	0.000033	--	0.000054
PCB-146/165	0.000019 J	0.000045	--	--	--	--	--
PCB-147	0.00002 U	0.00002 U	--	--	--	--	--
PCB-147/149	--	--	--	--	0.00021	--	0.00036
PCB-148	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-15	0.000039	0.000027	--	--	0.00002 U	--	0.000021 U
PCB-150	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-151	0.000053	0.00011	--	--	--	--	--
PCB-152	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U

LOCATION	SW/SD327	SW/SD327	SW/SD327	SW/SD327	SW/SD328	SW/SD328	SW/SD329
SAMPLE ID	SW327-20191205	SW327-20191205-D	SW327-20191205-F	SW327-20191205-F-D	SW328-20191203	SW328-20191203-F	SW329-20191203
SAMPLE DATE	20191205	20191205	20191205	20191205	20191203	20191203	20191203
DUPLICATE		SW327-20191205		SW327-20191205-F			
SAMPLE CODE	ORIG	DUP	ORIG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-153	0.00017	0.00032	--	--	--	--	--
PCB-153/168	--	--	--	--	0.00024	--	0.00038
PCB-154	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-155	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-156	0.000019 J	0.000023	--	--	--	--	--
PCB-156/157	--	--	--	--	0.000041 U	--	0.000042 U
PCB-157	0.000011 U	0.000014 U	--	--	--	--	--
PCB-158	--	--	--	--	0.00002	--	0.00003
PCB-158/160	0.000013 J	0.000025 J	--	--	--	--	--
PCB-159	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-16	0.000019 J	0.000013 J	--	--	0.0000062 J	--	0.0000065 J
PCB-160	--	--	--	--	0.00002 U	--	0.000021 U
PCB-161	--	--	--	--	0.00002 U	--	0.000021 U
PCB-162	--	--	--	--	0.00002 U	--	0.000021 U
PCB-164	--	--	--	--	0.000017 J	--	0.000027
PCB-165	--	--	--	--	0.00002 U	--	0.000021 U
PCB-166	0.00002 U	0.00002 U	--	--	--	--	--
PCB-167	0.000011 U	0.000015 U	--	--	0.00002 U	--	0.000021 U
PCB-168	0.00002 U	0.00002 U	--	--	--	--	--
PCB-169	0.000013 U	0.000016 U	--	--	0.0000032 U	--	0.0000033 U
PCB-17	0.000035	0.000024	--	--	0.00002 U	--	0.000021 U
PCB-170	0.000056	0.00014	--	--	0.000074	--	0.00014
PCB-171	0.000021	0.00004	--	--	--	--	--
PCB-171/173	--	--	--	--	0.000041 U	--	0.000044
PCB-172	0.00002 U	0.000032	--	--	0.000014 J	--	0.000026
PCB-173	0.00002 U	0.00002 U	--	--	--	--	--
PCB-174	0.00007	0.00015	--	--	0.000086	--	0.00016
PCB-175	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-176	0.000014 J	0.000024	--	--	0.00001 J	--	0.000019 J
PCB-177	0.000037	0.00009	--	--	0.000049	--	0.000091
PCB-178	0.000019 J	0.000044	--	--	0.00002	--	0.000035
PCB-179	0.000032	0.000068	--	--	0.000037	--	0.000069
PCB-18	0.000071	0.000039	--	--	--	--	--
PCB-18/30	--	--	--	--	0.000011 J	--	0.000012 J
PCB-180	0.0001	0.00024	--	--	--	--	--
PCB-180/193	--	--	--	--	0.00016	--	0.00031
PCB-181	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-182	--	--	--	--	0.00002 U	--	0.000021 U
PCB-182/187	0.000069	0.00018	--	--	--	--	--
PCB-183	0.000041	0.000086	--	--	--	--	--
PCB-183/185	--	--	--	--	0.000053	--	0.000099
PCB-184	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-185	0.00002 U	0.000025	--	--	--	--	--
PCB-186	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-187	--	--	--	--	0.000097	--	0.00018
PCB-188	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-189	0.0000075 U	0.000011 U	--	--	0.0000041 Z	--	0.0000062 J
PCB-19	0.000013 J	0.000014 J	--	--	0.00002 U	--	0.000021 U
PCB-190	0.000013 J	0.000033	--	--	0.000016 J	--	0.000032
PCB-191	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.0000051 J
PCB-192	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-193	0.00002 U	0.00002	--	--	--	--	--
PCB-194	0.000026	0.000066	--	--	0.000034	--	0.000065
PCB-195	0.000016 J	0.000031	--	--	0.00002 U	--	0.000031
PCB-196	--	--	--	--	0.00002 U	--	0.000032
PCB-196/203	0.000032 J	0.000068	--	--	--	--	--
PCB-197	0.00002 U	0.00002 U	--	--	--	--	--
PCB-197/200	--	--	--	--	0.0000063 J	--	0.000012 J
PCB-198	0.00002 U	0.00002 U	--	--	--	--	--
PCB-198/199	--	--	--	--	0.00004 J	--	0.000073
PCB-199	0.000027	0.000059	--	--	--	--	--
PCB-2	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-20/21/33	0.000042 J	0.000038 J	--	--	--	--	--
PCB-20/28	--	--	--	--	0.000016 J	--	0.00002 J
PCB-200	0.00002 U	0.000015 J	--	--	--	--	--
PCB-201	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-202	0.00002 U	0.000014 J	--	--	0.00002 U	--	0.000021 U
PCB-203	--	--	--	--	0.000023	--	0.000043
PCB-204	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-205	0.00002 U	0.00002 U	--	--	0.0000024 J	--	0.0000038 J
PCB-206	0.00002 U	0.000016 J	--	--	0.00002 U	--	0.000021 U
PCB-207	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.0000023 J
PCB-208	0.00002 U	0.00002 U	--	--	0.0000028 J	--	0.0000048 J
PCB-209	0.00002 U	0.00002 U	--	--	0.0000054 J	--	0.0000074 J
PCB-21/33	--	--	--	--	0.000041 U	--	0.000042 U
PCB-22	0.000028	0.000022	--	--	0.00002 U	--	0.0000066 J
PCB-23	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-24	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-25	0.000013 J	0.000013 J	--	--	0.00002 U	--	0.000021 U
PCB-26	0.000024	0.000018 J	--	--	--	--	--
PCB-26/29	--	--	--	--	0.000041 U	--	0.000042 U
PCB-27	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-28	0.000085	0.000063	--	--	--	--	--
PCB-29	0.00002 U	0.00002 U	--	--	--	--	--
PCB-3	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-30	0.00002 U	0.00002 U	--	--	--	--	--
PCB-31	0.000097	0.000052	--	--	0.000015 J	--	0.000017 J

LOCATION	SW/SD327	SW/SD327	SW/SD327	SW/SD327	SW/SD328	SW/SD328	SW/SD329
SAMPLE ID	SW327-20191205	SW327-20191205-D	SW327-20191205-F	SW327-20191205-F-D	SW328-20191203	SW328-20191203-F	SW329-20191203
SAMPLE DATE	20191205	20191205	20191205	20191205	20191203	20191203	20191203
DUPLICATE		SW327-20191205		SW327-20191205-F			
SAMPLE CODE	ORIG	DUP	ORIG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-32	0.000028	0.000016 J	--	--	0.000004 J	--	0.0000043 J
PCB-34	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-35	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-36	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-37	0.000018 J	0.000014 J	--	--	0.0000047 J	--	0.0000057 J
PCB-38	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-39	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-4	0.000038	0.000027	--	--	0.00002 U	--	0.000021 U
PCB-40	0.00002 U	0.00002 U	--	--	--	--	--
PCB-40/71	--	--	--	--	0.0000075 J	--	0.0000085 J
PCB-41	--	--	--	--	0.00002 U	--	0.000021 U
PCB-41/64/71/72	0.000038 J	0.000035 J	--	--	--	--	--
PCB-42	--	--	--	--	0.0000035 J	--	0.000021 U
PCB-42/59	0.000014 J	0.000016 J	--	--	--	--	--
PCB-43	--	--	--	--	0.00002 U	--	0.000021 U
PCB-43/49	0.000053	0.000067	--	--	--	--	--
PCB-44	0.000042	0.000039	--	--	--	--	--
PCB-44/47/65	--	--	--	--	0.000061 U	--	0.000062 U
PCB-45	0.00002 U	0.00002 U	--	--	--	--	--
PCB-45/51	--	--	--	--	0.00001 J	--	0.000015 J
PCB-46	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-47	0.000037	0.000046	--	--	--	--	--
PCB-48	--	--	--	--	0.00002 U	--	0.000021 U
PCB-48/75	0.000041 U	0.00004 U	--	--	--	--	--
PCB-49/69	--	--	--	--	0.000021 J	--	0.00003 J
PCB-5	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-50	0.00002 U	0.00002 U	--	--	--	--	--
PCB-50/53	--	--	--	--	0.0000095 J	--	0.000016 J
PCB-51	0.00002 U	0.000017 J	--	--	--	--	--
PCB-52	--	--	--	--	0.000052	--	0.000068
PCB-52/69	0.000088	0.000099	--	--	--	--	--
PCB-53	0.000015 J	0.000023	--	--	--	--	--
PCB-54	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.0000029 J
PCB-55	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-56	--	--	--	--	0.00002 U	--	0.000021 U
PCB-56/60	0.000031 J	0.000024 J	--	--	--	--	--
PCB-57	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-58	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-59/62/75	--	--	--	--	0.000061 U	--	0.000062 U
PCB-6	0.000031	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-60	--	--	--	--	0.0000041 J	--	0.0000049 J
PCB-61/70	0.000055	0.000064	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	0.000081 U	--	0.000083 U
PCB-62	0.00002 U	0.00002 U	--	--	--	--	--
PCB-63	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-64	--	--	--	--	0.00002 U	--	0.0000091 J
PCB-65	0.00002 U	0.00002 U	--	--	--	--	--
PCB-66	--	--	--	--	0.00002 U	--	0.000021 U
PCB-66/76	0.000049	0.000045	--	--	--	--	--
PCB-67	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-68	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-7	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-72	--	--	--	--	0.00002 U	--	0.000021 U
PCB-73	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-74	0.000022	0.000023	--	--	--	--	--
PCB-77	0.000017 U	0.000014 U	--	--	0.0000024 U	--	0.000021 U
PCB-78	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-79	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-8	0.000071	0.000028	--	--	0.00002 U	--	0.000021 U
PCB-80	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-81	0.000012 U	0.00001 U	--	--	0.0000023 U	--	0.0000023 U
PCB-82	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.0000092 J
PCB-83	--	--	--	--	0.000004 J	--	0.000021 U
PCB-83/112	0.000041 U	0.00004 U	--	--	--	--	--
PCB-84	--	--	--	--	0.000016 J	--	0.000021
PCB-84/92	0.00004 J	0.000055	--	--	--	--	--
PCB-85/116	0.000014 J	0.000019 J	--	--	--	--	--
PCB-85/116/117	--	--	--	--	0.000011 J	--	0.000013 J
PCB-86	0.00002 U	0.00002 U	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	0.00012 U	--	0.00012 U
PCB-87/117/125	0.000036 J	0.00004 J	--	--	--	--	--
PCB-88/91	0.000041 U	0.00004 U	--	--	0.000011 J	--	0.000017 J
PCB-89	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-9	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-90/101/113	--	--	--	--	0.00011	--	0.00017
PCB-92	--	--	--	--	0.000021	--	0.00003
PCB-93	0.00002 U	0.00002 U	--	--	--	--	--
PCB-93/100	--	--	--	--	0.000041 U	--	0.000042 U
PCB-94	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U

LOCATION	SW/SD327	SW/SD327	SW/SD327	SW/SD327	SW/SD328	SW/SD328	SW/SD329
SAMPLE ID	SW327-20191205	SW327-20191205-D	SW327-20191205-F	SW327-20191205-F-D	SW328-20191203	SW328-20191203-F	SW329-20191203
SAMPLE DATE	20191205	20191205	20191205	20191205	20191203	20191203	20191203
DUPLICATE		SW327-20191205		SW327-20191205-F			
SAMPLE CODE	ORIG	DUP	ORIG	DUP	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-95	0.000086	0.00015	--	--	0.000098	--	0.00014
PCB-96	0.00002 U	0.00002 U	--	--	0.00002 U	--	0.000021 U
PCB-97	0.000021	0.000024	--	--	--	--	--
PCB-98/102	0.000041 U	0.00004 U	--	--	0.000041 U	--	0.000042 U
PCB-99	0.000034	0.000048	--	--	0.000032	--	0.000043
PENTACHLOROBIPHENYLS	0.00054 J	0.00075 J	--	--	0.00058 J	--	0.00081 J
TEQ DIOXIN-LIKE PCBs (BIRD)	5.1E-09	5.5E-09	--	--	3.811E-09	--	4.952E-09
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.88778E-06	1.71487E-06	--	--	3.62725E-07	--	8.1396E-07
TEQ DIOXIN-LIKE PCBs (FISH)	2.55E-10	2.75E-10	--	--	5.55E-10	--	7.21E-10
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	4.7046E-08	4.6518E-08	--	--	1.0496E-08	--	1.0848E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.53E-09	1.65E-09	--	--	3.333E-09	--	4.326E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	1.04989E-06	1.09471E-06	--	--	2.32801E-07	--	2.21248E-07
TETRACHLOROBIPHENYLS	0.00044 J	0.0005 J	--	--	0.00018 J	--	0.00028 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.000051	0.000055	--	--	0.0001111	--	0.0001442
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.003172	0.004884	--	--	0.0023883	--	0.0040443
TOTAL PCB CONGENERS ZEROND	0.003223	0.004939	--	--	0.0024994	--	0.0041885
TOTAL PCB CONGENERS-NOAA	0.001206	0.001844	--	--	0.0011224	--	0.0018564
TOTAL PCB CONGENERS-NOAA HALFND	0.00437005	0.0059963	--	--	0.0037241	--	0.0053882
TOTAL PCB CONGENERS-NOAA X2	0.002412	0.003688	--	--	0.0022448	--	0.0037128
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.002452	0.003708	--	--	0.0024268	--	0.0038798
TRICHLOROBIPHENYLS	0.00047 J	0.00033 J	--	--	0.000063 J	--	0.000081 J
DIOXINS/FURANS (PG/L)							
1,2,3,4,6,7,8,9-OCDD	27 J	27 J	--	--	20 J	--	18 J
1,2,3,4,6,7,8,9-OCDF	3.7 U	4.9 U	--	--	5.4 U	--	5.8 U
1,2,3,4,6,7,8-HPCDD	2.6 J	3.4 U	--	--	3.7 U	--	4.4 U
1,2,3,4,6,7,8-HPCDF	2.1 U	2.4 U	--	--	2.5 U	--	2.7 U
1,2,3,4,7,8,9-HPCDF	2.7 U	2.9 U	--	--	4 U	--	4.3 U
1,2,3,4,7,8-HXCDD	3.1 U	3.1 U	--	--	1.4 U	--	1.7 U
1,2,3,4,7,8-HXCDF	2.3 U	2.3 U	--	--	2.1 U	--	2.2 U
1,2,3,6,7,8-HXCDD	2 U	2.4 U	--	--	1.9 U	--	2 U
1,2,3,6,7,8-HXCDF	2.1 U	1.8 U	--	--	1.7 U	--	1.8 U
1,2,3,7,8,9-HXCDD	1.8 U	2.1 U	--	--	2.1 U	--	2.2 U
1,2,3,7,8,9-HXCDF	2.7 U	1.8 U	--	--	3.8 U	--	4 U
1,2,3,7,8-PECDD	2 U	2 U	--	--	2.2 U	--	2.4 U
1,2,3,7,8-PECDF	1.3 U	1.7 U	--	--	2.3 U	--	2.4 U
2,3,4,6,7,8-HXCDF	1.9 U	1.3 U	--	--	2 U	--	2.1 U
2,3,4,7,8-PECDF	1.5 U	1.6 U	--	--	2.6 U	--	2.7 U
2,3,7,8-TCDD	0.91 U	1.1 U	--	--	2.1 U	--	1.8 U
2,3,7,8-TCDF	0.84 U	1.3 U	--	--	2 U	--	2.1 U
TEQ DIOXINS (BIRD)	0.0053	0.0027	--	--	0.002	--	0.0018
TEQ DIOXINS (BIRD) HALFND	3.346985	3.670645	--	--	5.23112	--	5.32679
TEQ DIOXINS (FISH)	0.0053	0.0027	--	--	0.002	--	0.0018
TEQ DIOXINS (FISH) HALFND	3.156985	3.213645	--	--	3.79412	--	3.87779
TEQ DIOXINS (HUMANS/MAMMALS)	0.0341	0.0081	--	--	0.006	--	0.0054
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	2.595155	2.672835	--	--	3.48231	--	3.50927
TOTAL HPCDD	6.6 J	0 UJ	--	--	2.1 UJ	--	4.4 UJ
TOTAL HPCDF	0 UJ	0 UJ	--	--	2.2 UJ	--	2.7 UJ
TOTAL HXCDD	0 UJ	0 UJ	--	--	1.4 UJ	--	1.7 UJ
TOTAL HXCDF	0 UJ	0 UJ	--	--	1.7 UJ	--	1.2 UJ
TOTAL PECDD	0 UJ	0 UJ	--	--	2.2 UJ	--	2.4 UJ
TOTAL PECDF	0 UJ	0 UJ	--	--	0.97 UJ	--	1.2 UJ
TOTAL TCDD	0 UJ	0 UJ	--	--	2.1 UJ	--	1.8 UJ
TOTAL TCDF	0 UJ	0 UJ	--	--	2 UJ	--	2.1 UJ
METALS (UG/L)							
ALUMINUM	58.9	51	20 U	20 U	63.1	20 U	82.3
ANTIMONY	2 U	2 U	2 U	2 U	2 U	2 U	2 U
ARSENIC	0.4 J	0.43 J	0.31 J	0.27 J	0.45 J	0.36 J	0.4 J
BARIUM	26.7	27.6	23	23.5	29.2	26.5	30.1
BERYLLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM	23100	22600	22400	23100	25400	25100	25300
CHROMIUM	0.15 J	0.08 J	2 U	2 U	0.17 J	2 U	0.21 J
COBALT	0.36 J	0.48 J	0.2 J	0.19 J	0.36 J	0.24 J	0.36 J
COPPER	2.4	2.4	2 U	2 U	2.5	2 U	2.8
CYANIDE	10 U	10 U	--	--	10 U	--	10 U
IRON	341	319	200 U	200 U	407	200 U	453
LEAD	1 U	1 U	1 U	1 U	1 U	1 U	1 U
MAGNESIUM	4220	4310	4160	4140	5260	5160	5140
MANGANESE	37.1	38	18.3	17.8	46	26.7	48.8
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	1.7	1.6	1.2	1.2	1.7	1.5	1.8
POTASSIUM	3140	3890	2960	2810	3330	3200	3040
SELENIUM	5 U	5 U	5 U	5 U	0.66 J	5 U	5 U
SILVER	1 U	1 U	1 U	1 U	1 U	1 U	1 U
SODIUM	18000	21500	17600	17000	21100	21200	22400
THALLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VANADIUM	0.25 J	0.23 J	0.13 J	0.15 J	0.23 J	0.13 J	0.25 J
ZINC	23.9 J	27.5	14.2 J	13.1	22.2	18.2	21.2

LOCATION	SW/SD329	SW/SD330	SW/SD330	SW/SD337	SW/SD337	SW/SD338	SW/SD338	SW/SD338
SAMPLE ID	SW329-20191203-F	SW330-20191203	SW330-20191203-F	SW337-20200226	SW337-20200226-F	SW338-20200226	SW338-20200226-F	SW338-20200226-D
SAMPLE DATE	20191203	20191203	20191203	20200226	20200226	20200226	20200226	20200226
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
VOLATILES (UG/L)								
1,1,1-TRICHLOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
1,1,2,2-TETRACHLOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
1,1,2-TRICHLOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
1,1-DICHLOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
1,1-DICHLOROETHENE	--	5 U	--	5 UJ	--	5 UJ	--	5 UJ
1,2,3-TRICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
1,2,4-TRICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DIBROMO-3-CHLOROPROPANE	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DIBROMOETHANE	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROPROPANE	--	5 U	--	5 U	--	5 U	--	5 U
1,3-DICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
1,4-DICHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
2-BUTANONE	--	10 U	--	10 U	--	10 U	--	10 U
2-HEXANONE	--	10 U	--	10 U	--	10 U	--	10 U
4-METHYL-2-PENTANONE	--	10 U	--	10 U	--	10 U	--	10 U
ACETONE	--	10 U	--	10 U	--	2.6 J	--	10 U
BENZENE	--	5 U	--	5 U	--	5 U	--	5 U
BROMOCHLOROMETHANE	--	5 U	--	5 U	--	5 U	--	5 U
BROMODICHLOROMETHANE	--	5 U	--	5 U	--	5 U	--	5 U
BROMOFORM	--	5 U	--	5 U	--	5 U	--	5 U
BROMOMETHANE	--	5 U	--	5 U	--	5 U	--	5 U
CARBON DISULFIDE	--	5 U	--	5 U	--	5 U	--	5 U
CARBON TETRACHLORIDE	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
CHLORODIBROMOMETHANE	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROFORM	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROMETHANE	--	5 U	--	5 U	--	5 U	--	5 U
CIS-1,2-DICHLOROETHENE	--	5 U	--	5 UJ	--	5 UJ	--	5 UJ
CIS-1,3-DICHLOROPROPENE	--	5 U	--	5 U	--	5 U	--	5 U
CYCLOHEXANE	--	5 U	--	5 U	--	5 U	--	5 U
DICHLORODIFLUOROMETHANE	--	5 U	--	5 U	--	5 U	--	5 U
ETHYLBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
ISOPROPYLBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
M+P-XYLENES	--	5 U	--	5 U	--	5 U	--	5 U
METHYL ACETATE	--	5 U	--	5 U	--	5 U	--	5 U
METHYL CYCLOHEXANE	--	5 U	--	5 U	--	5 U	--	5 U
METHYL TERT-BUTYL ETHER	--	5 U	--	5 U	--	5 U	--	5 U
METHYLENE CHLORIDE	--	5 U	--	5 U	--	5 U	--	5 U
O-XYLENE	--	5 U	--	5 U	--	5 U	--	5 U
STYRENE	--	5 U	--	5 U	--	5 U	--	5 U
TETRACHLOROETHENE	--	5 U	--	5 U	--	5 U	--	5 U
TOLUENE	--	5 U	--	5 U	--	5 U	--	5 U
TRANS-1,2-DICHLOROETHENE	--	5 U	--	5 UJ	--	5 UJ	--	5 UJ
TRANS-1,3-DICHLOROPROPENE	--	5 U	--	5 U	--	5 U	--	5 U
TRICHLOROETHENE	--	5 U	--	5 U	--	5 U	--	5 U
TRICHLOROFLUOROMETHANE	--	5 U	--	5 U	--	5 U	--	5 U
VINYL CHLORIDE	--	5 U	--	5 U	--	5 U	--	5 U
VOLATILES-TRACE (UG/L)								
1,1,1-TRICHLOROETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
1,1,2,2-TETRACHLOROETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
1,1,2-TRICHLOROETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
1,1-DICHLOROETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
1,1-DICHLOROETHENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
1,2,3-TRICHLOROBENZENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
1,2,4-TRICHLOROBENZENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
1,2-DIBROMOETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
1,2-DICHLOROBENZENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
1,2-DICHLOROETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
1,2-DICHLOROPROPANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
1,3-DICHLOROBENZENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
1,4-DICHLOROBENZENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
2-BUTANONE	--	--	--	5 U	--	5 U	--	5 U
2-HEXANONE	--	--	--	5 U	--	5 U	--	5 U
4-METHYL-2-PENTANONE	--	--	--	5 U	--	5 U	--	5 U

LOCATION	SW/SD329	SW/SD330	SW/SD330	SW/SD337	SW/SD337	SW/SD338	SW/SD338	SW/SD338
SAMPLE ID	SW329-20191203-F	SW330-20191203	SW330-20191203-F	SW337-20200226	SW337-20200226-F	SW338-20200226	SW338-20200226-F	SW338-20200226-D
SAMPLE DATE	20191203	20191203	20191203	20200226	20200226	20200226	20200226	20200226
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
ACETONE	--	--	--	5 U	--	3.6 J	--	5 U
BENZENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
BROMOCHLOROMETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
BROMODICHLOROMETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
BROMOFORM	--	--	--	0.5 U	--	0.5 U	--	0.5 U
BROMOMETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
CARBON DISULFIDE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
CARBON TETRACHLORIDE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
CHLOROBENZENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
CHLORODIBROMOMETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
CHLOROETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
CHLOROFORM	--	--	--	0.5 U	--	0.5 U	--	0.5 U
CHLOROMETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
CIS-1,2-DICHLOROETHENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
CIS-1,3-DICHLOROPROPENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
CYCLOHEXANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
DICHLORODIFLUOROMETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
ETHYLBENZENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
ISOPROPYLBENZENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
M+P-XYLENES	--	--	--	0.5 U	--	0.5 U	--	0.5 U
METHYL ACETATE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
METHYL CYCLOHEXANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
METHYL TERT-BUTYL ETHER	--	--	--	0.5 U	--	0.5 U	--	0.5 U
METHYLENE CHLORIDE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
O-XYLENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
STYRENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
TETRACHLOROETHENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
TOLUENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
TRANS-1,2-DICHLOROETHENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
TRANS-1,3-DICHLOROPROPENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
TRICHLOROETHENE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
TRICHLOROFLUOROMETHANE	--	--	--	0.5 U	--	0.5 U	--	0.5 U
VINYL CHLORIDE	--	--	--	0.50 U	--	0.50 U	--	0.50 U
SEMIVOLATILES (UG/L)								
1,1-BIPHENYL	--	5 U	--	5 U	--	5 U	--	5 U
1,2,4,5-TETRACHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
1,4-DIOXANE	--	2 U	--	2 U	--	2 U	--	2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	--	10 U	--	10 U	--	10 U	--	10 U
2,3,4,6-TETRACHLOROPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
2,4,5-TRICHLOROPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
2,4,6-TRICHLOROPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
2,4-DICHLOROPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
2,4-DIMETHYLPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
2,4-DINITROPHENOL	--	10 U	--	10 U	--	10 R	--	10 U
2,4-DINITROTOLUENE	--	5 U	--	5 U	--	5 U	--	5 U
2,6-DINITROTOLUENE	--	5 U	--	5 U	--	5 U	--	5 U
2-CHLORONAPHTHALENE	--	5 U	--	5 U	--	5 U	--	5 U
2-CHLOROPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
2-METHYLNAPHTHALENE	--	5 U	--	5 U	--	5 U	--	5 U
2-METHYLPHENOL	--	10 U	--	10 U	--	10 U	--	10 U
2-NITROANILINE	--	5 U	--	5 U	--	5 R	--	5 U
2-NITROPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
3&4-METHYLPHENOL	--	10 U	--	10 U	--	10 U	--	10 U
3,3'-DICHLOROBENZIDINE	--	10 U	--	10 U	--	10 U	--	10 U
3-NITROANILINE	--	10 U	--	10 U	--	10 R	--	10 U
4,6-DINITRO-2-METHYLPHENOL	--	10 U	--	10 U	--	10 U	--	10 U
4-BROMOPHENYL PHENYL ETHER	--	5 U	--	5 U	--	5 U	--	5 U
4-CHLORO-3-METHYLPHENOL	--	5 U	--	5 U	--	5 U	--	5 U
4-CHLOROANILINE	--	10 U	--	10 U	--	10 U	--	10 U
4-CHLOROPHENYL PHENYL ETHER	--	5 U	--	5 U	--	5 U	--	5 U
4-NITROANILINE	--	10 U	--	10 U	--	10 R	--	10 U
4-NITROPHENOL	--	10 U	--	10 U	--	10 R	--	10 U
ACENAPHTHENE	--	5 U	--	5 U	--	5 U	--	5 U
ACENAPHTHYLENE	--	5 U	--	5 U	--	5 U	--	5 U
ACETOPHENONE	--	10 U	--	10 U	--	10 U	--	10 U
ANTHRACENE	--	5 U	--	5 U	--	5 U	--	5 U
ATRAZINE	--	10 U	--	10 U	--	10 U	--	10 U
BAP EQUIVALENT-HALFND	--	5 U	--	5 U	--	5 U	--	5 U
BAP EQUIVALENT-POS	--	5 U	--	5 U	--	5 U	--	5 U
BENZALDEHYDE	--	10 U	--	10 U	--	10 U	--	10 U
BENZO(A)ANTHRACENE	--	5 U	--	5 U	--	5 U	--	5 U
BENZO(A)PYRENE	--	5 U	--	5 U	--	5 U	--	5 U
BENZO(B)FLUORANTHENE	--	5 U	--	5 U	--	5 U	--	5 U
BENZO(G,H,I)PERYLENE	--	5 U	--	5 U	--	5 U	--	5 U
BENZO(K)FLUORANTHENE	--	5 U	--	5 U	--	5 U	--	5 U
BIS(2-CHLOROETHOXY)METHANE	--	5 U	--	5 U	--	5 U	--	5 U

LOCATION	SW/SD329	SW/SD330	SW/SD330	SW/SD337	SW/SD337	SW/SD338	SW/SD338	SW/SD338
SAMPLE ID	SW329-20191203-F	SW330-20191203	SW330-20191203-F	SW337-20200226	SW337-20200226-F	SW338-20200226	SW338-20200226-F	SW338-20200226-D
SAMPLE DATE	20191203	20191203	20191203	20200226	20200226	20200226	20200226	20200226
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
BIS(2-CHLOROETHYL)ETHER	--	10 U	--	10 U	--	10 U	--	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	--	5 U	--	5 U	--	5 U	--	5 U
BUTYL BENZYL PHTHALATE	--	5 U	--	5 U	--	5 U	--	5 U
CAPROLACTAM	--	10 U	--	10 U	--	10 U	--	10 U
CARBAZOLE	--	10 U	--	10 U	--	10 U	--	10 U
CHRYSENE	--	5 U	--	5 U	--	5 U	--	5 U
DIBENZO(A,H)ANTHRACENE	--	5 U	--	5 U	--	5 U	--	5 U
DIBENZOFURAN	--	5 U	--	5 U	--	5 U	--	5 U
DIETHYL PHTHALATE	--	5 U	--	5 U	--	5 U	--	5 U
DIMETHYL PHTHALATE	--	5 U	--	1.6 J	--	1.5 J	--	2 J
DI-N-BUTYL PHTHALATE	--	5 U	--	5 U	--	5 U	--	5 U
DI-N-OCTYL PHTHALATE	--	10 U	--	10 U	--	10 U	--	10 U
FLUORANTHENE	--	10 U	--	10 U	--	10 U	--	10 U
FLUORENE	--	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROBUTADIENE	--	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROCYCLOPENTADIENE	--	10 U	--	10 U	--	10 U	--	10 U
HEXACHLOROETHANE	--	5 U	--	5 U	--	5 U	--	5 U
HIGH MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--	0 U	--	0 U
INDENO(1,2,3-CD)PYRENE	--	5 U	--	5 U	--	5 U	--	5 U
ISOPHORONE	--	5 U	--	5 U	--	5 U	--	5 U
LOW MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--	0 U	--	0 U
NAPHTHALENE	--	5 U	--	5 U	--	5 U	--	5 U
NITROBENZENE	--	5 U	--	5 U	--	5 U	--	5 U
N-NITROSO-DI-N-PROPYLAMINE	--	5 U	--	5 U	--	5 U	--	5 U
N-NITROSODIPHENYLAMINE	--	5 U	--	5 U	--	5 U	--	5 U
PENTACHLOROPHENOL	--	10 U	--	10 U	--	10 U	--	10 U
PHENANTHRENE	--	5 U	--	5 U	--	5 U	--	5 U
PHENOL	--	10 U	--	10 U	--	10 U	--	10 U
PYRENE	--	5 U	--	5 U	--	5 U	--	5 U
TOTAL PAHS	--	0 U	--	0 U	--	0 U	--	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L)								
2-METHYLNAPHTHALENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ACENAPHTHENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ACENAPHTHYLENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ANTHRACENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BAP EQUIVALENT-HALFND	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BAP EQUIVALENT-POS	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(A)ANTHRACENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(A)PYRENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(B)FLUORANTHENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(G,H,I)PERYLENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
BENZO(K)FLUORANTHENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
CHRYSENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
DIBENZO(A,H)ANTHRACENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
FLUORANTHENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
FLUORENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
HIGH MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--	0 U	--	0 U
INDENO(1,2,3-CD)PYRENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
LOW MOLECULAR WEIGHT PAHS	--	0 U	--	0 U	--	0 U	--	0 U
NAPHTHALENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
PENTACHLOROPHENOL	--	0.2 U	--	0.2 U	--	0.2 U	--	0.2 U
PHENANTHRENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
PYRENE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
TOTAL PAHS	--	0.1	--	0.1	--	0.1	--	0.1
PESTICIDES (UG/L)								
4,4'-DDD	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
4,4'-DDE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
4,4'-DDT	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ALDRIN	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ALPHA-BHC	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ALPHA-CHLORDANE	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
BETA-BHC	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
DELTA-BHC	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
DIELDRIN	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDOSULFAN I	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ENDOSULFAN II	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDOSULFAN SULFATE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN ALDEHYDE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN KETONE	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
GAMMA-BHC (LINDANE)	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
GAMMA-CHLORDANE	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
HEPTACHLOR	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD329	SW/SD330	SW/SD330	SW/SD337	SW/SD337	SW/SD338	SW/SD338	SW/SD338
SAMPLE ID	SW329-20191203-F	SW330-20191203	SW330-20191203-F	SW337-20200226	SW337-20200226-F	SW338-20200226	SW338-20200226-F	SW338-20200226-D
SAMPLE DATE	20191203	20191203	20191203	20200226	20200226	20200226	20200226	20200226
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
HEPTACHLOR EPOXIDE	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
METHOXYCHLOR	--	0.5 U	--	0.5 U	--	0.5 U	--	0.5 U
TOXAPHENE	--	5 U	--	5 U	--	5 U	--	5 U
PCBS (UG/L)								
AROCLOR-1016	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1221	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1232	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1242	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1248	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1254	--	0.34 J	--	1 U	--	1 U	--	1 U
AROCLOR-1260	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1262	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1268	--	1 U	--	1 U	--	1 U	--	1 U
TOTAL AROCLOR	--	0.34	--	0 U	--	0 U	--	0 U
TOTAL AROCLOR HALFND	--	4.34	--	4.5	--	4.5	--	4.5
PCB CONGENERS (UG/L)								
DICHLOROBIPHENYLS	--	0 UJ	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	0.00076 J	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	0.0015 J	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	0 UJ	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	0.000016 J	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	0.00016 J	--	--	--	--	--	--
PCB-1	--	0.00002 U	--	--	--	--	--	--
PCB-10	--	0.00002 U	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--
PCB-103	--	0.0000035 J	--	--	--	--	--	--
PCB-104	--	0.00002 U	--	--	--	--	--	--
PCB-105	--	0.000061	--	0.00000578 Z	--	0.00000674 Z	--	0.00000647 Z
PCB-106	--	0.00002 U	--	--	--	--	--	--
PCB-107	--	0.0000094 J	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--
PCB-108/124	--	0.0000076 J	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--
PCB-11	--	0.00002 U	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--
PCB-110/115	--	0.00016	--	--	--	--	--	--
PCB-111	--	0.00002 U	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--
PCB-112	--	0.00002 U	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--
PCB-114	--	0.0000039 J	--	0.0000993 U	--	0.0000955 U	--	0.0000978 U
PCB-118	--	0.00013	--	0.000013 J	--	0.0000199 J	--	0.0000165 J
PCB-118/106	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--
PCB-12/13	--	0.00004 U	--	--	--	--	--	--
PCB-120	--	0.00002 U	--	--	--	--	--	--
PCB-121	--	0.00002 U	--	--	--	--	--	--
PCB-122	--	0.00002 U	--	--	--	--	--	--
PCB-123	--	0.0000034 U	--	0.0000993 U	--	0.0000955 U	--	0.0000978 U
PCB-124	--	--	--	--	--	--	--	--
PCB-126	--	0.0000042 U	--	0.0000993 U	--	0.0000955 U	--	0.0000978 U
PCB-127	--	0.00002 U	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--
PCB-128/166	--	0.00004 U	--	0.00000473 J	--	0.00000682 J	--	0.00000497 Z
PCB-129	--	--	--	--	--	--	--	--
PCB-129/138/163	--	0.00034	--	0.0000672 J	--	0.0000947 J	--	0.0000751 J
PCB-13	--	--	--	--	--	--	--	--
PCB-130	--	0.000015 J	--	--	--	--	--	--
PCB-131	--	0.00002 U	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--
PCB-132	--	0.000095	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--
PCB-133	--	0.00002 U	--	--	--	--	--	--
PCB-134	--	0.000019 J	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--
PCB-135/151	--	0.00013	--	--	--	--	--	--
PCB-136	--	0.00004	--	--	--	--	--	--
PCB-137	--	0.0000095 J	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--
PCB-139/140	--	0.00004 U	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--
PCB-14	--	0.00002 U	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--
PCB-141	--	0.000069	--	--	--	--	--	--
PCB-142	--	0.00002 U	--	--	--	--	--	--
PCB-143	--	0.00002 U	--	--	--	--	--	--
PCB-144	--	0.000015 J	--	--	--	--	--	--
PCB-145	--	0.00002 U	--	--	--	--	--	--
PCB-146	--	0.000042	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--
PCB-147/149	--	0.00027	--	--	--	--	--	--
PCB-148	--	0.00002 U	--	--	--	--	--	--
PCB-15	--	0.00002 U	--	--	--	--	--	--
PCB-150	--	0.00002 U	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--
PCB-152	--	0.00002 U	--	--	--	--	--	--

LOCATION	SW/SD329	SW/SD330	SW/SD330	SW/SD337	SW/SD337	SW/SD338	SW/SD338	SW/SD338
SAMPLE ID	SW329-20191203-F	SW330-20191203	SW330-20191203-F	SW337-20200226	SW337-20200226-F	SW338-20200226	SW338-20200226-F	SW338-20200226-D
SAMPLE DATE	20191203	20191203	20191203	20200226	20200226	20200226	20200226	20200226
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-153	--	--	--	--	--	--	--	--
PCB-153/168	--	0.0003	--	0.0000669 J	--	0.0000915 J	--	0.0000742 J
PCB-154	--	0.00002 U	--	--	--	--	--	--
PCB-155	--	0.00002 U	--	--	--	--	--	--
PCB-156	--	--	--	0.00000485 J	--	0.00000699 J	--	0.0000054 J
PCB-156/157	--	0.00004 U	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-158	--	0.000029	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--
PCB-159	--	0.00002 U	--	--	--	--	--	--
PCB-16	--	0.0000054 J	--	--	--	--	--	--
PCB-160	--	0.00002 U	--	--	--	--	--	--
PCB-161	--	0.00002 U	--	--	--	--	--	--
PCB-162	--	0.00002 U	--	--	--	--	--	--
PCB-164	--	0.000023	--	--	--	--	--	--
PCB-165	--	0.00002 U	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--
PCB-167	--	0.00002 U	--	0.00000193 J	--	0.00000327 Z	--	0.00000194 J
PCB-168	--	--	--	--	--	--	--	--
PCB-169	--	0.0000044 U	--	0.0000993 U	--	0.0000955 U	--	0.0000978 U
PCB-17	--	0.0000037 J	--	--	--	--	--	--
PCB-170	--	0.000081	--	0.0000215 J	--	0.0000302 J	--	0.0000249 J
PCB-171	--	--	--	--	--	--	--	--
PCB-171/173	--	0.00004 U	--	--	--	--	--	--
PCB-172	--	0.000015 J	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--
PCB-174	--	0.0001	--	--	--	--	--	--
PCB-175	--	0.0000032 J	--	--	--	--	--	--
PCB-176	--	0.000012 J	--	--	--	--	--	--
PCB-177	--	0.000057	--	--	--	--	--	--
PCB-178	--	0.000021	--	--	--	--	--	--
PCB-179	--	0.000045	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--
PCB-18/30	--	0.0000096 J	--	0.00000481 Z	--	0.00000453 Z	--	0.00000424 Z
PCB-180	--	--	--	--	--	--	--	--
PCB-180/193	--	0.00019	--	0.0000505 J	--	0.0000696 J	--	0.000058 J
PCB-181	--	0.00002 U	--	--	--	--	--	--
PCB-182	--	0.00002 U	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--
PCB-183/185	--	0.000063	--	--	--	--	--	--
PCB-184	--	0.00002 U	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--
PCB-186	--	0.00002 U	--	--	--	--	--	--
PCB-187	--	0.00012	--	0.0000342 J	--	0.0000404 J	--	0.0000339 J
PCB-188	--	0.00002 U	--	--	--	--	--	--
PCB-189	--	0.0000055 J	--	0.0000993 U	--	0.0000025 J	--	0.00000219 Z
PCB-19	--	0.00002 U	--	--	--	--	--	--
PCB-190	--	0.000018 J	--	--	--	--	--	--
PCB-191	--	0.0000039 J	--	--	--	--	--	--
PCB-192	--	0.00002 U	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--
PCB-194	--	0.000041	--	--	--	--	--	--
PCB-195	--	0.00002 U	--	0.00000469 J	--	0.00000674 J	--	0.00000581 Z
PCB-196	--	0.00002 U	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--
PCB-197/200	--	0.0000078 J	--	--	--	--	--	--
PCB-198	--	--	--	--	--	--	--	--
PCB-198/199	--	0.000044	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--
PCB-2	--	0.00002 U	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--
PCB-20/28	--	0.000014 J	--	0.00000681	--	0.00000934	--	0.00000608
PCB-200	--	--	--	--	--	--	--	--
PCB-201	--	0.00002 U	--	--	--	--	--	--
PCB-202	--	0.00002 U	--	--	--	--	--	--
PCB-203	--	0.000026	--	--	--	--	--	--
PCB-204	--	0.00002 U	--	--	--	--	--	--
PCB-205	--	0.000003 J	--	--	--	--	--	--
PCB-206	--	0.00002 U	--	0.00000401 J	--	0.00000541 J	--	0.00000475 J
PCB-207	--	0.0000018 J	--	--	--	--	--	--
PCB-208	--	0.0000037 J	--	--	--	--	--	--
PCB-209	--	0.0000065 J	--	0.00000296 U	--	0.00000422 U	--	0.00000301 U
PCB-21/33	--	0.00004 U	--	--	--	--	--	--
PCB-22	--	0.00002 U	--	--	--	--	--	--
PCB-23	--	0.00002 U	--	--	--	--	--	--
PCB-24	--	0.00002 U	--	--	--	--	--	--
PCB-25	--	0.00002 U	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--
PCB-26/29	--	0.00004 U	--	--	--	--	--	--
PCB-27	--	0.00002 U	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--
PCB-3	--	0.00002 U	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--
PCB-31	--	0.000012 J	--	--	--	--	--	--

LOCATION	SW/SD329	SW/SD330	SW/SD330	SW/SD337	SW/SD337	SW/SD338	SW/SD338	SW/SD338
SAMPLE ID	SW329-20191203-F	SW330-20191203	SW330-20191203-F	SW337-20200226	SW337-20200226-F	SW338-20200226	SW338-20200226-F	SW338-20200226-D
SAMPLE DATE	20191203	20191203	20191203	20200226	20200226	20200226	20200226	20200226
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-32	--	0.0000034 J	--	--	--	--	--	--
PCB-34	--	0.00002 U	--	--	--	--	--	--
PCB-35	--	0.00002 U	--	--	--	--	--	--
PCB-36	--	0.00002 U	--	--	--	--	--	--
PCB-37	--	0.0000048 J	--	--	--	--	--	--
PCB-38	--	0.00002 U	--	--	--	--	--	--
PCB-39	--	0.00002 U	--	--	--	--	--	--
PCB-4	--	0.00002 U	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--
PCB-40/71	--	0.000007 J	--	--	--	--	--	--
PCB-41	--	0.00002 U	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--
PCB-42	--	0.00002 U	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--
PCB-43	--	0.00002 U	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--
PCB-44/47/65	--	0.00006 U	--	0.0000104 U	--	0.0000133 U	--	0.0000101 U
PCB-45	--	--	--	--	--	--	--	--
PCB-45/51	--	0.000011 J	--	--	--	--	--	--
PCB-46	--	0.00002 U	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--
PCB-48	--	0.00002 U	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--
PCB-49/69	--	0.000022 J	--	--	--	--	--	--
PCB-5	--	0.00002 U	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--
PCB-50/53	--	0.000012 J	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--
PCB-52	--	0.000053	--	0.0000147 U	--	0.0000189 U	--	0.0000146 U
PCB-52/69	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--
PCB-54	--	0.0000025 J	--	--	--	--	--	--
PCB-55	--	0.00002 U	--	--	--	--	--	--
PCB-56	--	0.00002 U	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--
PCB-57	--	0.00002 U	--	--	--	--	--	--
PCB-58	--	0.00002 U	--	--	--	--	--	--
PCB-59/62/75	--	0.00006 U	--	--	--	--	--	--
PCB-6	--	0.00002 U	--	--	--	--	--	--
PCB-60	--	0.00002 U	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	0.000081 U	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--
PCB-63	--	0.00002 U	--	--	--	--	--	--
PCB-64	--	0.000008 J	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--
PCB-66	--	0.00002	--	0.000005 U	--	0.00000743 U	--	0.00000356 U
PCB-66/76	--	--	--	--	--	--	--	--
PCB-67	--	0.00002 U	--	--	--	--	--	--
PCB-68	--	0.00002 U	--	--	--	--	--	--
PCB-7	--	0.00002 U	--	--	--	--	--	--
PCB-72	--	0.00002 U	--	--	--	--	--	--
PCB-73	--	0.00002 U	--	--	--	--	--	--
PCB-74	--	--	--	--	--	--	--	--
PCB-77	--	0.0000037 U	--	0.0000993 U	--	0.0000955 U	--	0.0000978 U
PCB-78	--	0.00002 U	--	--	--	--	--	--
PCB-79	--	0.00002 U	--	--	--	--	--	--
PCB-8	--	0.00002 U	--	0.0000993 U	--	0.0000955 U	--	0.0000978 U
PCB-80	--	0.00002 U	--	--	--	--	--	--
PCB-81	--	0.0000036 U	--	0.0000993 U	--	0.0000955 U	--	0.0000978 U
PCB-82	--	0.00002 U	--	--	--	--	--	--
PCB-83	--	0.0000052 J	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--
PCB-84	--	0.000018 J	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--
PCB-85/116/117	--	0.00002 J	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	0.00012 U	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--
PCB-88/91	--	0.000012 J	--	--	--	--	--	--
PCB-89	--	0.00002 U	--	--	--	--	--	--
PCB-9	--	0.00002 U	--	--	--	--	--	--
PCB-90/101/113	--	0.00015	--	0.0000277 U	--	0.0000396 U	--	0.0000316 U
PCB-92	--	0.000024	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--
PCB-93/100	--	0.00004 U	--	--	--	--	--	--
PCB-94	--	0.00002 U	--	--	--	--	--	--

LOCATION	SW/SD329	SW/SD330	SW/SD330	SW/SD337	SW/SD337	SW/SD338	SW/SD338	SW/SD338
SAMPLE ID	SW329-20191203-F	SW330-20191203	SW330-20191203-F	SW337-20200226	SW337-20200226-F	SW338-20200226	SW338-20200226-F	SW338-20200226-D
SAMPLE DATE	20191203	20191203	20191203	20200226	20200226	20200226	20200226	20200226
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-95	--	0.0001	--	--	--	--	--	--
PCB-96	--	0.00002 U	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--
PCB-98/102	--	0.00004 U	--	--	--	--	--	--
PCB-99	--	0.000046	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	0.00085 J	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	7.845E-09	--	1.212E-09	--	1.629E-09	--	1.392E-09
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	4.94662E-07	--	1.24693E-05	--	1.19921E-05	--	1.22807E-05
TEQ DIOXIN-LIKE PCBs (FISH)	--	1.001E-09	--	1.26E-10	--	1.94E-10	--	1.6E-10
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	1.2854E-08	--	2.81392E-07	--	2.70457E-07	--	2.76933E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	6.012E-09	--	7.65E-10	--	1.181E-09	--	9.74E-10
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	2.83688E-07	--	6.47959E-06	--	6.23065E-06	--	6.38047E-06
TETRACHLOROBIPHENYLS	--	0.00024 J	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	0.0002004	--	0.00002556	--	0.0000394	--	0.0000325
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	0.0030035	--	0.00026535	--	0.00035924	--	0.00029195
TOTAL PCB CONGENERS ZEROND	--	0.0032039	--	0.00029091	--	0.00039864	--	0.00032445
TOTAL PCB CONGENERS-NOAA	--	0.0014751	--	0.00028413	--	0.00038588	--	0.00031492
TOTAL PCB CONGENERS-NOAA HALFND	--	0.00437405	--	0.00071849	--	0.000774615	--	0.000698185
TOTAL PCB CONGENERS-NOAA X2	--	0.0029502	--	0.00056826	--	0.00077176	--	0.00062984
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	0.0031102	--	0.00072832	--	0.00095071	--	0.00079051
TRICHLOROBIPHENYLS	--	0.000053 J	--	--	--	--	--	--
DIOXINS/FURANS (PG/L)								
1,2,3,4,6,7,8,9-OCDD	--	18 Z	--	16.3 Z	--	28.9 Z	--	21 J
1,2,3,4,6,7,8,9-OCDF	--	5.6 U	--	99.1 U	--	97.8 U	--	96.7 U
1,2,3,4,6,7,8-HPCDD	--	3.8 U	--	49.6 U	--	48.9 U	--	48.4 U
1,2,3,4,6,7,8-HPCDF	--	2.6 U	--	49.6 U	--	48.9 U	--	48.4 U
1,2,3,4,7,8,9-HPCDF	--	4.2 U	--	49.6 U	--	48.9 U	--	48.4 U
1,2,3,4,7,8-HXCDD	--	1.9 U	--	49.6 U	--	48.9 U	--	48.4 U
1,2,3,4,7,8-HXCDF	--	2.2 U	--	49.6 U	--	48.9 U	--	48.4 U
1,2,3,6,7,8-HXCDD	--	2 U	--	49.6 U	--	48.9 U	--	48.4 U
1,2,3,6,7,8-HXCDF	--	1.8 U	--	49.6 U	--	48.9 U	--	48.4 U
1,2,3,7,8,9-HXCDD	--	2.1 U	--	49.6 U	--	48.9 U	--	48.4 U
1,2,3,7,8,9-HXCDF	--	3.9 U	--	49.6 U	--	48.9 U	--	48.4 U
1,2,3,7,8-PECDD	--	2.3 U	--	49.6 U	--	48.9 U	--	48.4 U
1,2,3,7,8-PECDF	--	2.4 U	--	49.6 U	--	48.9 U	--	48.4 U
2,3,4,6,7,8-HXCDF	--	2.1 U	--	49.6 U	--	48.9 U	--	48.4 U
2,3,4,7,8-PECDF	--	2.7 U	--	49.6 U	--	48.9 U	--	48.4 U
2,3,7,8-TCDD	--	2 U	--	9.91 U	--	9.78 U	--	9.67 U
2,3,7,8-TCDF	--	1.8 U	--	9.91 U	--	9.78 U	--	9.67 U
TEQ DIOXINS (BIRD)	--	0.0018	--	0.00163	--	0.00289	--	0.0021
TEQ DIOXINS (BIRD) HALFND	--	5.22048	--	76.405385	--	75.33823	--	74.557135
TEQ DIOXINS (FISH)	--	0.0018	--	0.00163	--	0.00289	--	0.0021
TEQ DIOXINS (FISH) HALFND	--	3.96348	--	66.986135	--	66.04723	--	65.365885
TEQ DIOXINS (HUMANS/MAMMALS)	--	0.0054	--	0.00489	--	0.00867	--	0.0063
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	3.54024	--	56.558255	--	55.76934	--	55.191305
TOTAL HPCDD	--	2.3 UJ	--	49.6 U	--	48.9 U	--	48.4 U
TOTAL HPCDF	--	1.8 UJ	--	49.6 U	--	48.9 U	--	48.4 U
TOTAL HXCDD	--	1.9 UJ	--	49.6 U	--	48.9 U	--	48.4 U
TOTAL HXCDF	--	1.2 UJ	--	49.6 U	--	48.9 U	--	48.4 U
TOTAL PECDD	--	1.6 UJ	--	49.6 U	--	48.9 U	--	48.4 U
TOTAL PECDF	--	0.96 UJ	--	49.6 U	--	48.9 U	--	48.4 U
TOTAL TCDD	--	2 UJ	--	9.91 U	--	9.78 U	--	9.67 U
TOTAL TCDF	--	1.8 UJ	--	9.91 U	--	9.78 U	--	9.67 U
METALS (UG/L)								
ALUMINUM	20 U	59	20 U	43	20 U	51.7	20 U	38.6
ANTIMONY	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
ARSENIC	0.29 J	0.37 J	0.34 J	1 U	1 U	1 U	1 U	1 U
BARIUM	27.1	28.7	27	40.5	38.1	41.9	40.1	40.9
BERYLLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM	25300	25300	24800	22600	22000	22600	22600	22400
CHROMIUM	2 U	0.17 J	2 U	2 U	2 U	2 U	2 U	2 U
COBALT	0.23 J	0.35 J	0.24 J	1 U	1 U	1 U	1 U	1 U
COPPER	2 U	2.3	2 U	2 U	2 U	2 U	2 U	2 U
CYANIDE	--	10 U	--	10 U	--	10 U	--	10 U
IRON	200 U	379	200 U	146	100 U	149	100 U	119
LEAD	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
MAGNESIUM	5120	5090	4970	7880	7700	7870	7800	7720
MANGANESE	28.3	44.8	25.3	14	6.8	14.7	6.7	13.8
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	1.5	1.9	1.6	2.2	1.8	1.9	1.9	2.2
POTASSIUM	3160	3160	3120	2620	2570	2690	2670	2640
SELENIUM	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SILVER	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
SODIUM	21200	22000	20900	18100	17700	19100	19100	18800
THALLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VANADIUM	0.12 J	0.23 J	0.13 J	5 U	5 U	5 U	5 U	5 U
ZINC	18.5	22.2	16.9	6	5	6.6	5	6.3

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD338	SW/SD339	SW/SD339	SW-001	SW-002	SW-003	SW-004	SW-005
SAMPLE ID	SW338-20200226-D-F	SW339-20200226	SW339-20200226-F	SW-001	SW-002	SW-003	SW-004	SW-005
SAMPLE DATE	20200226	20200226	20200226	20170614	20170614	20170614	20170614	20170614
DUPLICATE								
SAMPLE CODE	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
VOLATILES (UG/L)								
1,1,1-TRICHLOROETHANE	--	5 U	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	5 U	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	5 U	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	5 U	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	5 U	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	5 UJ	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	5 U	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	5 U	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	5 U	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	5 U	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	5 U	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	5 U	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	5 U	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	5 U	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	5 U	--	--	--	--	--	--
2-BUTANONE	--	10 U	--	--	--	--	--	--
2-HEXANONE	--	10 U	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	10 U	--	--	--	--	--	--
ACETONE	--	2.1 J	--	--	--	--	--	--
BENZENE	--	5 U	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	5 U	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	5 U	--	--	--	--	--	--
BROMOFORM	--	5 U	--	--	--	--	--	--
BROMOMETHANE	--	5 U	--	--	--	--	--	--
CARBON DISULFIDE	--	5 U	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	5 U	--	--	--	--	--	--
CHLOROBENZENE	--	5 U	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	5 U	--	--	--	--	--	--
CHLOROETHANE	--	5 U	--	--	--	--	--	--
CHLOROFORM	--	5 U	--	--	--	--	--	--
CHLOROMETHANE	--	5 U	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	5 UJ	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	5 U	--	--	--	--	--	--
CYCLOHEXANE	--	5 U	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	5 U	--	--	--	--	--	--
ETHYLBENZENE	--	5 U	--	--	--	--	--	--
ISOPROPYLBENZENE	--	5 U	--	--	--	--	--	--
M+P-XYLENES	--	5 U	--	--	--	--	--	--
METHYL ACETATE	--	5 U	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	5 U	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	5 U	--	--	--	--	--	--
METHYLENE CHLORIDE	--	5 U	--	--	--	--	--	--
O-XYLENE	--	5 U	--	--	--	--	--	--
STYRENE	--	5 U	--	--	--	--	--	--
TETRACHLOROETHENE	--	5 U	--	--	--	--	--	--
TOLUENE	--	5 U	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	5 UJ	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	5 U	--	--	--	--	--	--
TRICHLOROETHENE	--	5 U	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	5 U	--	--	--	--	--	--
VINYL CHLORIDE	--	5 U	--	--	--	--	--	--
VOLATILES-TRACE (UG/L)								
1,1,1-TRICHLOROETHANE	--	0.5 U	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	0.5 U	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	0.5 U	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	0.5 U	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	0.5 U	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	0.5 U	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	0.5 U	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	0.5 U	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	0.5 U	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	0.5 U	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	0.5 U	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	0.5 U	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	0.5 U	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	0.5 U	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	0.5 U	--	--	--	--	--	--
2-BUTANONE	--	5 U	--	--	--	--	--	--
2-HEXANONE	--	5 U	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	5 U	--	--	--	--	--	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD338	SW/SD339	SW/SD339	SW-001	SW-002	SW-003	SW-004	SW-005
SAMPLE ID	SW338-20200226-D-F	SW339-20200226	SW339-20200226-F	SW-001	SW-002	SW-003	SW-004	SW-005
SAMPLE DATE	20200226	20200226	20200226	20170614	20170614	20170614	20170614	20170614
DUPLICATE								
SAMPLE CODE	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
ACETONE	--	5 U	--	--	--	--	--	--
BENZENE	--	0.5 U	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	0.5 U	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	0.5 U	--	--	--	--	--	--
BROMOFORM	--	0.5 U	--	--	--	--	--	--
BROMOMETHANE	--	0.5 U	--	--	--	--	--	--
CARBON DISULFIDE	--	0.5 U	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	0.5 U	--	--	--	--	--	--
CHLOROBENZENE	--	0.5 U	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	0.5 U	--	--	--	--	--	--
CHLOROETHANE	--	0.5 U	--	--	--	--	--	--
CHLOROFORM	--	0.5 U	--	--	--	--	--	--
CHLOROMETHANE	--	0.5 U	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	0.5 U	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	0.5 U	--	--	--	--	--	--
CYCLOHEXANE	--	0.5 U	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	0.5 U	--	--	--	--	--	--
ETHYLBENZENE	--	0.5 U	--	--	--	--	--	--
ISOPROPYLBENZENE	--	0.5 U	--	--	--	--	--	--
M+P-XYLENES	--	0.5 U	--	--	--	--	--	--
METHYL ACETATE	--	0.5 U	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	0.5 U	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	0.5 U	--	--	--	--	--	--
METHYLENE CHLORIDE	--	0.5 U	--	--	--	--	--	--
O-XYLENE	--	0.5 U	--	--	--	--	--	--
STYRENE	--	0.5 U	--	--	--	--	--	--
TETRACHLOROETHENE	--	0.5 U	--	--	--	--	--	--
TOLUENE	--	0.5 U	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	0.5 U	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	0.5 U	--	--	--	--	--	--
TRICHLOROETHENE	--	0.5 U	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	0.5 U	--	--	--	--	--	--
VINYL CHLORIDE	--	0.50 U	--	--	--	--	--	--
SEMIVOLATILES (UG/L)								
1,1-BIPHENYL	--	5 U	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	5 U	--	--	--	--	--	--
1,4-DIOXANE	--	2 U	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	10 U	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	5 U	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	5 U	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	5 U	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	5 U	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	5 U	--	--	--	--	--	--
2,4-DINITROPHENOL	--	10 R	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	5 U	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	5 U	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	5 U	--	--	--	--	--	--
2-CHLOROPHENOL	--	5 U	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	5 U	--	--	--	--	--	--
2-METHYLPHENOL	--	10 U	--	--	--	--	--	--
2-NITROANILINE	--	5 R	--	--	--	--	--	--
2-NITROPHENOL	--	5 U	--	--	--	--	--	--
3&4-METHYLPHENOL	--	10 U	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	10 U	--	--	--	--	--	--
3-NITROANILINE	--	10 R	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	10 U	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	5 U	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	5 U	--	--	--	--	--	--
4-CHLOROANILINE	--	10 U	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	5 U	--	--	--	--	--	--
4-NITROANILINE	--	10 R	--	--	--	--	--	--
4-NITROPHENOL	--	10 R	--	--	--	--	--	--
ACENAPHTHENE	--	5 U	--	--	--	--	--	--
ACENAPHTHYLENE	--	5 U	--	--	--	--	--	--
ACETOPHENONE	--	10 U	--	--	--	--	--	--
ANTHRACENE	--	5 U	--	--	--	--	--	--
ATRAZINE	--	10 U	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	5 U	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	5 U	--	--	--	--	--	--
BENZALDEHYDE	--	10 U	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	5 U	--	--	--	--	--	--
BENZO(A)PYRENE	--	5 U	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	5 U	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	5 U	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	5 U	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	5 U	--	--	--	--	--	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD338	SW/SD339	SW/SD339	SW-001	SW-002	SW-003	SW-004	SW-005
SAMPLE ID	SW338-20200226-D-F	SW339-20200226	SW339-20200226-F	SW-001	SW-002	SW-003	SW-004	SW-005
SAMPLE DATE	20200226	20200226	20200226	20170614	20170614	20170614	20170614	20170614
DUPLICATE								
SAMPLE CODE	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
BIS(2-CHLOROETHYL)ETHER	--	10 U	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	5 U	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	5 U	--	--	--	--	--	--
CAPROLACTAM	--	10 U	--	--	--	--	--	--
CARBAZOLE	--	10 U	--	--	--	--	--	--
CHRYSENE	--	5 U	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	5 U	--	--	--	--	--	--
DIBENZOFURAN	--	5 U	--	--	--	--	--	--
DIETHYL PHTHALATE	--	5 U	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	1.5 J	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	5 U	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	10 U	--	--	--	--	--	--
FLUORANTHENE	--	10 U	--	--	--	--	--	--
FLUORENE	--	5 U	--	--	--	--	--	--
HEXACHLOROBENZENE	--	5 U	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	5 U	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	10 U	--	--	--	--	--	--
HEXACHLOROETHANE	--	5 U	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	0 U	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	5 U	--	--	--	--	--	--
ISOPHORONE	--	5 U	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	0 U	--	--	--	--	--	--
NAPHTHALENE	--	5 U	--	--	--	--	--	--
NITROBENZENE	--	5 U	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	5 U	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	5 U	--	--	--	--	--	--
PENTACHLOROPHENOL	--	10 U	--	--	--	--	--	--
PHENANTHRENE	--	5 U	--	--	--	--	--	--
PHENOL	--	10 U	--	--	--	--	--	--
PYRENE	--	5 U	--	--	--	--	--	--
TOTAL PAHS	--	0 U	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L)								
2-METHYLNAPHTHALENE	--	0.1 U	--	--	--	--	--	--
ACENAPHTHENE	--	0.1 U	--	--	--	--	--	--
ACENAPHTHYLENE	--	0.1 U	--	--	--	--	--	--
ANTHRACENE	--	0.1 U	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	0.1 U	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	0.1 U	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	0.1 U	--	--	--	--	--	--
BENZO(A)PYRENE	--	0.1 U	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	0.1 U	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	0.1 U	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	0.1 U	--	--	--	--	--	--
CHRYSENE	--	0.1 U	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	0.1 U	--	--	--	--	--	--
FLUORANTHENE	--	0.1 U	--	--	--	--	--	--
FLUORENE	--	0.1 U	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	0 U	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	0.1 U	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	0 U	--	--	--	--	--	--
NAPHTHALENE	--	0.1 U	--	--	--	--	--	--
PENTACHLOROPHENOL	--	0.2 U	--	--	--	--	--	--
PHENANTHRENE	--	0.1 U	--	--	--	--	--	--
PYRENE	--	0.1 U	--	--	--	--	--	--
TOTAL PAHS	--	0.1	--	--	--	--	--	--
PESTICIDES (UG/L)								
4,4'-DDD	--	0.1 U	--	--	--	--	--	--
4,4'-DDE	--	0.1 U	--	--	--	--	--	--
4,4'-DDT	--	0.1 U	--	--	--	--	--	--
ALDRIN	--	0.05 U	--	--	--	--	--	--
ALPHA-BHC	--	0.05 U	--	--	--	--	--	--
ALPHA-CHLORDANE	--	0.05 U	--	--	--	--	--	--
BETA-BHC	--	0.05 U	--	--	--	--	--	--
DELTA-BHC	--	0.05 U	--	--	--	--	--	--
DIELDRIN	--	0.1 U	--	--	--	--	--	--
ENDOSULFAN I	--	0.05 U	--	--	--	--	--	--
ENDOSULFAN II	--	0.1 U	--	--	--	--	--	--
ENDOSULFAN SULFATE	--	0.1 U	--	--	--	--	--	--
ENDRIN	--	0.1 U	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	0.1 U	--	--	--	--	--	--
ENDRIN KETONE	--	0.1 U	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	0.05 U	--	--	--	--	--	--
GAMMA-CHLORDANE	--	0.05 U	--	--	--	--	--	--
HEPTACHLOR	--	0.05 U	--	--	--	--	--	--

LOCATION	SW/SD338	SW/SD339	SW/SD339	SW-001	SW-002	SW-003	SW-004	SW-005
SAMPLE ID	SW338-20200226-D-F	SW339-20200226	SW339-20200226-F	SW-001	SW-002	SW-003	SW-004	SW-005
SAMPLE DATE	20200226	20200226	20200226	20170614	20170614	20170614	20170614	20170614
DUPLICATE								
SAMPLE CODE	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
HEPTACHLOR EPOXIDE	--	0.05 U	--	--	--	--	--	--
METHOXYCHLOR	--	0.5 U	--	--	--	--	--	--
TOXAPHENE	--	5 U	--	--	--	--	--	--
PCBS (UG/L)								
AROCLOR-1016	--	1 U	--	--	--	--	--	--
AROCLOR-1221	--	1 U	--	--	--	--	--	--
AROCLOR-1232	--	1 U	--	--	--	--	--	--
AROCLOR-1242	--	1 U	--	--	--	--	--	--
AROCLOR-1248	--	1 U	--	--	--	--	--	--
AROCLOR-1254	--	1 U	--	--	--	--	--	--
AROCLOR-1260	--	1 U	--	--	--	--	--	--
AROCLOR-1262	--	1 U	--	--	--	--	--	--
AROCLOR-1268	--	1 U	--	--	--	--	--	--
TOTAL AROCLOR	--	0 U	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	4.5	--	--	--	--	--	--
PCB CONGENERS (UG/L)								
DICHLOROBIPHENYLS	--	--	--	0.000031 J	0 UJ	0.000042 J	0 UJ	0 UJ
HEPTACHLOROBIPHENYLS	--	--	--	0.00044 J	0.00083 J	0.0033 J	0.0013 J	0.0012 J
HEXACHLOROBIPHENYLS	--	--	--	0.00068 J	0.0011 J	0.0038 J	0.0028 J	0.0017 J
MONOCHLOROBIPHENYLS	--	--	--	0.0000033 J	0 UJ	0 UJ	0 UJ	0 UJ
NONACHLOROBIPHENYLS	--	--	--	0.0000082 J	0.000018 J	0.000064 J	0.000025 J	0.000026 J
OCTACHLOROBIPHENYLS	--	--	--	0.000085 J	0.00017 J	0.00073 J	0.00027 J	0.00027 J
PCB-1	--	--	--	0.0000033 J	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-10	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-100	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--
PCB-103	--	--	--	0.000019 U	0.00002 U	0.0000061 J	0.00002 U	0.00002 U
PCB-104	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-105	--	0.00000668 Z	--	0.000019 U	0.00002 U	0.000027	0.000068	0.00002 U
PCB-106	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-107	--	--	--	0.000019 U	0.00002 U	0.0000035 J	0.0000081 J	0.00002 U
PCB-108/107	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	0.000039 U	0.00004 U	0.0000032 J	0.000041 U	0.00004 U
PCB-109	--	--	--	--	--	--	--	--
PCB-11	--	--	--	0.000031	0.00002 U	0.000042	0.00002 U	0.00002 U
PCB-110	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	0.000055	0.00007	0.00018	0.00033	0.000084
PCB-111	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-111/115	--	--	--	--	--	--	--	--
PCB-112	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-113	--	--	--	--	--	--	--	--
PCB-114	--	0.0000971 U	--	0.0000032 U	0.000004 U	0.0000036 U	0.0000051 U	0.0000047 U
PCB-118	--	0.0000161 J	--	0.000027	0.000041	0.000096	0.00015	0.000044
PCB-118/106	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	0.000039 U	0.00004 U	0.000041 U	0.000041 U	0.00004 U
PCB-120	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-121	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-122	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-123	--	0.0000971 U	--	0.0000029 U	0.0000039 U	0.0000034 U	0.0000049 U	0.0000047 U
PCB-124	--	--	--	--	--	--	--	--
PCB-126	--	0.0000971 U	--	0.0000038 U	0.0000046 U	0.0000042 U	0.0000059 U	0.0000054 U
PCB-127	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-128/162	--	--	--	--	--	--	--	--
PCB-128/166	--	0.00000515 J	--	0.000039 U	0.000014 J	0.000045	0.000094	0.000022 J
PCB-129	--	--	--	--	--	--	--	--
PCB-129/138/163	--	0.0000762 J	--	0.00014	0.00024	0.00081	0.00065	0.00035
PCB-13	--	--	--	--	--	--	--	--
PCB-130	--	--	--	0.000019 U	0.0000083 J	0.000023	0.000035	0.000012 J
PCB-131	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.0000089 J	0.00002 U
PCB-131/133	--	--	--	--	--	--	--	--
PCB-132	--	--	--	0.000045	0.000071	0.00022	0.00024	0.00011
PCB-132/161	--	--	--	--	--	--	--	--
PCB-133	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.0000073 J	0.00002 U
PCB-134	--	--	--	0.000019 U	0.0000093 J	0.000027	0.000029	0.000012 J
PCB-134/143	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	0.00008	0.00012	0.00039	0.00023	0.00018
PCB-136	--	--	--	0.000027	0.000037	0.00011	0.000092	0.000058
PCB-137	--	--	--	0.000019 U	0.00002 U	0.0000085 J	0.000028	0.00002 U
PCB-138/163/164	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	0.000039 U	0.00004 U	0.000041 U	0.0000089 J	0.00004 U
PCB-139/149	--	--	--	--	--	--	--	--
PCB-14	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-140	--	--	--	--	--	--	--	--
PCB-141	--	--	--	0.000035	0.00006	0.0002	0.00012	0.00009
PCB-142	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-143	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-144	--	--	--	0.0000093 J	0.000014 J	0.000043	0.000028	0.000021
PCB-145	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-146	--	--	--	0.000019 J	0.000029	0.000091	0.000062	0.000046
PCB-146/165	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	0.00015	0.00022	0.00077	0.00048	0.00035
PCB-148	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-15	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-150	--	--	--	0.000019 U	0.00002 U	0.0000018 J	0.00002 U	0.00002 U
PCB-151	--	--	--	--	--	--	--	--
PCB-152	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD338	SW/SD339	SW/SD339	SW-001	SW-002	SW-003	SW-004	SW-005
SAMPLE ID	SW338-20200226-D-F	SW339-20200226	SW339-20200226-F	SW-001	SW-002	SW-003	SW-004	SW-005
SAMPLE DATE	20200226	20200226	20200226	20170614	20170614	20170614	20170614	20170614
DUPLICATE								
SAMPLE CODE	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-153	--	--	--	--	--	--	--	--
PCB-153/168	--	0.000079 J	--	0.00014	0.00025	0.00083	0.00048	0.00037
PCB-154	--	--	--	0.0000019 J	0.0000021 J	0.0000065 J	0.00002 U	0.00002 U
PCB-155	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-156	--	--	--	--	--	--	--	--
PCB-156/157	--	0.00000555 J	--	0.000039 U	0.00004 U	0.000048	0.000069	0.00004 U
PCB-157	--	--	--	--	--	--	--	--
PCB-158	--	--	--	0.000011 J	0.000018 J	0.000062	0.000058	0.000028
PCB-158/160	--	--	--	--	--	--	--	--
PCB-159	--	--	--	0.000019 U	0.00002 U	0.000019 J	0.00002 U	0.00002 U
PCB-16	--	--	--	0.000006 J	0.00002 U	0.00002 U	0.0000052 J	0.00002 U
PCB-160	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-161	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-162	--	--	--	0.000019 U	0.00002 U	0.0000025 J	0.00002 U	0.00002 U
PCB-164	--	--	--	0.00001 J	0.000017 J	0.000058	0.000043	0.000027
PCB-165	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-166	--	--	--	--	--	--	--	--
PCB-167	--	0.00000231 Z	--	0.0000037 J	0.0000063 J	0.00002	0.000019 J	0.00002 U
PCB-168	--	--	--	--	--	--	--	--
PCB-169	--	0.0000971 U	--	0.0000022 U	0.0000024 U	0.0000028 U	0.0000026 U	0.000003 U
PCB-17	--	--	--	0.0000047 J	0.00002 U	0.00002 U	0.00002 U	0.0000049 J
PCB-170	--	0.0000319 J	--	0.000045	0.000088	0.00035	0.00015	0.00014
PCB-171	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	0.000015 J	0.000026 J	0.00011	0.000049	0.000045
PCB-172	--	--	--	0.0000088 J	0.000017 J	0.000064	0.000025	0.000024
PCB-173	--	--	--	--	--	--	--	--
PCB-174	--	--	--	0.000064	0.00012	0.00045	0.00018	0.00019
PCB-175	--	--	--	0.000019 U	0.00002 U	0.000014 J	0.0000058 J	0.000007 J
PCB-176	--	--	--	0.000008 J	0.000012 J	0.000044	0.000021	0.00002
PCB-177	--	--	--	0.000034	0.000063	0.00025	0.000099	0.000097
PCB-178	--	--	--	0.000013 J	0.000023	0.000083	0.000035	0.000036
PCB-179	--	--	--	0.000027	0.000047	0.00016	0.000069	0.000075
PCB-18	--	--	--	--	--	--	--	--
PCB-18/30	--	0.00000524 Z	--	0.000039 U	0.00004 U	0.000041 U	0.000041 U	0.00004 U
PCB-180	--	--	--	--	--	--	--	--
PCB-180/193	--	0.0000746 J	--	0.00011	0.00021	0.00087	0.00033	0.00034
PCB-181	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-182	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-182/187	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	0.000034 J	0.000067	0.00027	0.00011	0.00004 U
PCB-184	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-185	--	--	--	--	--	--	--	--
PCB-186	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-187	--	0.0000425 J	--	0.000074	0.00013	0.00049	0.0002	0.00021
PCB-188	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-189	--	0.00000136 J	--	0.0000025 U	0.0000044 J	0.000012 J	0.0000064 J	0.0000055 J
PCB-19	--	--	--	0.0000045 J	0.00002 U	0.0000066 J	0.0000063 J	0.00002 U
PCB-190	--	--	--	0.000019 U	0.00002 U	0.00008	0.000032	0.000029
PCB-191	--	--	--	0.000019 U	0.0000036 J	0.000014 J	0.0000059 J	0.00002 U
PCB-192	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-193	--	--	--	--	--	--	--	--
PCB-194	--	--	--	0.00002 U	0.000038	0.00016	0.00006	0.00006
PCB-195	--	0.00000819 J	--	0.0000085 J	0.000017 J	0.000073	0.000029	0.000028
PCB-196	--	--	--	0.0000097 J	0.00002 J	0.000087	0.000031	0.000031
PCB-196/203	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	0.0000041 J	0.0000079 J	0.000032 J	0.000012 J	0.000011 J
PCB-198	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	0.000039 U	0.000048	0.00019	0.000069	0.000073
PCB-199	--	--	--	--	--	--	--	--
PCB-2	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-20/21/33	--	--	--	--	--	--	--	--
PCB-20/28	--	0.00000769	--	0.000039 U	0.00004 U	0.000041 U	0.000041 U	0.00004 U
PCB-200	--	--	--	--	--	--	--	--
PCB-201	--	--	--	0.0000029 J	0.0000052 J	0.00002	0.0000068 J	0.000008 J
PCB-202	--	--	--	0.0000043 J	0.0000079 J	0.000035	0.000012 J	0.000014 J
PCB-203	--	--	--	0.000014 J	0.00003	0.00012	0.000045	0.000045
PCB-204	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-205	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-206	--	0.0000046 Z	--	0.0000082 J	0.000012 J	0.000046	0.000019 J	0.000018 J
PCB-207	--	--	--	0.000019 U	0.0000017 J	0.0000063 J	0.0000019 J	0.0000026 J
PCB-208	--	--	--	0.000019 U	0.0000046 J	0.000012 J	0.0000041 J	0.0000053 J
PCB-209	--	0.00000266 U	--	0.000019 U	0.00002 U	0.000021	0.00002 U	0.00002 U
PCB-21/33	--	--	--	0.000039 U	0.00004 U	0.00004 U	0.000041 U	0.00004 U
PCB-22	--	--	--	0.0000078 J	0.0000068 J	0.00002 U	0.0000068 J	0.0000056 J
PCB-23	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-24	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-25	--	--	--	0.000019 U	0.00002 U	0.0000021 J	0.00002 U	0.00002 U
PCB-26	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	0.0000031 J	0.00004 U	0.00004 U	0.000041 U	0.00004 U
PCB-27	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-28	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--
PCB-3	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-30	--	--	--	--	--	--	--	--
PCB-31	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD338	SW/SD339	SW/SD339	SW-001	SW-002	SW-003	SW-004	SW-005
SAMPLE ID	SW338-20200226-D-F	SW339-20200226	SW339-20200226-F	SW-001	SW-002	SW-003	SW-004	SW-005
SAMPLE DATE	20200226	20200226	20200226	20170614	20170614	20170614	20170614	20170614
DUPLICATE								
SAMPLE CODE	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-32	--	--	--	0.0000052 J	0.000004 J	0.0000057 J	0.0000048 J	0.0000046 J
PCB-34	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-35	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-36	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-37	--	--	--	0.0000041 J	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-38	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-39	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-4	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-40	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	0.0000049 J	0.0000067 J	0.000012 J	0.0000076 J	0.0000082 J
PCB-41	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-41/64/71/72	--	--	--	--	--	--	--	--
PCB-42	--	--	--	0.0000044 J	0.00002 U	0.0000074 J	0.00002 U	0.00002 U
PCB-42/59	--	--	--	--	--	--	--	--
PCB-43	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-43/49	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--
PCB-44/47/65	--	0.0000118 U	--	0.000058 U	0.00006 U	0.00006 U	0.000061 U	0.00006 U
PCB-45	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	0.000039 U	0.00004 U	0.00004 U	0.000041 U	0.00004 U
PCB-46	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-47	--	--	--	--	--	--	--	--
PCB-48	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-48/75	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	0.000018 J	0.000019 J	0.000037 J	0.000022 J	0.000022 J
PCB-5	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-50	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	0.0000074 J	0.00004 U	0.000013 J	0.000011 J	0.00001 J
PCB-51	--	--	--	--	--	--	--	--
PCB-52	--	0.0000165 U	--	0.000042	0.000046	0.000076	0.000083	0.000054
PCB-52/69	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--
PCB-54	--	--	--	0.000019 U	0.00002 U	0.0000035 J	0.00002 U	0.00002 U
PCB-55	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-56	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-56/60	--	--	--	--	--	--	--	--
PCB-57	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-58	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-59/62/75	--	--	--	0.000058 U	0.00006 U	0.000061 U	0.000061 U	0.00006 U
PCB-6	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-60	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-61/70	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	0.000077 U	0.00008 U	0.000081 U	0.000081 U	0.00008 U
PCB-62	--	--	--	--	--	--	--	--
PCB-63	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-64	--	--	--	0.0000063 J	0.0000089 J	0.000013 J	0.0000098 J	0.0000081 J
PCB-65	--	--	--	--	--	--	--	--
PCB-66	--	0.00000462 U	--	0.0000093 J	0.000014 J	0.00002	0.000015 J	0.000012 J
PCB-66/76	--	--	--	--	--	--	--	--
PCB-67	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-68	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-7	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-72	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-73	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-74	--	--	--	--	--	--	--	--
PCB-77	--	0.0000971 U	--	0.0000022 U	0.0000031 U	0.0000034 J	0.0000037 U	0.0000029 U
PCB-78	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-79	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-8	--	0.0000971 U	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-80	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-81	--	0.0000971 U	--	0.0000021 U	0.000003 U	0.000003 U	0.0000034 U	0.0000028 U
PCB-82	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.000031	0.00002 U
PCB-83	--	--	--	0.000019 U	0.00002 U	0.0000077 J	0.000016 J	0.00002 U
PCB-83/112	--	--	--	--	--	--	--	--
PCB-84	--	--	--	0.000019 U	0.0000099 J	0.000019 J	0.000092	0.000012 J
PCB-84/92	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	0.000058 U	0.00006 U	0.000015 J	0.000061 U	0.00006 U
PCB-86	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	0.00012 U	0.00012 U	0.00012 U	0.00016	0.00012 U
PCB-87/117/125	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	0.000039 U	0.0000073 J	0.000019 J	0.000036 J	0.00004 U
PCB-89	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-9	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U
PCB-90/101/113	--	0.0000306 U	--	0.000076	0.0001	0.00028	0.00027	0.00014
PCB-92	--	--	--	0.000012 J	0.00002 U	0.000043	0.000052	0.000021
PCB-93	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	0.000039 U	0.00004 U	0.000041 U	0.000041 U	0.00004 U
PCB-94	--	--	--	0.000019 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U

LOCATION	SW/SD338	SW/SD339	SW/SD339	SW-001	SW-002	SW-003	SW-004	SW-005
SAMPLE ID	SW338-20200226-D-F	SW339-20200226	SW339-20200226-F	SW-001	SW-002	SW-003	SW-004	SW-005
SAMPLE DATE	20200226	20200226	20200226	20170614	20170614	20170614	20170614	20170614
DUPLICATE								
SAMPLE CODE	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-95	--	--	--	0.000077	0.000091	0.00025	0.00031	0.00013
PCB-96	--	--	--	0.000019 U	0.00002 U	0.0000023 J	0.00002 U	0.00002 U
PCB-97	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	0.000039 U	0.00004 U	0.000041 U	0.000041 U	0.00004 U
PCB-99	--	--	--	0.000016 J	0.00002 U	0.000036	0.000065	0.00002
PENTACHLOROBIPHENYLS	--	--	--	0.0003 J	0.00037 J	0.001 J	0.0016 J	0.00051 J
TEQ DIOXIN-LIKE PCBs (BIRD)	--	1.42E-09	--	3.07E-10	5.17E-10	1.7878E-07	1.5454E-08	4.95E-10
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	1.21928E-05	--	3.54493E-07	4.62436E-07	5.40377E-07	5.74533E-07	4.87853E-07
TEQ DIOXIN-LIKE PCBs (FISH)	--	1.57E-10	--	1.53E-10	2.58E-10	1.355E-09	1.562E-09	2.47E-10
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	2.74948E-07	--	1.0508E-08	1.2892E-08	1.2692E-08	1.7436E-08	1.4889E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	9.58E-10	--	9.21E-10	1.551E-09	6.43E-09	9.372E-09	1.485E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	6.33479E-06	--	2.25344E-07	2.69174E-07	2.58985E-07	3.44216E-07	3.1839E-07
TETRACHLOROBIPHENYLS	--	--	--	0.00015 J	0.00015 J	0.0003 J	0.00025 J	0.00019 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	0.000032	--	0.0000307	0.0000517	0.0002064	0.0003124	0.0000495
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	0.00033507	--	0.0015507	0.0024922	0.0088717	0.0058372	0.0037213
TOTAL PCB CONGENERS ZEROND	--	0.00036707	--	0.0015814	0.0025439	0.0090781	0.0061496	0.0037708
TOTAL PCB CONGENERS-NOAA	--	0.00035785	--	0.00068	0.001162	0.004034	0.002538	0.001728
TOTAL PCB CONGENERS-NOAA HALFND	--	0.00074001	--	0.00286635	0.0038844	0.0101506	0.0072589	0.00511255
TOTAL PCB CONGENERS-NOAA X2	--	0.0007157	--	0.00136	0.002324	0.008068	0.005076	0.003456
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	0.00087898	--	0.001592	0.002524	0.00823	0.005259	0.003656
TRICHLOROBIPHENYLS	--	--	--	0.00008 J	0.00005 J	0.0001 J	0.00005 J	0.000055 J
DIOXINS/FURANS (PG/L)								
1,2,3,4,6,7,8,9-OCDD	--	21.7 Z	--	98 U	--	--	100 U	--
1,2,3,4,6,7,8,9-OCDF	--	100 U	--	2.9 U	--	--	3 U	--
1,2,3,4,6,7,8-HPCDD	--	50.2 U	--	49 U	--	--	50 U	--
1,2,3,4,6,7,8-HPCDF	--	50.2 U	--	1.5 U	--	--	1.6 U	--
1,2,3,4,7,8,9-HPCDF	--	50.2 U	--	1.3 U	--	--	1.3 U	--
1,2,3,4,7,8-HXCDD	--	50.2 U	--	0.61 U	--	--	0.62 U	--
1,2,3,4,7,8-HXCDF	--	50.2 U	--	1 U	--	--	1 U	--
1,2,3,6,7,8-HXCDD	--	50.2 U	--	0.71 U	--	--	0.73 U	--
1,2,3,6,7,8-HXCDF	--	50.2 U	--	1 U	--	--	1.1 U	--
1,2,3,7,8,9-HXCDD	--	50.2 U	--	1.4 U	--	--	1.4 U	--
1,2,3,7,8,9-HXCDF	--	50.2 U	--	49 U	--	--	50 U	--
1,2,3,7,8-PECDD	--	50.2 U	--	1.1 U	--	--	1.1 U	--
1,2,3,7,8-PECDF	--	50.2 U	--	0.68 U	--	--	0.7 U	--
2,3,4,6,7,8-HXCDF	--	50.2 U	--	1.4 U	--	--	1.4 U	--
2,3,4,7,8-PECDF	--	50.2 U	--	0.77 U	--	--	0.79 U	--
2,3,7,8-TCDD	--	10 U	--	0.47 U	--	--	0.48 U	--
2,3,7,8-TCDF	--	10 U	--	0.42 U	--	--	0.43 U	--
TEQ DIOXINS (BIRD)	--	0.00217	--	0.47 U	--	--	0.48 U	--
TEQ DIOXINS (BIRD) HALFND	--	77.30027	--	0.47 U	--	--	0.48 U	--
TEQ DIOXINS (FISH)	--	0.00217	--	0.47 U	--	--	0.48 U	--
TEQ DIOXINS (FISH) HALFND	--	67.78127	--	0.47 U	--	--	0.48 U	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	0.00651	--	0.47 U	--	--	0.48 U	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	57.22751	--	0.47 U	--	--	0.48 U	--
TOTAL HPCDD	--	50.2 U	--	4.3 J	--	--	1.9 J	--
TOTAL HPCDF	--	50.2 U	--	1.3 UJ	--	--	1.3 UJ	--
TOTAL HXCDD	--	50.2 U	--	0.61 UJ	--	--	0.62 UJ	--
TOTAL HXCDF	--	50.2 U	--	0.69 J	--	--	0.76 J	--
TOTAL PECDD	--	50.2 U	--	1.1 UJ	--	--	1.1 UJ	--
TOTAL PECDF	--	50.2 U	--	0.68 UJ	--	--	0.7 UJ	--
TOTAL TCDD	--	10 U	--	0.47 UJ	--	--	0.48 UJ	--
TOTAL TCDF	--	10 U	--	0.42 UJ	--	--	0.43 UJ	--
METALS (UG/L)								
ALUMINUM	20 U	42.4	20 U	--	--	--	--	--
ANTIMONY	2 U	2 U	2 U	--	--	--	--	--
ARSENIC	1 U	1 U	1 U	--	--	--	--	--
BARIUM	44	41.6	41.3	--	--	--	--	--
BERYLLIUM	1 U	1 U	1 U	--	--	--	--	--
CADMIUM	1 U	1 U	1 U	--	--	--	--	--
CALCIUM	22800	22300	22800	--	--	--	--	--
CHROMIUM	2 U	2 U	2 U	--	--	--	--	--
COBALT	1 U	1 U	1 U	--	--	--	--	--
COPPER	2 U	2 U	2 U	--	--	--	--	--
CYANIDE	--	2.9 J	--	--	--	--	--	--
IRON	100 U	136	100 U	--	--	--	--	--
LEAD	1 U	1 U	1 U	--	--	--	--	--
MAGNESIUM	7790	7670	7850	--	--	--	--	--
MANGANESE	7.6	13.8	7.4	--	--	--	--	--
MERCURY	0.2 U	0.2 U	0.2 U	--	--	--	--	--
NICKEL	2	2.3	2.2	--	--	--	--	--
POTASSIUM	2670	2640	2710	--	--	--	--	--
SELENIUM	5 U	5 U	5 U	--	--	--	--	--
SILVER	1 U	1 U	1 U	--	--	--	--	--
SODIUM	19300	18400	18800	--	--	--	--	--
THALLIUM	1 U	1 U	1 U	--	--	--	--	--
VANADIUM	5 U	5 U	5 U	--	--	--	--	--
ZINC	6.3	7.1	7.3	--	--	--	--	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW-006	SW-007	SW-008	SW-009	SW-010	SW-011	SW-012	SW-013
SAMPLE ID	SW-006	SW-007	SW-008	SW-009	SW-010	SW-011	SW-012	SW-013
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
VOLATILES (UG/L)								
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--
VOLATILES-TRACE (UG/L)								
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW-006	SW-007	SW-008	SW-009	SW-010	SW-011	SW-012	SW-013
SAMPLE ID	SW-006	SW-007	SW-008	SW-009	SW-010	SW-011	SW-012	SW-013
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
ACETONE	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)								
1,1-BIPHENYL	--	--	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--
2,4-DINITROPHENOL	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--	--
2-CHLOROPHENOL	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--
2-METHYLPHENOL	--	--	--	--	--	--	--	--
2-NITROANILINE	--	--	--	--	--	--	--	--
2-NITROPHENOL	--	--	--	--	--	--	--	--
3&4-METHYLPHENOL	--	--	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--	--
3-NITROANILINE	--	--	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--	--
4-CHLOROANILINE	--	--	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--
4-NITROANILINE	--	--	--	--	--	--	--	--
4-NITROPHENOL	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--
ACETOPHENONE	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--
ATRAZINE	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--
BENZALDEHYDE	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--	--

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW-006	SW-007	SW-008	SW-009	SW-010	SW-011	SW-012	SW-013
SAMPLE ID	SW-006	SW-007	SW-008	SW-009	SW-010	SW-011	SW-012	SW-013
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	--
CAPROLACTAM	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--
DIETHYL PHTHALATE	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--
HEXACHLOROBENZENE	--	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--	--
HEXACHLOROETHANE	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--
ISOPHORONE	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L)								
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--
PESTICIDES (UG/L)								
4,4'-DDD	--	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--
ALDRIN	--	--	--	--	--	--	--	--
ALPHA-BHC	--	--	--	--	--	--	--	--
ALPHA-CHLORDANE	--	--	--	--	--	--	--	--
BETA-BHC	--	--	--	--	--	--	--	--
DELTA-BHC	--	--	--	--	--	--	--	--
DIELDRIN	--	--	--	--	--	--	--	--
ENDOSULFAN I	--	--	--	--	--	--	--	--
ENDOSULFAN II	--	--	--	--	--	--	--	--
ENDOSULFAN SULFATE	--	--	--	--	--	--	--	--
ENDRIN	--	--	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	--	--	--	--	--	--
ENDRIN KETONE	--	--	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--	--
GAMMA-CHLORDANE	--	--	--	--	--	--	--	--
HEPTACHLOR	--	--	--	--	--	--	--	--

LOCATION	SW-006	SW-007	SW-008	SW-009	SW-010	SW-011	SW-012	SW-013
SAMPLE ID	SW-006	SW-007	SW-008	SW-009	SW-010	SW-011	SW-012	SW-013
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--	--
METHOXYCHLOR	--	--	--	--	--	--	--	--
TOXAPHENE	--	--	--	--	--	--	--	--
PCBS (UG/L)								
AROCLOR-1016	--	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--
AROCLOR-1262	--	--	--	--	--	--	--	--
AROCLOR-1268	--	--	--	--	--	--	--	--
TOTAL AROCLOR	--	--	--	--	--	--	--	--
TOTAL AROCLOR HALFND	--	--	--	--	--	--	--	--
PCB CONGENERS (UG/L)								
DICHLOROBIPHENYLS	0 UJ	0 UJ	0.000026 J	0 UJ	0.000035 J	0.000025 J	0.000027 J	0 UJ
HEPTACHLOROBIPHENYLS	0.0017 J	0.0011 J	0.0011 J	0.001 J	0.0021 J	0.0017 J	0.0012 J	0.00097 J
HEXACHLOROBIPHENYLS	0.0023 J	0.0015 J	0.0014 J	0.0013 J	0.0024 J	0.002 J	0.0014 J	0.0012 J
MONOCHLOROBIPHENYLS	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ
NONACHLOROBIPHENYLS	0.000033 J	0.000016 J	0.00002 J	0.000019 J	0.000033 J	0.000028 J	0.000021 J	0.000017 J
OCTACHLOROBIPHENYLS	0.00033 J	0.0002 J	0.00024 J	0.00023 J	0.00044 J	0.00036 J	0.00025 J	0.0002 J
PCB-1	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-10	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-100	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--
PCB-103	0.0000082 J	0.0000069 J	0.00002 U	0.0000044 J	0.0000055 J	0.0000068 J	0.0000034 J	0.00002 U
PCB-104	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.0000014 J	0.000021 U	0.000021 U	0.00002 U
PCB-105	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000016 J	0.000021 U	0.000021 U	0.00002 U
PCB-106	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-107	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.0000041 J	0.0000037 J	0.000021 U	0.00002 U
PCB-108/107	--	--	--	--	--	--	--	--
PCB-108/124	0.000039 U	0.00004 U	0.000041 U	0.00004 U	0.000041 U	0.000042 U	0.000042 U	0.00004 U
PCB-109	--	--	--	--	--	--	--	--
PCB-11	0.00002 U	0.00002 U	0.00003 U	0.00002 U	0.000035	0.00003 U	0.00003 U	0.00002 U
PCB-110	--	--	--	--	--	--	--	--
PCB-110/115	0.00011	0.000069	0.000071	0.000066	0.0001	0.000093	0.00007	0.000067
PCB-111	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-111/115	--	--	--	--	--	--	--	--
PCB-112	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-113	--	--	--	--	--	--	--	--
PCB-114	0.0000035 U	0.0000032 U	0.0000043 U	0.0000027 U	0.0000036 U	0.0000027 U	0.0000026 U	0.0000027 U
PCB-118	0.000054	0.000032	0.000035	0.000034	0.000059	0.000048	0.000039	0.000033
PCB-118/106	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--
PCB-12/13	0.000039 U	0.00004 U	0.000041 U	0.00004 U	0.000041 U	0.000042 U	0.000042 U	0.00004 U
PCB-120	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-121	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-122	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-123	0.0000033 U	0.0000031 U	0.000004 U	0.0000026 U	0.0000035 U	0.0000026 U	0.0000025 U	0.0000027 U
PCB-124	--	--	--	--	--	--	--	--
PCB-126	0.000004 U	0.0000038 U	0.0000047 U	0.0000033 U	0.0000042 U	0.0000033 U	0.0000032 U	0.0000033 U
PCB-127	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-128/162	--	--	--	--	--	--	--	--
PCB-128/166	0.000027 J	0.000016 J	0.000016 J	0.000015 J	0.000031 J	0.000027 J	0.000018 J	0.000014 J
PCB-129	--	--	--	--	--	--	--	--
PCB-129/138/163	0.00046	0.00028	0.00029	0.00026	0.0005	0.0004	0.00027	0.00024
PCB-13	--	--	--	--	--	--	--	--
PCB-130	0.000016 J	0.0000087 J	0.000011 J	0.0000077 J	0.000014 J	0.000013 J	0.0000097 J	0.000009 J
PCB-131	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-131/133	--	--	--	--	--	--	--	--
PCB-132	0.00014	0.000088	0.000084	0.000081	0.00014	0.00012	0.000081	0.000074
PCB-132/161	--	--	--	--	--	--	--	--
PCB-133	0.000009 J	0.0000055 J	0.0000051 J	0.00002 U	0.0000068 J	0.0000063 J	0.0000048 J	0.000004 J
PCB-134	0.00002	0.00002 U	0.0000096 J	0.000011 J	0.000016 J	0.000016 J	0.000011 J	0.0000074 J
PCB-134/143	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--
PCB-135/151	0.00026	0.00017	0.00016	0.00015	0.00025	0.00023	0.00015	0.00014
PCB-136	0.00008	0.000053	0.000047	0.000047	0.000075	0.000071	0.000047	0.000044
PCB-137	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.0000046 J	0.000005 J	0.000021 U	0.0000035 J
PCB-138/163/164	--	--	--	--	--	--	--	--
PCB-139/140	0.000039 U	0.00004 U	0.000041 U	0.00004 U	0.000041 U	0.000042 U	0.000042 U	0.00004 U
PCB-139/149	--	--	--	--	--	--	--	--
PCB-14	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-140	--	--	--	--	--	--	--	--
PCB-141	0.00012	0.000072	0.000072	0.000066	0.00013	0.0001	0.000069	0.000063
PCB-142	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-143	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-144	0.000028	0.000016 J	0.000017 J	0.000016 J	0.000028	0.000023	0.000016 J	0.000015 J
PCB-145	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-146	0.000063	0.000043	0.000039	0.000032	0.000059	0.000054	0.000037	0.000031
PCB-146/165	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--
PCB-147/149	0.0005	0.00032	0.0003	0.00028	0.00048	0.00041	0.00029	0.00025
PCB-148	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-15	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-150	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.0000016 J	0.000021 U	0.000021 U	0.00002 U
PCB-151	--	--	--	--	--	--	--	--
PCB-152	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW-006	SW-007	SW-008	SW-009	SW-010	SW-011	SW-012	SW-013
SAMPLE ID	SW-006	SW-007	SW-008	SW-009	SW-010	SW-011	SW-012	SW-013
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-153	--	--	--	--	--	--	--	--
PCB-153/168	0.0005	0.00031	0.00031	0.00026	0.00051	0.00042	0.00029	0.00025
PCB-154	0.0000086 J	0.0000081 J	0.0000051 J	0.0000029 J	0.0000072 J	0.0000049 J	0.0000053 J	0.0000038 J
PCB-155	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-156	--	--	--	--	--	--	--	--
PCB-156/157	0.000039 U	0.00004 U	0.000041 U	0.00004 U	0.000041 U	0.000042 U	0.000042 U	0.00004 U
PCB-157	--	--	--	--	--	--	--	--
PCB-158	0.000036	0.000021	0.000021	0.000019 J	0.000039	0.000029	0.000021	0.000019 J
PCB-158/160	--	--	--	--	--	--	--	--
PCB-159	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-16	0.0000049 J	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.0000044 J
PCB-160	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-161	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-162	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-164	0.000034	0.000021	0.000021	0.00002 J	0.000038	0.000029	0.000021 J	0.000018 J
PCB-165	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-166	--	--	--	--	--	--	--	--
PCB-167	0.00001 J	0.0000057 J	0.0000065 J	0.0000063 J	0.000012 J	0.0000088 J	0.0000064 J	0.0000059 J
PCB-168	--	--	--	--	--	--	--	--
PCB-169	0.0000029 U	0.0000034 U	0.0000029 U	0.0000018 U	0.0000033 U	0.0000026 U	0.0000026 U	0.0000021 U
PCB-17	0.00002 U	0.00002 U	0.00002 U	0.0000042 J	0.00002 U	0.0000054 J	0.000021 U	0.00002 U
PCB-170	0.00017	0.00011	0.00012	0.00011	0.00021	0.00018	0.00012	0.00011
PCB-171	--	--	--	--	--	--	--	--
PCB-171/173	0.000057	0.000035 J	0.000037 J	0.000035 J	0.00007	0.000057	0.000039 J	0.000032 J
PCB-172	0.000031	0.000021	0.000023	0.000021	0.000042	0.000034	0.000023	0.00002 J
PCB-173	--	--	--	--	--	--	--	--
PCB-174	0.00023	0.00014	0.00016	0.00014	0.00028	0.00023	0.00016	0.00014
PCB-175	0.0000077 J	0.0000046 J	0.000004 J	0.0000041 J	0.0000088 J	0.0000059 J	0.0000036 J	0.0000048 J
PCB-176	0.000026	0.000018 J	0.000018 J	0.000016 J	0.000031	0.000024	0.000016 J	0.000014 J
PCB-177	0.00013	0.000078	0.000087	0.00008	0.00015	0.00013	0.000088	0.000074
PCB-178	0.000045	0.00003	0.000031	0.000027	0.000055	0.000045	0.000033	0.000026
PCB-179	0.000099	0.000065	0.000066	0.00006	0.00011	0.00009	0.000061	0.000053
PCB-18	--	--	--	--	--	--	--	--
PCB-18/30	0.000039 U	0.00004 U	0.000041 U	0.00004 U	0.000041 U	0.000042 U	0.000042 U	0.00004 U
PCB-180	--	--	--	--	--	--	--	--
PCB-180/193	0.00042	0.00026	0.00028	0.00026	0.00054	0.00042	0.0003	0.00025
PCB-181	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-182	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-182/187	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--
PCB-183/185	0.00014	0.000086	0.000088	0.000084	0.00017	0.00014	0.000098	0.000081
PCB-184	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-185	--	--	--	--	--	--	--	--
PCB-186	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-187	0.00027	0.00017	0.00019	0.00016	0.00031	0.00025	0.00017	0.00015
PCB-188	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-189	0.0000065 J	0.0000039 J	0.0000048 Z	0.0000043 J	0.0000057 J	0.0000057 J	0.0000043 J	0.0000041 J
PCB-19	0.0000069 J	0.00002 U	0.00002 U	0.0000054 J	0.0000048 J	0.000021 U	0.000021 U	0.0000035 J
PCB-190	0.00004	0.000024	0.000025	0.000024	0.000048	0.000039	0.000027	0.000023
PCB-191	0.0000062 J	0.0000049 J	0.0000048 J	0.00002 U	0.0000086 J	0.0000062 J	0.0000051 J	0.0000046 J
PCB-192	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-193	--	--	--	--	--	--	--	--
PCB-194	0.00007	0.000043	0.00005	0.000046	0.000093	0.00007	0.000049	0.000039
PCB-195	0.000035	0.00002	0.000023	0.000021	0.000046	0.000035	0.000022	0.000019 J
PCB-196	0.000038	0.000024	0.000029	0.000029	0.000053	0.000044	0.000028	0.000023
PCB-196/203	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--
PCB-197/200	0.000014 J	0.0000099 J	0.00001 J	0.000011 J	0.000019 J	0.000017 J	0.000012 J	0.0000093 J
PCB-198	--	--	--	--	--	--	--	--
PCB-198/199	0.000088	0.000054	0.000064	0.000064	0.00012	0.0001	0.000069	0.000056
PCB-199	--	--	--	--	--	--	--	--
PCB-2	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-20/21/33	--	--	--	--	--	--	--	--
PCB-20/28	0.000039 U	0.00004 U	0.000041 U	0.00004 U	0.000041 U	0.000042 U	0.000042 U	0.00004 U
PCB-200	--	--	--	--	--	--	--	--
PCB-201	0.0000091 J	0.0000067 J	0.0000066 J	0.0000069 J	0.000014 J	0.000011 J	0.0000082 J	0.0000064 J
PCB-202	0.000017 J	0.000011 J	0.000012 J	0.000011 J	0.000022	0.000018 J	0.000012 J	0.000011 J
PCB-203	0.000054	0.000033	0.00004	0.000038	0.00007	0.00006	0.000042	0.000032
PCB-204	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-205	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-206	0.000025	0.000012 J	0.000016 J	0.000013 J	0.000023	0.00002 J	0.000015 J	0.000011 J
PCB-207	0.00002 U	0.00002 U	0.00002 U	0.00002 J	0.0000033 J	0.0000028 J	0.0000019 J	0.0000018 J
PCB-208	0.0000082 J	0.000004 J	0.000004 J	0.000004 J	0.0000059 J	0.0000054 J	0.0000046 J	0.0000038 J
PCB-209	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000017 J	0.000021 U	0.000021 U	0.00002 U
PCB-21/33	0.000039 U	0.00004 U	0.000041 U	0.00004 U	0.00004 U	0.000042 U	0.000042 U	0.00004 U
PCB-22	0.0000069 J	0.0000039 J	0.0000047 J	0.0000052 J	0.00002 U	0.0000067 J	0.0000049 J	0.0000047 J
PCB-23	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-24	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-25	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-26	--	--	--	--	--	--	--	--
PCB-26/29	0.000039 U	0.00004 U	0.000041 U	0.00004 U	0.00004 U	0.000042 U	0.000042 U	0.00004 U
PCB-27	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-28	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--
PCB-3	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-30	--	--	--	--	--	--	--	--
PCB-31	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW-006	SW-007	SW-008	SW-009	SW-010	SW-011	SW-012	SW-013
SAMPLE ID	SW-006	SW-007	SW-008	SW-009	SW-010	SW-011	SW-012	SW-013
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-32	0.0000047 J	0.0000033 J	0.00002 U	0.00002 U	0.00002 U	0.0000044 J	0.000003 J	0.0000041 J
PCB-34	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-35	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-36	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-37	0.00002 U	0.00002 U	0.00002 U	0.0000043 J	0.0000044 J	0.000021 U	0.0000037 J	0.0000035 J
PCB-38	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-39	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-4	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-40	--	--	--	--	--	--	--	--
PCB-40/71	0.000039 U	0.0000071 J	0.000041 U	0.0000068 J	0.000011 J	0.0000085 J	0.0000063 J	0.0000069 J
PCB-41	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-41/64/71/72	--	--	--	--	--	--	--	--
PCB-42	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-42/59	--	--	--	--	--	--	--	--
PCB-43	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-43/49	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--
PCB-44/47/65	0.000064	0.000061 U	0.000061 U	0.00006 U	0.00006 U	0.000063 U	0.000063 U	0.00006 U
PCB-45	--	--	--	--	--	--	--	--
PCB-45/51	0.000039 U	0.00004 U	0.000041 U	0.00004 U	0.00004 U	0.000042 U	0.000042 U	0.00004 U
PCB-46	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-47	--	--	--	--	--	--	--	--
PCB-48	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-48/75	--	--	--	--	--	--	--	--
PCB-49/69	0.000041	0.00003 J	0.000028 J	0.000023 J	0.000036 J	0.000032 J	0.000024 J	0.000022 J
PCB-5	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-50	--	--	--	--	--	--	--	--
PCB-50/53	0.000024 J	0.000015 J	0.000015 J	0.000014 J	0.000019 J	0.000018 J	0.000014 J	0.000013 J
PCB-51	--	--	--	--	--	--	--	--
PCB-52	0.000065	0.000048	0.000044	0.00004	0.000055	0.000047	0.000041	0.000037
PCB-52/69	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--
PCB-54	0.0000059 J	0.00002 U	0.0000047 J	0.0000042 J	0.0000066 J	0.000006 J	0.0000045 J	0.0000043 J
PCB-55	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-56	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.0000065 J	0.000021 U	0.000021 U	0.00002 U
PCB-56/60	--	--	--	--	--	--	--	--
PCB-57	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-58	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-59/62/75	0.000059 U	0.000061 U	0.000061 U	0.00006 U	0.000061 U	0.000063 U	0.000063 U	0.00006 U
PCB-6	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-60	0.00002 U	0.00002 U	0.00002 U	0.0000025 J	0.0000033 J	0.000021 U	0.000021 U	0.0000026 J
PCB-61/70	--	--	--	--	--	--	--	--
PCB-61/70/74/76	0.000078 U	0.000081 U	0.000081 U	0.00008 U	0.000081 U	0.000083 U	0.000085 U	0.00008 U
PCB-62	--	--	--	--	--	--	--	--
PCB-63	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-64	0.00002 U	0.0000056 J	0.00002 U	0.00002 U	0.000009 J	0.0000068 J	0.0000057 J	0.0000056 J
PCB-65	--	--	--	--	--	--	--	--
PCB-66	0.000015 J	0.000011 J	0.000011 J	0.00002 U	0.000013 J	0.000011 J	0.0000098 J	0.0000083 J
PCB-66/76	--	--	--	--	--	--	--	--
PCB-67	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-68	0.00002 U	0.00002 U	0.00002 U	0.0000016 J	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-7	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-72	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-73	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-74	--	--	--	--	--	--	--	--
PCB-77	0.0000032 U	0.0000031 U	0.0000031 U	0.0000019 U	0.0000026 U	0.0000024 U	0.0000025 U	0.000002 U
PCB-78	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-79	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-8	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-80	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-81	0.0000032 U	0.0000028 U	0.0000003 U	0.0000018 U	0.0000024 U	0.0000023 U	0.0000023 U	0.0000019 U
PCB-82	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-83	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.0000051 J	0.0000082 J	0.0000039 J	0.0000031 J
PCB-83/112	--	--	--	--	--	--	--	--
PCB-84	0.000015 J	0.0000095 J	0.0000097 J	0.0000084 J	0.000012 J	0.000011 J	0.000021 U	0.0000089 J
PCB-84/92	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--
PCB-85/116/117	0.000059 U	0.000061 U	0.000061 U	0.00006 U	0.000017 J	0.000063 U	0.000063 U	0.00006 U
PCB-86	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	0.00012 U	0.00012 U	0.00012 U	0.00012 U	0.00012 U	0.00013 U	0.00013 U	0.00012 U
PCB-87/117/125	--	--	--	--	--	--	--	--
PCB-88/91	0.000039 U	0.000015 J	0.000012 J	0.000012 J	0.000018 J	0.000018 J	0.000012 J	0.000011 J
PCB-89	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-9	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U
PCB-90/101/113	0.00021	0.00013	0.00012	0.00011	0.00018	0.00016	0.00012	0.00011
PCB-92	0.000036	0.000024	0.00002	0.00002 J	0.000032	0.000027	0.000021	0.000019 J
PCB-93	--	--	--	--	--	--	--	--
PCB-93/100	0.0000077 J	0.00004 U	0.000041 U	0.000004 J	0.0000065 J	0.0000071 J	0.000042 U	0.0000027 J
PCB-94	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.000021 U	0.00002 U

TABLE 20

SURFACE WATER ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW-006	SW-007	SW-008	SW-009	SW-010	SW-011	SW-012	SW-013
SAMPLE ID	SW-006	SW-007	SW-008	SW-009	SW-010	SW-011	SW-012	SW-013
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE								
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
PCB-95	0.00017	0.00012	0.00011	0.0001	0.00016	0.00014	0.000097	0.000094
PCB-96	0.0000035 J	0.00002 U	0.00002 U	0.00002 U	0.0000029 J	0.000021 U	0.0000017 J	0.0000014 J
PCB-97	--	--	--	--	--	--	--	--
PCB-98/102	0.000039 U	0.00004 U	0.000041 U	0.0000033 J	0.000041 U	0.0000042 J	0.000042 U	0.00004 U
PCB-99	0.000038	0.000031	0.000022	0.000021	0.00003	0.000029	0.000022	0.00002 J
PENTACHLOROBIPHENYLS	0.00072 J	0.00048 J	0.00044 J	0.00042 J	0.00069 J	0.00061 J	0.00044 J	0.00041 J
TEQ DIOXIN-LIKE PCBs (BIRD)	7.05E-10	4.16E-10	4.63E-10	4.46E-10	2.38E-09	6.25E-10	4.97E-10	4.3E-10
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	4.45296E-07	4.12791E-07	4.67698E-07	3.06994E-07	4.01277E-07	3.45223E-07	3.42589E-07	3.14628E-07
TEQ DIOXIN-LIKE PCBs (FISH)	3.52E-10	2.07E-10	2.31E-10	2.22E-10	4.7E-10	3.12E-10	2.48E-10	2.14E-10
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	1.1547E-08	1.0812E-08	1.313E-08	9.224E-09	1.1901E-08	9.491E-09	9.182E-09	9.253E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	2.115E-09	1.248E-09	1.389E-09	1.338E-09	2.82E-09	1.875E-09	1.491E-09	1.29E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	2.47241E-07	2.43817E-07	2.81533E-07	1.94682E-07	2.63531E-07	2.07364E-07	2.01982E-07	1.99155E-07
TETRACHLOROBIPHENYLS	0.00028 J	0.0002 J	0.00018 J	0.00018 J	0.00027 J	0.00024 J	0.00019 J	0.00018 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0000705	0.0000416	0.0000463	0.0000446	0.000094	0.0000625	0.0000497	0.000043
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.0051685	0.0032257	0.0032683	0.0029949	0.0056279	0.0046463	0.0032161	0.0028374
TOTAL PCB CONGENERS ZEROND	0.005239	0.0032673	0.0033146	0.0030395	0.0057219	0.0047088	0.0032658	0.0028804
TOTAL PCB CONGENERS-NOAA	0.002315	0.001399	0.001455	0.001283	0.00251	0.002018	0.0014148	0.0012323
TOTAL PCB CONGENERS-NOAA HALFND	0.00646105	0.004549	0.0046386	0.00424655	0.0068162	0.00594075	0.00456165	0.00404775
TOTAL PCB CONGENERS-NOAA X2	0.00463	0.002798	0.00291	0.002566	0.00502	0.004036	0.0028296	0.0024646
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.004768	0.002999	0.003113	0.002786	0.005182	0.004246	0.0030396	0.0026646
TRICHLOROBIPHENYLS	0.000052 J	0.000034 J	0.000031 J	0.000045 J	0.000066 J	0.000055 J	0.000046 J	0.000053 J
DIOXINS/FURANS (PG/L)								
1,2,3,4,6,7,8,9-OCDD	--	--	100 U	100 U	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	100 U	3.1 U	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	50 U	52 U	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	1.6 U	1.6 U	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	1.3 U	1.4 U	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	0.66 UJ	0.65 U	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	1 U	1.1 U	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	0.73 U	0.76 U	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	1.1 U	1.1 U	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	1.4 U	1.5 U	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	50 U	0.67 U	--	--	--	--
1,2,3,7,8-PECDD	--	--	1.2 U	1.2 U	--	--	--	--
1,2,3,7,8-PECDF	--	--	0.7 U	0.73 U	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	1.4 U	1.5 U	--	--	--	--
2,3,4,7,8-PECDF	--	--	0.79 U	0.83 U	--	--	--	--
2,3,7,8-TCDD	--	--	0.59 UJ	0.5 U	--	--	--	--
2,3,7,8-TCDF	--	--	0.55 UJ	0.45 U	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	0.59 U	0.5 U	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	0.59 U	0.5 U	--	--	--	--
TEQ DIOXINS (FISH)	--	--	0.59 U	0.5 U	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	0.59 U	0.5 U	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	0.59 U	0.5 U	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	0.59 U	0.5 U	--	--	--	--
TOTAL HPCDD	--	--	1.7 J	1.5 J	--	--	--	--
TOTAL HPCDF	--	--	1.3 UJ	1.4 UJ	--	--	--	--
TOTAL HXCDD	--	--	0.67 UJ	0.65 UJ	--	--	--	--
TOTAL HXCDF	--	--	0.64 UJ	0.67 UJ	--	--	--	--
TOTAL PECDD	--	--	1.2 UJ	1.2 UJ	--	--	--	--
TOTAL PECDF	--	--	0.7 UJ	0.73 UJ	--	--	--	--
TOTAL TCDD	--	--	0.59 UJ	0.5 UJ	--	--	--	--
TOTAL TCDF	--	--	0.55 UJ	0.45 UJ	--	--	--	--
METALS (UG/L)								
ALUMINUM	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--
CYANIDE	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-001	SD-002	SD-003	SD-004	SD-005	SD-006	SD-007	SD-008	SD-009	SD-010	SD-011
SAMPLE ID	SD-001	SD-002	SD-003	SD-004	SD-005	SD-006	SD-007	SD-008	SD-009	SD-010	SD-011
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)											
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)											
1,1-BIPHENYL	--	--	--	--	--	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
2-CHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
2-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
2-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
2-NITROPHENOL	--	--	--	--	--	--	--	--	--	--	--
3&4-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--	--	--	--	--
3-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
4-CHLOROANILINE	--	--	--	--	--	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--	--	--
4-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
4-NITROPHENOL	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-001	SD-002	SD-003	SD-004	SD-005	SD-006	SD-007	SD-008	SD-009	SD-010	SD-011
SAMPLE ID	SD-001	SD-002	SD-003	SD-004	SD-005	SD-006	SD-007	SD-008	SD-009	SD-010	SD-011
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
ACENAPHTHENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--	--	--
ACETOPHENONE	--	--	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
ATRAZINE	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--	--	--
BENZALDEHYDE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
CAPROLACTAM	--	--	--	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--	--	--	--
DIETHYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--	--	--
ISOPHORONE	--	--	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K											
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--	--	--
PESTICIDES (MG/KG)											
4,4'-DDD	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--	--	--	--
ALDRIN	--	--	--	--	--	--	--	--	--	--	--
ALPHA-BHC	--	--	--	--	--	--	--	--	--	--	--
ALPHA-CHLORDANE	--	--	--	--	--	--	--	--	--	--	--
BETA-BHC	--	--	--	--	--	--	--	--	--	--	--
DELTA-BHC	--	--	--	--	--	--	--	--	--	--	--
DIELDRIN	--	--	--	--	--	--	--	--	--	--	--
ENDOSULFAN I	--	--	--	--	--	--	--	--	--	--	--
ENDOSULFAN II	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-001	SD-002	SD-003	SD-004	SD-005	SD-006	SD-007	SD-008	SD-009	SD-010	SD-011
SAMPLE ID	SD-001	SD-002	SD-003	SD-004	SD-005	SD-006	SD-007	SD-008	SD-009	SD-010	SD-011
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
ENDOSULFAN SULFATE	--	--	--	--	--	--	--	--	--	--	--
ENDRIN	--	--	--	--	--	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	--	--	--	--	--	--	--	--	--
ENDRIN KETONE	--	--	--	--	--	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--	--	--	--	--
GAMMA-CHLORDANE	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOR	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--	--	--	--	--
METHOXYCHLOR	--	--	--	--	--	--	--	--	--	--	--
TOXAPHENE	--	--	--	--	--	--	--	--	--	--	--
PCBS (MG/KG)											
AROCLOR-1016	0.045 U	0.049 U	0.058 U	0.052 U	0.045 U	0.34 U	0.043 U	0.041 U	0.05 U	0.054 U	0.052 U
AROCLOR-1221	0.045 U	0.049 U	0.058 U	0.052 U	0.045 U	0.34 U	0.043 U	0.041 U	0.05 U	0.054 U	0.052 U
AROCLOR-1232	0.045 U	0.049 U	0.058 U	0.052 U	0.045 U	0.34 U	0.043 U	0.041 U	0.05 U	0.054 U	0.052 U
AROCLOR-1242	0.045 U	0.049 U	0.058 U	0.052 U	0.045 U	0.34 U	0.043 U	0.041 U	0.05 U	0.054 U	0.052 U
AROCLOR-1248	0.045 U	0.049 U	0.058 U	0.052 U	0.045 U	0.34 U	0.043 U	0.041 U	0.05 U	0.054 U	0.052 U
AROCLOR-1254	0.045 U	0.049 U	0.058 U	0.052 U	0.045 U	0.34 U	0.043 U	0.041 U	0.05 U	0.054 U	0.052 U
AROCLOR-1260	0.032 J	0.14	6.2	0.35	0.23	50 C	0.085	0.12	0.13	0.3	0.98 J+
AROCLOR-1262	0.045 U	0.049 U	0.058 U	0.052 U	0.045 U	0.34 U	0.043 U	0.041 U	0.05 U	0.054 U	0.052 U
AROCLOR-1268	0.045 U	0.049 U	0.058 U	0.052 U	0.045 U	0.34 U	0.043 U	0.041 U	0.05 U	0.054 U	0.052 U
TOTAL AROCLOR	0.032	0.14	6.2	0.35	0.23	50	0.085	0.12	0.13	0.3	0.98
TOTAL AROCLOR HALFND	0.212	0.336	6.432	0.558	0.41	51.36	0.257	0.284	0.33	0.516	1.188
PCB CONGENERS (MG/KG)											
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--
PCB-106	--	--	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-001	SD-002	SD-003	SD-004	SD-005	SD-006	SD-007	SD-008	SD-009	SD-010	SD-011
SAMPLE ID	SD-001	SD-002	SD-003	SD-004	SD-005	SD-006	SD-007	SD-008	SD-009	SD-010	SD-011
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-14	--	--	--	--	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--
PCB-156/157	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--	--	--	--
PCB-196	--	--	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--	--	--
PCB-198	--	--	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-001	SD-002	SD-003	SD-004	SD-005	SD-006	SD-007	SD-008	SD-009	SD-010	SD-011
SAMPLE ID	SD-001	SD-002	SD-003	SD-004	SD-005	SD-006	SD-007	SD-008	SD-009	SD-010	SD-011
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-201	--	--	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--	--	--	--
PCB-21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--	--	--
PCB-74	--	--	--	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-001	SD-002	SD-003	SD-004	SD-005	SD-006	SD-007	SD-008	SD-009	SD-010	SD-011
SAMPLE ID	SD-001	SD-002	SD-003	SD-004	SD-005	SD-006	SD-007	SD-008	SD-009	SD-010	SD-011
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-80	--	--	--	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)											
1,2,3,4,6,7,8,9-OCDD	35	--	--	1100	--	--	--	--	500	--	--
1,2,3,4,6,7,8,9-OCDF	2.5 J	--	--	71	--	--	--	--	23	--	--
1,2,3,4,6,7,8-HPCDD	3 J	--	--	100	--	--	--	--	27	--	--
1,2,3,4,6,7,8-HPCDF	1.5 J	--	--	30	--	--	--	--	11	--	--
1,2,3,4,7,8,9-HPCDF	0.17 Z	--	--	2.1 J	--	--	--	--	0.57 J	--	--
1,2,3,4,7,8-HXCDD	0.2 U	--	--	1.3 J	--	--	--	--	0.38 J	--	--
1,2,3,4,7,8-HXCDF	0.46 J	--	--	2.9 J	--	--	--	--	0.92 Z	--	--
1,2,3,6,7,8-HXCDD	0.35 U	--	--	3.5 J	--	--	--	--	0.99 J	--	--
1,2,3,6,7,8-HXCDF	0.21 U	--	--	1.5 J	--	--	--	--	0.71 J	--	--
1,2,3,7,8,9-HXCDD	0.24 U	--	--	2.9 J	--	--	--	--	0.97 J	--	--
1,2,3,7,8,9-HXCDF	0.17 U	--	--	0.55 J	--	--	--	--	0.18 U	--	--
1,2,3,7,8-PECDD	0.18 U	--	--	0.82 J	--	--	--	--	0.35 Z	--	--
1,2,3,7,8-PECDF	0.23 U	--	--	1.4 J	--	--	--	--	0.41 J	--	--
2,3,4,6,7,8-HXCDF	0.19 Z	--	--	2 J	--	--	--	--	0.87 J	--	--
2,3,4,7,8-PECDF	0.2 J	--	--	1.6 J	--	--	--	--	0.72 J	--	--
2,3,7,8-TCDD	0.2 U	--	--	0.46 J	--	--	--	--	0.19 U	--	--
2,3,7,8-TCDF	0.39 J	--	--	1.5	--	--	--	--	0.6 J	--	--
TEQ DIOXINS (BIRD)	0.67845	--	--	6.1431	--	--	--	--	2.2819	--	--
TEQ DIOXINS (BIRD) HALFND	0.9177	--	--	6.1431	--	--	--	--	2.3859	--	--
TEQ DIOXINS (FISH)	0.20795	--	--	4.1721	--	--	--	--	1.4151	--	--
TEQ DIOXINS (FISH) HALFND	0.47565	--	--	4.1721	--	--	--	--	1.5191	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	0.22195	--	--	5.0893	--	--	--	--	1.6649	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	0.4739	--	--	5.0893	--	--	--	--	1.7689	--	--
TOTAL HPCDD	5.8 J	--	--	200 J	--	--	--	--	53 J	--	--
TOTAL HPCDF	3 J	--	--	79 J	--	--	--	--	25 J	--	--
TOTAL HXCDD	0.93 J	--	--	34 J	--	--	--	--	12 J	--	--
TOTAL HXCDF	2 J	--	--	35 J	--	--	--	--	9 J	--	--
TOTAL PECDD	0.13 UJ	--	--	9.4 J	--	--	--	--	3.4 J	--	--
TOTAL PECDF	2.2 J	--	--	22 J	--	--	--	--	8.1 J	--	--
TOTAL TCDD	0.38 J	--	--	11 J	--	--	--	--	3 J	--	--
TOTAL TCDF	0.66 J	--	--	12 J	--	--	--	--	5.7 J	--	--
METALS (MG/KG)											
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-001	SD-002	SD-003	SD-004	SD-005	SD-006	SD-007	SD-008	SD-009	SD-010	SD-011
SAMPLE ID	SD-001	SD-002	SD-003	SD-004	SD-005	SD-006	SD-007	SD-008	SD-009	SD-010	SD-011
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--
CYANIDE	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (%)											
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)											
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-012	SD-013	SD-014	SD-015	SD-016	SD-017	SD-018	SD-019	SD-020	SD-021	SD-022
SAMPLE ID	SD-012	SD-013	SD-014	SD-015	SD-016	SD-017	SD-018	SD-019	SD-020	SD-021	SD-022
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)											
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)											
1,1-BIPHENYL	--	--	--	--	--	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
2-CHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
2-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
2-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
2-NITROPHENOL	--	--	--	--	--	--	--	--	--	--	--
3&4-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--	--	--	--	--
3-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
4-CHLOROANILINE	--	--	--	--	--	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--	--	--
4-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
4-NITROPHENOL	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-012	SD-013	SD-014	SD-015	SD-016	SD-017	SD-018	SD-019	SD-020	SD-021	SD-022
SAMPLE ID	SD-012	SD-013	SD-014	SD-015	SD-016	SD-017	SD-018	SD-019	SD-020	SD-021	SD-022
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
ACENAPHTHENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--	--	--
ACETOPHENONE	--	--	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
ATRAZINE	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--	--	--
BENZALDEHYDE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
CAPROLACTAM	--	--	--	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--	--	--	--
DIETHYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--	--	--
ISOPHORONE	--	--	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K											
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--	--	--
PESTICIDES (MG/KG)											
4,4'-DDD	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--	--	--	--
ALDRIN	--	--	--	--	--	--	--	--	--	--	--
ALPHA-BHC	--	--	--	--	--	--	--	--	--	--	--
ALPHA-CHLORDANE	--	--	--	--	--	--	--	--	--	--	--
BETA-BHC	--	--	--	--	--	--	--	--	--	--	--
DELTA-BHC	--	--	--	--	--	--	--	--	--	--	--
DIELDRIN	--	--	--	--	--	--	--	--	--	--	--
ENDOSULFAN I	--	--	--	--	--	--	--	--	--	--	--
ENDOSULFAN II	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-012	SD-013	SD-014	SD-015	SD-016	SD-017	SD-018	SD-019	SD-020	SD-021	SD-022
SAMPLE ID	SD-012	SD-013	SD-014	SD-015	SD-016	SD-017	SD-018	SD-019	SD-020	SD-021	SD-022
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
ENDOSULFAN SULFATE	--	--	--	--	--	--	--	--	--	--	--
ENDRIN	--	--	--	--	--	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	--	--	--	--	--	--	--	--	--
ENDRIN KETONE	--	--	--	--	--	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--	--	--	--	--
GAMMA-CHLORDANE	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOR	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--	--	--	--	--
METHOXYCHLOR	--	--	--	--	--	--	--	--	--	--	--
TOXAPHENE	--	--	--	--	--	--	--	--	--	--	--
PCBS (MG/KG)											
AROCLOR-1016	0.043 U	0.047 U	0.042 U	0.043 U	0.042 U	0.052 U	0.041 U	0.044 U	0.044 U	0.043 U	0.053 U
AROCLOR-1221	0.043 U	0.047 U	0.042 U	0.043 U	0.042 U	0.052 U	0.041 U	0.044 U	0.044 U	0.043 U	0.053 U
AROCLOR-1232	0.043 U	0.047 U	0.042 U	0.043 U	0.042 U	0.052 U	0.041 U	0.044 U	0.044 U	0.043 U	0.053 U
AROCLOR-1242	0.043 U	0.047 U	0.042 U	0.043 U	0.042 U	0.052 U	0.041 U	0.044 U	0.044 U	0.043 U	0.053 U
AROCLOR-1248	0.043 U	0.047 U	0.042 U	0.043 U	0.042 U	0.052 U	0.041 U	0.044 U	0.044 U	0.043 U	0.053 U
AROCLOR-1254	0.043 U	0.047 U	0.042 U	0.043 U	0.042 U	0.052 U	0.041 U	0.044 U	0.044 U	0.043 U	0.053 U
AROCLOR-1260	0.13	0.18 J+	0.34	0.061	0.07	0.19	0.086	0.05	0.27 J+	0.043 U	0.0075 J
AROCLOR-1262	0.043 U	0.047 U	0.042 U	0.043 U	0.042 U	0.052 U	0.041 U	0.044 U	0.044 U	0.043 U	0.053 U
AROCLOR-1268	0.043 U	0.047 U	0.042 U	0.043 U	0.042 U	0.052 U	0.041 U	0.044 U	0.044 U	0.043 U	0.053 U
TOTAL AROCLOR	0.13	0.18	0.34	0.061	0.07	0.19	0.086	0.05	0.27	0 U	0.0075
TOTAL AROCLOR HALFND	0.302	0.368	0.508	0.233	0.238	0.398	0.25	0.226	0.446	0.1935	0.2195
PCB CONGENERS (MG/KG)											
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--
PCB-106	--	--	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-012	SD-013	SD-014	SD-015	SD-016	SD-017	SD-018	SD-019	SD-020	SD-021	SD-022
SAMPLE ID	SD-012	SD-013	SD-014	SD-015	SD-016	SD-017	SD-018	SD-019	SD-020	SD-021	SD-022
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-14	--	--	--	--	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--
PCB-156/157	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--	--	--	--
PCB-196	--	--	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--	--	--
PCB-198	--	--	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-012	SD-013	SD-014	SD-015	SD-016	SD-017	SD-018	SD-019	SD-020	SD-021	SD-022
SAMPLE ID	SD-012	SD-013	SD-014	SD-015	SD-016	SD-017	SD-018	SD-019	SD-020	SD-021	SD-022
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-201	--	--	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--	--	--	--
PCB-21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--	--	--
PCB-74	--	--	--	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-012	SD-013	SD-014	SD-015	SD-016	SD-017	SD-018	SD-019	SD-020	SD-021	SD-022
SAMPLE ID	SD-012	SD-013	SD-014	SD-015	SD-016	SD-017	SD-018	SD-019	SD-020	SD-021	SD-022
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-80	--	--	--	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)											
1,2,3,4,6,7,8,9-OCDD	--	270	--	90	--	1200	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	22	--	7.2 J	--	59	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	25	--	8.8	--	78	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	9.6	--	3.3 J	--	28	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	0.67 J	--	0.26 Z	--	1.5 J	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	0.46 J	--	0.41 J	--	1.1 J	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	0.7 Z	--	0.74 J	--	2.4 J	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	1.1 Z	--	1.4 J	--	3.1 J	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	0.54 J	--	0.33 Z	--	1.7 J	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	0.97 J	--	0.72 J	--	2.1 J	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	0.19 U	--	0.15 J	--	0.48 J	--	--	--	--	--
1,2,3,7,8-PECDD	--	0.32 J	--	0.46 J	--	0.64 J	--	--	--	--	--
1,2,3,7,8-PECDF	--	0.34 J	--	0.37 J	--	1 J	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	0.65 J	--	0.35 J	--	2 J	--	--	--	--	--
2,3,4,7,8-PECDF	--	0.46 Z	--	0.4 J	--	1.8 J	--	--	--	--	--
2,3,7,8-TCDD	--	0.19 U	--	0.19 U	--	0.41 J	--	--	--	--	--
2,3,7,8-TCDF	--	0.56 Z	--	0.47 J	--	1.5	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	1.8509	--	1.68462	--	5.9029	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	1.9554	--	1.77962	--	5.9029	--	--	--	--	--
TEQ DIOXINS (FISH)	--	1.1916	--	1.13932	--	3.8339	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	1.2961	--	1.23432	--	3.8339	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	1.4065	--	1.20086	--	4.5107	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	1.511	--	1.29586	--	4.5107	--	--	--	--	--
TOTAL HPCDD	--	52 J	--	16 J	--	160 J	--	--	--	--	--
TOTAL HPCDF	--	23 J	--	6.6 J	--	71 J	--	--	--	--	--
TOTAL HXCDD	--	12 J	--	16 J	--	28 J	--	--	--	--	--
TOTAL HXCDF	--	10 J	--	4.1 J	--	34 J	--	--	--	--	--
TOTAL PECDD	--	4.5 J	--	15 J	--	9.6 J	--	--	--	--	--
TOTAL PECDF	--	6.4 J	--	4.9 J	--	23 J	--	--	--	--	--
TOTAL TCDD	--	5.6 J	--	9 J	--	9.8 J	--	--	--	--	--
TOTAL TCDF	--	8 J	--	3.6 J	--	17 J	--	--	--	--	--
METALS (MG/KG)											
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-012	SD-013	SD-014	SD-015	SD-016	SD-017	SD-018	SD-019	SD-020	SD-021	SD-022
SAMPLE ID	SD-012	SD-013	SD-014	SD-015	SD-016	SD-017	SD-018	SD-019	SD-020	SD-021	SD-022
SAMPLE DATE	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614	20170614
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--
CYANIDE	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (%)											
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)											
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-023	SD-024	SD-025	SD-050	SD-051	SD-051	SD-052	SD-053	SD-054	SD-055	SD-071
SAMPLE ID	SD-023	SD-024	SD-025	SD-50	SD-51	SD-51-B	SD-52	SD-53	SD-54	SD-55	SEC-SD-71
SAMPLE DATE	20170614	20170614	20170614	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180626
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation
AREA	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)											
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)											
1,1-BIPHENYL	--	--	--	--	--	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
2-CHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
2-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
2-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
2-NITROPHENOL	--	--	--	--	--	--	--	--	--	--	--
3&4-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--	--	--	--	--
3-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
4-CHLOROANILINE	--	--	--	--	--	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--	--	--
4-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
4-NITROPHENOL	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-023	SD-024	SD-025	SD-050	SD-051	SD-051	SD-052	SD-053	SD-054	SD-055	SD-071
SAMPLE ID	SD-023	SD-024	SD-025	SD-50	SD-51	SD-51-B	SD-52	SD-53	SD-54	SD-55	SEC-SD-71
SAMPLE DATE	20170614	20170614	20170614	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180626
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation
AREA	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
ACENAPHTHENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--	--	--
ACETOPHENONE	--	--	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
ATRAZINE	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--	--	--
BENZALDEHYDE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
CAPROLACTAM	--	--	--	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--	--	--	--
DIETHYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--	--	--
ISOPHORONE	--	--	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K											
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--	--	--
PESTICIDES (MG/KG)											
4,4'-DDD	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--	--	--	--
ALDRIN	--	--	--	--	--	--	--	--	--	--	--
ALPHA-BHC	--	--	--	--	--	--	--	--	--	--	--
ALPHA-CHLORDANE	--	--	--	--	--	--	--	--	--	--	--
BETA-BHC	--	--	--	--	--	--	--	--	--	--	--
DELTA-BHC	--	--	--	--	--	--	--	--	--	--	--
DIELDRIN	--	--	--	--	--	--	--	--	--	--	--
ENDOSULFAN I	--	--	--	--	--	--	--	--	--	--	--
ENDOSULFAN II	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-023	SD-024	SD-025	SD-050	SD-051	SD-051	SD-052	SD-053	SD-054	SD-055	SD-071
SAMPLE ID	SD-023	SD-024	SD-025	SD-50	SD-51	SD-51-B	SD-52	SD-53	SD-54	SD-55	SEC-SD-71
SAMPLE DATE	20170614	20170614	20170614	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180626
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation
AREA	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
ENDOSULFAN SULFATE	--	--	--	--	--	--	--	--	--	--	--
ENDRIN	--	--	--	--	--	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	--	--	--	--	--	--	--	--	--
ENDRIN KETONE	--	--	--	--	--	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--	--	--	--	--
GAMMA-CHLORDANE	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOR	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--	--	--	--	--
METHOXYCHLOR	--	--	--	--	--	--	--	--	--	--	--
TOXAPHENE	--	--	--	--	--	--	--	--	--	--	--
PCBS (MG/KG)											
AROCLOR-1016	0.055 U	0.048 U	0.039 U	0.044 U	0.045 U	0.043 U	0.042 U	0.043 U	0.045 U	0.046 U	0.041 U
AROCLOR-1221	0.055 U	0.048 U	0.039 U	0.044 U	0.045 U	0.043 U	0.042 U	0.043 U	0.045 U	0.046 U	0.041 U
AROCLOR-1232	0.055 U	0.048 U	0.039 U	0.044 U	0.045 U	0.043 U	0.042 U	0.043 U	0.045 U	0.046 U	0.041 U
AROCLOR-1242	0.055 U	0.048 U	0.039 U	0.044 U	0.045 U	0.043 U	0.042 U	0.043 U	0.045 U	0.046 U	0.041 U
AROCLOR-1248	0.055 U	0.048 U	0.039 U	0.044 U	0.045 U	0.043 U	0.042 U	0.043 U	0.045 U	0.046 U	0.041 U
AROCLOR-1254	0.055 U	0.048 U	0.039 U	0.044 U	0.045 U	0.043 U	0.042 U	0.043 U	0.045 U	0.046 U	0.041 U
AROCLOR-1260	0.0091 J	0.0064 J	0.039 U	0.034 J	0.1 J	0.044 J	0.037 J	0.1	0.052	0.046 U	0.038 J
AROCLOR-1262	0.055 U	0.048 U	0.039 U	0.044 U	0.045 U	0.043 U	0.042 U	0.043 U	0.045 U	0.046 U	0.041 U
AROCLOR-1268	0.055 U	0.048 U	0.039 U	0.044 U	0.045 U	0.043 U	0.042 U	0.043 U	0.045 U	0.046 U	0.041 U
TOTAL AROCLOR	0.0091	0.0064	0 U	0.034	0.1	0.044	0.037	0.1	0.052	0 U	0.038
TOTAL AROCLOR HALFND	0.2291	0.1984	0.1755	0.21	0.28	0.216	0.205	0.272	0.232	0.207	0.202
PCB CONGENERS (MG/KG)											
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--
PCB-106	--	--	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-023	SD-024	SD-025	SD-050	SD-051	SD-051	SD-052	SD-053	SD-054	SD-055	SD-071
SAMPLE ID	SD-023	SD-024	SD-025	SD-50	SD-51	SD-51-B	SD-52	SD-53	SD-54	SD-55	SEC-SD-71
SAMPLE DATE	20170614	20170614	20170614	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180626
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation
AREA	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-14	--	--	--	--	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--
PCB-156/157	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--	--	--	--
PCB-196	--	--	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--	--	--
PCB-198	--	--	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-023	SD-024	SD-025	SD-050	SD-051	SD-051	SD-052	SD-053	SD-054	SD-055	SD-071
SAMPLE ID	SD-023	SD-024	SD-025	SD-50	SD-51	SD-51-B	SD-52	SD-53	SD-54	SD-55	SEC-SD-71
SAMPLE DATE	20170614	20170614	20170614	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180626
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation
AREA	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-201	--	--	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--	--	--	--
PCB-21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--	--	--
PCB-74	--	--	--	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-023	SD-024	SD-025	SD-050	SD-051	SD-051	SD-052	SD-053	SD-054	SD-055	SD-071
SAMPLE ID	SD-023	SD-024	SD-025	SD-50	SD-51	SD-51-B	SD-52	SD-53	SD-54	SD-55	SEC-SD-71
SAMPLE DATE	20170614	20170614	20170614	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180626
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation
AREA	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-80	--	--	--	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)											
1,2,3,4,6,7,8,9-OCDD	--	--	190	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	13	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	14	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	6.7	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	0.34 Z	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	0.26 Z	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	0.44 J	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	0.62 J	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	0.33 Z	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	0.61 Z	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	0.21 U	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	0.25 J	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	0.22 U	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	0.54 J	--	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	0.42 J	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	0.2 U	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	0.32 U	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	0.9859	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	1.2674	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	0.838	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	0.962	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	0.9273	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	1.0571	--	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	29 J	--	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	14 J	--	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	2.4 J	--	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	7.7 J	--	--	--	--	--	--	--	--
TOTAL PECDD	--	--	3.1 J	--	--	--	--	--	--	--	--
TOTAL PECDF	--	--	5 J	--	--	--	--	--	--	--	--
TOTAL TCDD	--	--	1.1 J	--	--	--	--	--	--	--	--
TOTAL TCDF	--	--	0.43 J	--	--	--	--	--	--	--	--
METALS (MG/KG)											
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-023	SD-024	SD-025	SD-050	SD-051	SD-051	SD-052	SD-053	SD-054	SD-055	SD-071
SAMPLE ID	SD-023	SD-024	SD-025	SD-50	SD-51	SD-51-B	SD-52	SD-53	SD-54	SD-55	SEC-SD-71
SAMPLE DATE	20170614	20170614	20170614	20180320	20180320	20180320	20180320	20180320	20180320	20180320	20180626
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Site Investigation (Unspecified)	Remedial Investigation
AREA	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--
CYANIDE	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (%)											
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)											
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-072	SD-073	SD-074	SD-075	SD-076	SD-077	SD-078	SEC-SD-56	SEC-SD-57	SEC-SD-58	SEC-SD-59
SAMPLE ID	SEC-SD-72	SEC-SD-73	SEC-SD-74	SEC-SD-75	SEC-SD-76	SEC-SD-77	SEC-SD-78	SEC-SD-56	SEC-SD-57	SEC-SD-58	SEC-SD-59
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180515	20180515	20180515	20180515
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018
AREA	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)											
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)											
1,1-BIPHENYL	--	--	--	--	--	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
2-CHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
2-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
2-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
2-NITROPHENOL	--	--	--	--	--	--	--	--	--	--	--
3&4-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--	--	--	--	--
3-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
4-CHLOROANILINE	--	--	--	--	--	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--	--	--
4-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
4-NITROPHENOL	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-072	SD-073	SD-074	SD-075	SD-076	SD-077	SD-078	SEC-SD-56	SEC-SD-57	SEC-SD-58	SEC-SD-59
SAMPLE ID	SEC-SD-72	SEC-SD-73	SEC-SD-74	SEC-SD-75	SEC-SD-76	SEC-SD-77	SEC-SD-78	SEC-SD-56	SEC-SD-57	SEC-SD-58	SEC-SD-59
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180515	20180515	20180515	20180515
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018
AREA	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
ACENAPHTHENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--	--	--
ACETOPHENONE	--	--	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
ATRAZINE	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--	--	--
BENZALDEHYDE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
CAPROLACTAM	--	--	--	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--	--	--	--
DIETHYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--	--	--
ISOPHORONE	--	--	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K											
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--	--	--
PESTICIDES (MG/KG)											
4,4'-DDD	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--	--	--	--
ALDRIN	--	--	--	--	--	--	--	--	--	--	--
ALPHA-BHC	--	--	--	--	--	--	--	--	--	--	--
ALPHA-CHLORDANE	--	--	--	--	--	--	--	--	--	--	--
BETA-BHC	--	--	--	--	--	--	--	--	--	--	--
DELTA-BHC	--	--	--	--	--	--	--	--	--	--	--
DIELDRIN	--	--	--	--	--	--	--	--	--	--	--
ENDOSULFAN I	--	--	--	--	--	--	--	--	--	--	--
ENDOSULFAN II	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-072	SD-073	SD-074	SD-075	SD-076	SD-077	SD-078	SEC-SD-56	SEC-SD-57	SEC-SD-58	SEC-SD-59
SAMPLE ID	SEC-SD-72	SEC-SD-73	SEC-SD-74	SEC-SD-75	SEC-SD-76	SEC-SD-77	SEC-SD-78	SEC-SD-56	SEC-SD-57	SEC-SD-58	SEC-SD-59
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180515	20180515	20180515	20180515
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018
AREA	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
ENDOSULFAN SULFATE	--	--	--	--	--	--	--	--	--	--	--
ENDRIN	--	--	--	--	--	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	--	--	--	--	--	--	--	--	--
ENDRIN KETONE	--	--	--	--	--	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--	--	--	--	--
GAMMA-CHLORDANE	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOR	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--	--	--	--	--
METHOXYCHLOR	--	--	--	--	--	--	--	--	--	--	--
TOXAPHENE	--	--	--	--	--	--	--	--	--	--	--
PCBS (MG/KG)											
AROCLOR-1016	0.04 U	0.041 U	0.041 U	0.041 U	0.048 U	0.043 U	0.04 U	0.046 U	0.041 U	0.044 U	0.037 U
AROCLOR-1221	0.04 U	0.041 U	0.041 U	0.041 U	0.048 U	0.043 U	0.04 U	0.046 U	0.041 U	0.044 U	0.037 U
AROCLOR-1232	0.04 U	0.041 U	0.041 U	0.041 U	0.048 U	0.043 U	0.04 U	0.046 U	0.041 U	0.044 U	0.037 U
AROCLOR-1242	0.04 U	0.041 U	0.041 U	0.041 U	0.048 U	0.043 U	0.04 U	0.046 U	0.041 U	0.044 U	0.037 U
AROCLOR-1248	0.04 U	0.041 U	0.041 U	0.041 U	0.048 U	0.043 U	0.04 U	0.046 U	0.041 U	0.044 U	0.037 U
AROCLOR-1254	0.04 U	0.041 U	0.041 U	0.041 U	0.048 U	0.043 U	0.04 U	0.046 U	0.041 U	0.044 U	0.037 U
AROCLOR-1260	0.04 U	0.028 J	0.04 J	0.064 J	0.089 J	0.069 J	0.039 J	0.045 J	0.045	0.055 J	0.14
AROCLOR-1262	0.04 U	0.041 U	0.041 U	0.041 U	0.048 U	0.043 U	0.04 U	0.046 U	0.041 U	0.044 U	0.037 U
AROCLOR-1268	0.04 U	0.041 U	0.041 U	0.041 U	0.048 U	0.043 U	0.04 U	0.046 U	0.041 U	0.044 U	0.037 U
TOTAL AROCLOR	0 U	0.028	0.04	0.064	0.089	0.069	0.039	0.045	0.045	0.055	0.14
TOTAL AROCLOR HALFND	0.18	0.192	0.204	0.228	0.281	0.241	0.199	0.229	0.209	0.231	0.288
PCB CONGENERS (MG/KG)											
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--
PCB-106	--	--	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-072	SD-073	SD-074	SD-075	SD-076	SD-077	SD-078	SEC-SD-56	SEC-SD-57	SEC-SD-58	SEC-SD-59
SAMPLE ID	SEC-SD-72	SEC-SD-73	SEC-SD-74	SEC-SD-75	SEC-SD-76	SEC-SD-77	SEC-SD-78	SEC-SD-56	SEC-SD-57	SEC-SD-58	SEC-SD-59
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180515	20180515	20180515	20180515
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018
AREA	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-14	--	--	--	--	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--
PCB-156/157	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--	--	--	--
PCB-196	--	--	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--	--	--
PCB-198	--	--	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-072	SD-073	SD-074	SD-075	SD-076	SD-077	SD-078	SEC-SD-56	SEC-SD-57	SEC-SD-58	SEC-SD-59
SAMPLE ID	SEC-SD-72	SEC-SD-73	SEC-SD-74	SEC-SD-75	SEC-SD-76	SEC-SD-77	SEC-SD-78	SEC-SD-56	SEC-SD-57	SEC-SD-58	SEC-SD-59
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180515	20180515	20180515	20180515
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018
AREA	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-201	--	--	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--	--	--	--
PCB-21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--	--	--
PCB-74	--	--	--	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-072	SD-073	SD-074	SD-075	SD-076	SD-077	SD-078	SEC-SD-56	SEC-SD-57	SEC-SD-58	SEC-SD-59
SAMPLE ID	SEC-SD-72	SEC-SD-73	SEC-SD-74	SEC-SD-75	SEC-SD-76	SEC-SD-77	SEC-SD-78	SEC-SD-56	SEC-SD-57	SEC-SD-58	SEC-SD-59
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180515	20180515	20180515	20180515
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018
AREA	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-80	--	--	--	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)											
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--	--	--	--	--	--
METALS (MG/KG)											
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-072	SD-073	SD-074	SD-075	SD-076	SD-077	SD-078	SEC-SD-56	SEC-SD-57	SEC-SD-58	SEC-SD-59
SAMPLE ID	SEC-SD-72	SEC-SD-73	SEC-SD-74	SEC-SD-75	SEC-SD-76	SEC-SD-77	SEC-SD-78	SEC-SD-56	SEC-SD-57	SEC-SD-58	SEC-SD-59
SAMPLE DATE	20180626	20180626	20180626	20180626	20180626	20180626	20180626	20180515	20180515	20180515	20180515
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018
AREA	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--
CYANIDE	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (%)											
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)											
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-60	SEC-SD-61	SEC-SD-62	SEC-SD-63	SEC-SD-64	SEC-SD-65	SEC-SD-66	SEC-SD-CL-01	SEC-SD-T1-01	SEC-SD-T1-02	SEC-SD-T1-03
SAMPLE ID	SEC-SD-60	SEC-SD-61	SEC-SD-62	SEC-SD-63	SEC-SD-64	SEC-SD-65	SEC-SD-66	SEC-SD-CL-01	SEC-SD-T1-01	SEC-SD-T1-02	SEC-SD-T1-03
SAMPLE DATE	20180515	20180515	20180515	20180515	20180515	20180515	20180515	20171213	20171212	20171212	20171212
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)											
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)											
1,1-BIPHENYL	--	--	--	--	--	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
2-CHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
2-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
2-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
2-NITROPHENOL	--	--	--	--	--	--	--	--	--	--	--
3&4-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--	--	--	--	--
3-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
4-CHLOROANILINE	--	--	--	--	--	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--	--	--
4-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
4-NITROPHENOL	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-60	SEC-SD-61	SEC-SD-62	SEC-SD-63	SEC-SD-64	SEC-SD-65	SEC-SD-66	SEC-SD-CL-01	SEC-SD-T1-01	SEC-SD-T1-02	SEC-SD-T1-03
SAMPLE ID	SEC-SD-60	SEC-SD-61	SEC-SD-62	SEC-SD-63	SEC-SD-64	SEC-SD-65	SEC-SD-66	SEC-SD-CL-01	SEC-SD-T1-01	SEC-SD-T1-02	SEC-SD-T1-03
SAMPLE DATE	20180515	20180515	20180515	20180515	20180515	20180515	20180515	20171213	20171212	20171212	20171212
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
ACENAPHTHENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--	--	--
ACETOPHENONE	--	--	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
ATRAZINE	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--	--	--
BENZALDEHYDE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
CAPROLACTAM	--	--	--	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--	--	--	--
DIETHYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--	--	--
ISOPHORONE	--	--	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K											
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--	--	--
PESTICIDES (MG/KG)											
4,4'-DDD	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--	--	--	--
ALDRIN	--	--	--	--	--	--	--	--	--	--	--
ALPHA-BHC	--	--	--	--	--	--	--	--	--	--	--
ALPHA-CHLORDANE	--	--	--	--	--	--	--	--	--	--	--
BETA-BHC	--	--	--	--	--	--	--	--	--	--	--
DELTA-BHC	--	--	--	--	--	--	--	--	--	--	--
DIELDRIN	--	--	--	--	--	--	--	--	--	--	--
ENDOSULFAN I	--	--	--	--	--	--	--	--	--	--	--
ENDOSULFAN II	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-60	SEC-SD-61	SEC-SD-62	SEC-SD-63	SEC-SD-64	SEC-SD-65	SEC-SD-66	SEC-SD-CL-01	SEC-SD-T1-01	SEC-SD-T1-02	SEC-SD-T1-03
SAMPLE ID	SEC-SD-60	SEC-SD-61	SEC-SD-62	SEC-SD-63	SEC-SD-64	SEC-SD-65	SEC-SD-66	SEC-SD-CL-01	SEC-SD-T1-01	SEC-SD-T1-02	SEC-SD-T1-03
SAMPLE DATE	20180515	20180515	20180515	20180515	20180515	20180515	20180515	20171213	20171212	20171212	20171212
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
ENDOSULFAN SULFATE	--	--	--	--	--	--	--	--	--	--	--
ENDRIN	--	--	--	--	--	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	--	--	--	--	--	--	--	--	--
ENDRIN KETONE	--	--	--	--	--	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--	--	--	--	--
GAMMA-CHLORDANE	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOR	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--	--	--	--	--
METHOXYCHLOR	--	--	--	--	--	--	--	--	--	--	--
TOXAPHENE	--	--	--	--	--	--	--	--	--	--	--
PCBS (MG/KG)											
AROCLOR-1016	0.047 U	0.053 U	0.043 U	0.044 U	0.039 U	0.043 U	0.045 U	0.039 U	0.044 UJ	0.04 U	0.044 UJ
AROCLOR-1221	0.047 U	0.053 U	0.043 U	0.044 U	0.039 U	0.043 U	0.045 U	0.039 U	0.044 UJ	0.04 U	0.044 UJ
AROCLOR-1232	0.047 U	0.053 U	0.043 U	0.044 U	0.039 U	0.043 U	0.045 U	0.039 U	0.044 UJ	0.04 U	0.044 UJ
AROCLOR-1242	0.047 U	0.053 U	0.043 U	0.044 U	0.039 U	0.043 U	0.045 U	0.039 U	0.044 UJ	0.04 U	0.044 UJ
AROCLOR-1248	0.047 U	0.053 U	0.043 U	0.044 U	0.039 U	0.043 U	0.045 U	0.039 U	0.044 UJ	0.04 U	0.044 UJ
AROCLOR-1254	0.047 U	0.053 U	0.043 U	0.044 U	0.039 U	0.043 U	0.045 U	0.039 U	0.044 UJ	0.04 U	0.044 UJ
AROCLOR-1260	0.061 J	0.071	0.029 J	0.11 J	0.04 J	0.07	0.08 J	0.033 J	0.037 J	0.024 J	0.047 J-
AROCLOR-1262	0.047 U	0.053 U	0.043 U	0.044 U	0.039 U	0.043 U	0.045 U	0.039 U	0.044 UJ	0.04 U	0.044 UJ
AROCLOR-1268	0.047 U	0.053 U	0.043 U	0.044 U	0.039 U	0.043 U	0.045 U	0.039 U	0.044 UJ	0.04 U	0.044 UJ
TOTAL AROCLOR	0.061	0.071	0.029	0.11	0.04	0.07	0.08	0.033	0.037	0.024	0.047
TOTAL AROCLOR HALFND	0.249	0.283	0.201	0.286	0.196	0.242	0.26	0.189	0.213	0.184	0.223
PCB CONGENERS (MG/KG)											
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--
PCB-106	--	--	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-60	SEC-SD-61	SEC-SD-62	SEC-SD-63	SEC-SD-64	SEC-SD-65	SEC-SD-66	SEC-SD-CL-01	SEC-SD-T1-01	SEC-SD-T1-02	SEC-SD-T1-03
SAMPLE ID	SEC-SD-60	SEC-SD-61	SEC-SD-62	SEC-SD-63	SEC-SD-64	SEC-SD-65	SEC-SD-66	SEC-SD-CL-01	SEC-SD-T1-01	SEC-SD-T1-02	SEC-SD-T1-03
SAMPLE DATE	20180515	20180515	20180515	20180515	20180515	20180515	20180515	20171213	20171212	20171212	20171212
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-14	--	--	--	--	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--
PCB-156/157	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--	--	--	--
PCB-196	--	--	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--	--	--
PCB-198	--	--	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-60	SEC-SD-61	SEC-SD-62	SEC-SD-63	SEC-SD-64	SEC-SD-65	SEC-SD-66	SEC-SD-CL-01	SEC-SD-T1-01	SEC-SD-T1-02	SEC-SD-T1-03
SAMPLE ID	SEC-SD-60	SEC-SD-61	SEC-SD-62	SEC-SD-63	SEC-SD-64	SEC-SD-65	SEC-SD-66	SEC-SD-CL-01	SEC-SD-T1-01	SEC-SD-T1-02	SEC-SD-T1-03
SAMPLE DATE	20180515	20180515	20180515	20180515	20180515	20180515	20180515	20171213	20171212	20171212	20171212
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-201	--	--	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--	--	--	--
PCB-21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--	--	--
PCB-74	--	--	--	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-60	SEC-SD-61	SEC-SD-62	SEC-SD-63	SEC-SD-64	SEC-SD-65	SEC-SD-66	SEC-SD-CL-01	SEC-SD-T1-01	SEC-SD-T1-02	SEC-SD-T1-03
SAMPLE ID	SEC-SD-60	SEC-SD-61	SEC-SD-62	SEC-SD-63	SEC-SD-64	SEC-SD-65	SEC-SD-66	SEC-SD-CL-01	SEC-SD-T1-01	SEC-SD-T1-02	SEC-SD-T1-03
SAMPLE DATE	20180515	20180515	20180515	20180515	20180515	20180515	20180515	20171213	20171212	20171212	20171212
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-80	--	--	--	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)											
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--	--	--	--	--	--
METALS (MG/KG)											
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-60	SEC-SD-61	SEC-SD-62	SEC-SD-63	SEC-SD-64	SEC-SD-65	SEC-SD-66	SEC-SD-CL-01	SEC-SD-T1-01	SEC-SD-T1-02	SEC-SD-T1-03
SAMPLE ID	SEC-SD-60	SEC-SD-61	SEC-SD-62	SEC-SD-63	SEC-SD-64	SEC-SD-65	SEC-SD-66	SEC-SD-CL-01	SEC-SD-T1-01	SEC-SD-T1-02	SEC-SD-T1-03
SAMPLE DATE	20180515	20180515	20180515	20180515	20180515	20180515	20180515	20171213	20171212	20171212	20171212
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--
CYANIDE	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (%)											
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)											
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T2-01	SEC-SD-T2-02	SEC-SD-T2-03	SEC-SD-T3-01	SEC-SD-T3-01	SEC-SD-T3-02	SEC-SD-T3-03	SEC-SD-T4-01	SEC-SD-T4-02	SEC-SD-T4-03	SEC-SD-T5-01
SAMPLE ID	SEC-SD-T2-01	SEC-SD-T2-02	SEC-SD-T2-03	SEC-SD-T3-01	SEC-SD-T3-01-D	SEC-SD-T3-02	SEC-SD-T3-03	SEC-SD-T4-01	SEC-SD-T4-02	SEC-SD-T4-03	SEC-SD-T5-01
SAMPLE DATE	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)											
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)											
1,1-BIPHENYL	--	--	--	--	--	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
2-CHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
2-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
2-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
2-NITROPHENOL	--	--	--	--	--	--	--	--	--	--	--
3&4-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--	--	--	--	--
3-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
4-CHLOROANILINE	--	--	--	--	--	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--	--	--
4-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
4-NITROPHENOL	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T2-01	SEC-SD-T2-02	SEC-SD-T2-03	SEC-SD-T3-01	SEC-SD-T3-01	SEC-SD-T3-02	SEC-SD-T3-03	SEC-SD-T4-01	SEC-SD-T4-02	SEC-SD-T4-03	SEC-SD-T5-01
SAMPLE ID	SEC-SD-T2-01	SEC-SD-T2-02	SEC-SD-T2-03	SEC-SD-T3-01	SEC-SD-T3-01-D	SEC-SD-T3-02	SEC-SD-T3-03	SEC-SD-T4-01	SEC-SD-T4-02	SEC-SD-T4-03	SEC-SD-T5-01
SAMPLE DATE	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
ACENAPHTHENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--	--	--
ACETOPHENONE	--	--	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
ATRAZINE	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--	--	--
BENZALDEHYDE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
CAPROLACTAM	--	--	--	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--	--	--	--
DIETHYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--	--	--
ISOPHORONE	--	--	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K											
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--	--	--
PESTICIDES (MG/KG)											
4,4'-DDD	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--	--	--	--
ALDRIN	--	--	--	--	--	--	--	--	--	--	--
ALPHA-BHC	--	--	--	--	--	--	--	--	--	--	--
ALPHA-CHLORDANE	--	--	--	--	--	--	--	--	--	--	--
BETA-BHC	--	--	--	--	--	--	--	--	--	--	--
DELTA-BHC	--	--	--	--	--	--	--	--	--	--	--
DIELDRIN	--	--	--	--	--	--	--	--	--	--	--
ENDOSULFAN I	--	--	--	--	--	--	--	--	--	--	--
ENDOSULFAN II	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T2-01	SEC-SD-T2-02	SEC-SD-T2-03	SEC-SD-T3-01	SEC-SD-T3-01	SEC-SD-T3-02	SEC-SD-T3-03	SEC-SD-T4-01	SEC-SD-T4-02	SEC-SD-T4-03	SEC-SD-T5-01
SAMPLE ID	SEC-SD-T2-01	SEC-SD-T2-02	SEC-SD-T2-03	SEC-SD-T3-01	SEC-SD-T3-01-D	SEC-SD-T3-02	SEC-SD-T3-03	SEC-SD-T4-01	SEC-SD-T4-02	SEC-SD-T4-03	SEC-SD-T5-01
SAMPLE DATE	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
ENDOSULFAN SULFATE	--	--	--	--	--	--	--	--	--	--	--
ENDRIN	--	--	--	--	--	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	--	--	--	--	--	--	--	--	--
ENDRIN KETONE	--	--	--	--	--	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--	--	--	--	--
GAMMA-CHLORDANE	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOR	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--	--	--	--	--
METHOXYCHLOR	--	--	--	--	--	--	--	--	--	--	--
TOXAPHENE	--	--	--	--	--	--	--	--	--	--	--
PCBS (MG/KG)											
AROCLOR-1016	0.045 U	0.04 U	0.042 UJ	0.04 U	0.041 U	0.041 U	0.043 UJ	0.046 UJ	0.042 UJ	0.052 UJ	0.045 U
AROCLOR-1221	0.045 U	0.04 U	0.042 UJ	0.04 U	0.041 U	0.041 U	0.043 UJ	0.046 UJ	0.042 UJ	0.052 UJ	0.045 U
AROCLOR-1232	0.045 U	0.04 U	0.042 UJ	0.04 U	0.041 U	0.041 U	0.043 UJ	0.046 UJ	0.042 UJ	0.052 UJ	0.045 U
AROCLOR-1242	0.045 U	0.04 U	0.042 UJ	0.04 U	0.041 U	0.041 U	0.043 UJ	0.046 UJ	0.042 UJ	0.052 UJ	0.045 U
AROCLOR-1248	0.045 U	0.04 U	0.042 UJ	0.04 U	0.041 U	0.041 U	0.043 UJ	0.046 UJ	0.042 UJ	0.052 UJ	0.045 U
AROCLOR-1254	0.045 U	0.04 U	0.042 UJ	0.04 U	0.041 U	0.041 U	0.043 UJ	0.046 UJ	0.042 UJ	0.052 UJ	0.045 U
AROCLOR-1260	0.51	0.036 J	0.037 J	0.0062 J	0.0075 J	0.061 J	0.11 J-	1.6 J	0.1 J	0.1 J-	0.41
AROCLOR-1262	0.045 U	0.04 U	0.042 UJ	0.04 U	0.041 U	0.041 U	0.043 UJ	0.046 UJ	0.042 UJ	0.052 UJ	0.045 U
AROCLOR-1268	0.045 U	0.04 U	0.042 UJ	0.04 U	0.041 U	0.041 U	0.043 UJ	0.046 UJ	0.042 UJ	0.052 UJ	0.045 U
TOTAL AROCLOR	0.51	0.036	0.037	0.0062	0.0075	0.061	0.11	1.6	0.1	0.1	0.41
TOTAL AROCLOR HALFND	0.69	0.196	0.205	0.1662	0.1715	0.225	0.282	1.784	0.268	0.308	0.59
PCB CONGENERS (MG/KG)											
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--
PCB-106	--	--	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T2-01	SEC-SD-T2-02	SEC-SD-T2-03	SEC-SD-T3-01	SEC-SD-T3-01	SEC-SD-T3-02	SEC-SD-T3-03	SEC-SD-T4-01	SEC-SD-T4-02	SEC-SD-T4-03	SEC-SD-T5-01
SAMPLE ID	SEC-SD-T2-01	SEC-SD-T2-02	SEC-SD-T2-03	SEC-SD-T3-01	SEC-SD-T3-01-D	SEC-SD-T3-02	SEC-SD-T3-03	SEC-SD-T4-01	SEC-SD-T4-02	SEC-SD-T4-03	SEC-SD-T5-01
SAMPLE DATE	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-14	--	--	--	--	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--
PCB-156/157	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--	--	--	--
PCB-196	--	--	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--	--	--
PCB-198	--	--	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T2-01	SEC-SD-T2-02	SEC-SD-T2-03	SEC-SD-T3-01	SEC-SD-T3-01	SEC-SD-T3-02	SEC-SD-T3-03	SEC-SD-T4-01	SEC-SD-T4-02	SEC-SD-T4-03	SEC-SD-T5-01
SAMPLE ID	SEC-SD-T2-01	SEC-SD-T2-02	SEC-SD-T2-03	SEC-SD-T3-01	SEC-SD-T3-01-D	SEC-SD-T3-02	SEC-SD-T3-03	SEC-SD-T4-01	SEC-SD-T4-02	SEC-SD-T4-03	SEC-SD-T5-01
SAMPLE DATE	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-201	--	--	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--	--	--	--
PCB-21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--	--	--
PCB-74	--	--	--	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T2-01	SEC-SD-T2-02	SEC-SD-T2-03	SEC-SD-T3-01	SEC-SD-T3-01	SEC-SD-T3-02	SEC-SD-T3-03	SEC-SD-T4-01	SEC-SD-T4-02	SEC-SD-T4-03	SEC-SD-T5-01
SAMPLE ID	SEC-SD-T2-01	SEC-SD-T2-02	SEC-SD-T2-03	SEC-SD-T3-01	SEC-SD-T3-01-D	SEC-SD-T3-02	SEC-SD-T3-03	SEC-SD-T4-01	SEC-SD-T4-02	SEC-SD-T4-03	SEC-SD-T5-01
SAMPLE DATE	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-80	--	--	--	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)											
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--	--	--	--	--	--
METALS (MG/KG)											
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T2-01	SEC-SD-T2-02	SEC-SD-T2-03	SEC-SD-T3-01	SEC-SD-T3-01	SEC-SD-T3-02	SEC-SD-T3-03	SEC-SD-T4-01	SEC-SD-T4-02	SEC-SD-T4-03	SEC-SD-T5-01
SAMPLE ID	SEC-SD-T2-01	SEC-SD-T2-02	SEC-SD-T2-03	SEC-SD-T3-01	SEC-SD-T3-01-D	SEC-SD-T3-02	SEC-SD-T3-03	SEC-SD-T4-01	SEC-SD-T4-02	SEC-SD-T4-03	SEC-SD-T5-01
SAMPLE DATE	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171212	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--
CYANIDE	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (%)											
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)											
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T5-02	SEC-SD-T5-03	SEC-SD-T6-01	SEC-SD-T6-02	SEC-SD-T6-03	SEC-SD-T7-01	SEC-SD-T7-02	SEC-SD-T7-03	SEC-SD-T8-01	SEC-SD-T8-02	SEC-SD-T8-03
SAMPLE ID	SEC-SD-T5-02	SEC-SD-T5-03	SEC-SD-T6-01	SEC-SD-T6-02	SEC-SD-T6-03	SEC-SD-T7-01	SEC-SD-T7-02	SEC-SD-T7-03	SEC-SD-T8-01	SEC-SD-T8-02	SEC-SD-T8-03
SAMPLE DATE	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
VOLATILES (MG/KG)											
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DIBROMOETHANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
1,2-DICHLOROPROPANE	--	--	--	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--	--	--	--
BENZENE	--	--	--	--	--	--	--	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
BROMODICHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
BROMOFORM	--	--	--	--	--	--	--	--	--	--	--
BROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	--	--	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
CHLORODIBROMOMETHANE	--	--	--	--	--	--	--	--	--	--	--
CHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
CHLOROFORM	--	--	--	--	--	--	--	--	--	--	--
CHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--
CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--	--	--	--
METHYL ACETATE	--	--	--	--	--	--	--	--	--	--	--
METHYL CYCLOHEXANE	--	--	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	--	--	--	--	--	--	--	--	--	--	--
STYRENE	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	--	--	--	--	--	--	--	--	--	--	--
SEMIVOLATILES (MG/KG)											
1,1-BIPHENYL	--	--	--	--	--	--	--	--	--	--	--
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
1,4-DIOXANE	--	--	--	--	--	--	--	--	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4,5-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4,6-TRICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DICHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2,6-DINITROTOLUENE	--	--	--	--	--	--	--	--	--	--	--
2-CHLORONAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
2-CHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
2-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
2-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
2-NITROPHENOL	--	--	--	--	--	--	--	--	--	--	--
3&4-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
3,3'-DICHLOROBENZIDINE	--	--	--	--	--	--	--	--	--	--	--
3-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--	--	--
4-CHLORO-3-METHYLPHENOL	--	--	--	--	--	--	--	--	--	--	--
4-CHLOROANILINE	--	--	--	--	--	--	--	--	--	--	--
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	--	--	--	--	--	--	--
4-NITROANILINE	--	--	--	--	--	--	--	--	--	--	--
4-NITROPHENOL	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T5-02	SEC-SD-T5-03	SEC-SD-T6-01	SEC-SD-T6-02	SEC-SD-T6-03	SEC-SD-T7-01	SEC-SD-T7-02	SEC-SD-T7-03	SEC-SD-T8-01	SEC-SD-T8-02	SEC-SD-T8-03
SAMPLE ID	SEC-SD-T5-02	SEC-SD-T5-03	SEC-SD-T6-01	SEC-SD-T6-02	SEC-SD-T6-03	SEC-SD-T7-01	SEC-SD-T7-02	SEC-SD-T7-03	SEC-SD-T8-01	SEC-SD-T8-02	SEC-SD-T8-03
SAMPLE DATE	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
ACENAPHTHENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--	--	--
ACETOPHENONE	--	--	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
ATRAZINE	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--	--	--
BENZALDEHYDE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
CAPROLACTAM	--	--	--	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--	--	--	--
DIETHYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROETHANE	--	--	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--	--	--
ISOPHORONE	--	--	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
NITROBENZENE	--	--	--	--	--	--	--	--	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K											
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND	--	--	--	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(A)PYRENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--	--	--	--
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--	--	--	--
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROPHENOL	--	--	--	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--	--	--	--
TOTAL PAHS	--	--	--	--	--	--	--	--	--	--	--
PESTICIDES (MG/KG)											
4,4'-DDD	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--	--	--	--
ALDRIN	--	--	--	--	--	--	--	--	--	--	--
ALPHA-BHC	--	--	--	--	--	--	--	--	--	--	--
ALPHA-CHLORDANE	--	--	--	--	--	--	--	--	--	--	--
BETA-BHC	--	--	--	--	--	--	--	--	--	--	--
DELTA-BHC	--	--	--	--	--	--	--	--	--	--	--
DIELDRIN	--	--	--	--	--	--	--	--	--	--	--
ENDOSULFAN I	--	--	--	--	--	--	--	--	--	--	--
ENDOSULFAN II	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T5-02	SEC-SD-T5-03	SEC-SD-T6-01	SEC-SD-T6-02	SEC-SD-T6-03	SEC-SD-T7-01	SEC-SD-T7-02	SEC-SD-T7-03	SEC-SD-T8-01	SEC-SD-T8-02	SEC-SD-T8-03
SAMPLE ID	SEC-SD-T5-02	SEC-SD-T5-03	SEC-SD-T6-01	SEC-SD-T6-02	SEC-SD-T6-03	SEC-SD-T7-01	SEC-SD-T7-02	SEC-SD-T7-03	SEC-SD-T8-01	SEC-SD-T8-02	SEC-SD-T8-03
SAMPLE DATE	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
ENDOSULFAN SULFATE	--	--	--	--	--	--	--	--	--	--	--
ENDRIN	--	--	--	--	--	--	--	--	--	--	--
ENDRIN ALDEHYDE	--	--	--	--	--	--	--	--	--	--	--
ENDRIN KETONE	--	--	--	--	--	--	--	--	--	--	--
GAMMA-BHC (LINDANE)	--	--	--	--	--	--	--	--	--	--	--
GAMMA-CHLORDANE	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOR	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOR EPOXIDE	--	--	--	--	--	--	--	--	--	--	--
METHOXYCHLOR	--	--	--	--	--	--	--	--	--	--	--
TOXAPHENE	--	--	--	--	--	--	--	--	--	--	--
PCBS (MG/KG)											
AROCLOR-1016	0.039 U	0.043 U	0.043 U	0.04 U	0.047 UJ	0.047 U	0.042 U	0.041 U	0.043 U	0.041 U	0.042 R
AROCLOR-1221	0.039 U	0.043 U	0.043 U	0.04 U	0.047 UJ	0.047 U	0.042 U	0.041 U	0.043 U	0.041 U	0.042 R
AROCLOR-1232	0.039 U	0.043 U	0.043 U	0.04 U	0.047 UJ	0.047 U	0.042 U	0.041 U	0.043 U	0.041 U	0.042 R
AROCLOR-1242	0.039 U	0.043 U	0.043 U	0.04 U	0.047 UJ	0.047 U	0.042 U	0.041 U	0.043 U	0.041 U	0.042 R
AROCLOR-1248	0.039 U	0.043 U	0.043 U	0.04 U	0.047 UJ	0.047 U	0.042 U	0.041 U	0.043 U	0.041 U	0.042 R
AROCLOR-1254	0.039 U	0.043 U	0.043 U	0.04 U	0.047 UJ	0.047 U	0.042 U	0.041 U	0.043 U	0.041 U	0.042 R
AROCLOR-1260	4.6	0.062	0.048	0.027 J	0.042 J	0.052	0.026 J	0.037 J	0.027 J	0.029 J	0.038 J
AROCLOR-1262	0.039 U	0.043 U	0.043 U	0.04 U	0.047 UJ	0.047 U	0.042 U	0.041 U	0.043 U	0.041 U	0.042 R
AROCLOR-1268	0.039 U	0.043 U	0.043 U	0.04 U	0.047 UJ	0.047 U	0.042 U	0.041 U	0.043 U	0.041 U	0.042 R
TOTAL AROCLOR	4.6	0.062	0.048	0.027	0.042	0.052	0.026	0.037	0.027	0.029	0.038
TOTAL AROCLOR HALFND	4.756	0.234	0.22	0.187	0.23	0.24	0.194	0.201	0.199	0.193	0.038
PCB CONGENERS (MG/KG)											
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--	--	--
PCB-100	--	--	--	--	--	--	--	--	--	--	--
PCB-101/90	--	--	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--
PCB-106	--	--	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--	--	--
PCB-110	--	--	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	--	--	--	--	--	--	--	--
PCB-119	--	--	--	--	--	--	--	--	--	--	--
PCB-12	--	--	--	--	--	--	--	--	--	--	--
PCB-12/13	--	--	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--	--	--	--
PCB-124	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--
PCB-127	--	--	--	--	--	--	--	--	--	--	--
PCB-128/162	--	--	--	--	--	--	--	--	--	--	--
PCB-128/166	--	--	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	--	--	--	--	--	--	--	--
PCB-129/138/163	--	--	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	--	--	--	--	--	--	--	--
PCB-130	--	--	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	--	--	--	--	--	--	--	--
PCB-135	--	--	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--	--	--
PCB-138/163/164	--	--	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T5-02	SEC-SD-T5-03	SEC-SD-T6-01	SEC-SD-T6-02	SEC-SD-T6-03	SEC-SD-T7-01	SEC-SD-T7-02	SEC-SD-T7-03	SEC-SD-T8-01	SEC-SD-T8-02	SEC-SD-T8-03
SAMPLE ID	SEC-SD-T5-02	SEC-SD-T5-03	SEC-SD-T6-01	SEC-SD-T6-02	SEC-SD-T6-03	SEC-SD-T7-01	SEC-SD-T7-02	SEC-SD-T7-03	SEC-SD-T8-01	SEC-SD-T8-02	SEC-SD-T8-03
SAMPLE DATE	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-14	--	--	--	--	--	--	--	--	--	--	--
PCB-140	--	--	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	--	--	--	--	--	--	--	--
PCB-147	--	--	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--	--	--
PCB-151	--	--	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--	--	--
PCB-153	--	--	--	--	--	--	--	--	--	--	--
PCB-153/168	--	--	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--
PCB-156/157	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--	--	--	--
PCB-168	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--
PCB-17	--	--	--	--	--	--	--	--	--	--	--
PCB-170	--	--	--	--	--	--	--	--	--	--	--
PCB-171	--	--	--	--	--	--	--	--	--	--	--
PCB-171/173	--	--	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--	--	--
PCB-173	--	--	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--	--	--
PCB-18	--	--	--	--	--	--	--	--	--	--	--
PCB-18/30	--	--	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	--	--	--	--	--	--	--	--
PCB-180/193	--	--	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	--	--	--	--	--	--	--	--
PCB-183	--	--	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--	--	--
PCB-185	--	--	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--	--	--
PCB-187	--	--	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--	--	--	--
PCB-19	--	--	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--	--	--
PCB-193	--	--	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--	--	--
PCB-195	--	--	--	--	--	--	--	--	--	--	--
PCB-196	--	--	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	--	--	--	--	--	--	--	--
PCB-197	--	--	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--	--	--
PCB-198	--	--	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--	--	--
PCB-20/21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-20/28	--	--	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T5-02	SEC-SD-T5-03	SEC-SD-T6-01	SEC-SD-T6-02	SEC-SD-T6-03	SEC-SD-T7-01	SEC-SD-T7-02	SEC-SD-T7-03	SEC-SD-T8-01	SEC-SD-T8-02	SEC-SD-T8-03
SAMPLE ID	SEC-SD-T5-02	SEC-SD-T5-03	SEC-SD-T6-01	SEC-SD-T6-02	SEC-SD-T6-03	SEC-SD-T7-01	SEC-SD-T7-02	SEC-SD-T7-03	SEC-SD-T8-01	SEC-SD-T8-02	SEC-SD-T8-03
SAMPLE DATE	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-201	--	--	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--	--	--
PCB-206	--	--	--	--	--	--	--	--	--	--	--
PCB-207	--	--	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--	--	--
PCB-209	--	--	--	--	--	--	--	--	--	--	--
PCB-21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--	--	--
PCB-26	--	--	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--	--	--
PCB-28	--	--	--	--	--	--	--	--	--	--	--
PCB-29	--	--	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--	--	--
PCB-30	--	--	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--	--	--
PCB-40	--	--	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--	--	--
PCB-43/49	--	--	--	--	--	--	--	--	--	--	--
PCB-44	--	--	--	--	--	--	--	--	--	--	--
PCB-44/47/65	--	--	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	--	--	--	--	--	--	--	--
PCB-45/51	--	--	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--	--	--
PCB-47	--	--	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--	--	--
PCB-50	--	--	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	--	--	--	--	--	--	--	--
PCB-52	--	--	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	--	--	--	--	--	--	--	--
PCB-53	--	--	--	--	--	--	--	--	--	--	--
PCB-54	--	--	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	--	--	--	--	--	--	--	--
PCB-66	--	--	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	--	--	--	--	--	--	--	--
PCB-67	--	--	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--	--	--
PCB-74	--	--	--	--	--	--	--	--	--	--	--
PCB-77	--	--	--	--	--	--	--	--	--	--	--
PCB-78	--	--	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--	--	--
PCB-8	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T5-02	SEC-SD-T5-03	SEC-SD-T6-01	SEC-SD-T6-02	SEC-SD-T6-03	SEC-SD-T7-01	SEC-SD-T7-02	SEC-SD-T7-03	SEC-SD-T8-01	SEC-SD-T8-02	SEC-SD-T8-03
SAMPLE ID	SEC-SD-T5-02	SEC-SD-T5-03	SEC-SD-T6-01	SEC-SD-T6-02	SEC-SD-T6-03	SEC-SD-T7-01	SEC-SD-T7-02	SEC-SD-T7-03	SEC-SD-T8-01	SEC-SD-T8-02	SEC-SD-T8-03
SAMPLE DATE	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
PCB-80	--	--	--	--	--	--	--	--	--	--	--
PCB-81	--	--	--	--	--	--	--	--	--	--	--
PCB-82	--	--	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--	--	--
PCB-90/101/113	--	--	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--	--	--
PCB-97	--	--	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--	--	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS ZEROND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	--	--	--	--	--	--	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	--	--	--	--	--	--	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (NG/KG)											
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--	--	--	--	--	--
METALS (MG/KG)											
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T5-02	SEC-SD-T5-03	SEC-SD-T6-01	SEC-SD-T6-02	SEC-SD-T6-03	SEC-SD-T7-01	SEC-SD-T7-02	SEC-SD-T7-03	SEC-SD-T8-01	SEC-SD-T8-02	SEC-SD-T8-03
SAMPLE ID	SEC-SD-T5-02	SEC-SD-T5-03	SEC-SD-T6-01	SEC-SD-T6-02	SEC-SD-T6-03	SEC-SD-T7-01	SEC-SD-T7-02	SEC-SD-T7-03	SEC-SD-T8-01	SEC-SD-T8-02	SEC-SD-T8-03
SAMPLE DATE	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213	20171213
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6	6	6
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--
CYANIDE	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (%)											
TOTAL SOLIDS	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS (MG/KG)											
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T8-05	SEC-SD-TL-03	SEC-SD-TL-06	SW/SD300	SW/SD301	SW/SD302	SW/SD303	SW/SD304	SW/SD305	SW/SD318	SW/SD319
SAMPLE ID	SEC-SD-T8-05	SEC-SD-TL-03	SEC-SD-TL-06	SD300-20191206	SD301-20191206	SD302-20191206	SD303-20191206	SD304-20191206	SD305-20191205	SD318-20191205	SD319-20191205
SAMPLE DATE	20171213	20171213	20171213	20191206	20191206	20191206	20191206	20191206	20191205	20191205	20191205
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
VOLATILES (MG/KG)											
1,1,1-TRICHLOROETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
1,1,2,2-TETRACHLOROETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
1,1,2-TRICHLOROETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
1,1-DICHLOROETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
1,1-DICHLOROETHENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
1,2,3-TRICHLOROBENZENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
1,2,4-TRICHLOROBENZENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
1,2-DIBROMOETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
1,2-DICHLOROBENZENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
1,2-DICHLOROETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
1,2-DICHLOROPROPANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
1,3-DICHLOROBENZENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
1,4-DICHLOROBENZENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
2-BUTANONE	--	--	--	0.013 U	0.012 U	0.011 U	0.013 U	0.012 U	0.019	0.017 J	0.012 U
2-HEXANONE	--	--	--	0.013 U	0.012 U	0.011 U	0.013 U	0.012 U	0.015 U	0.021 U	0.012 U
4-METHYL-2-PENTANONE	--	--	--	0.013 U	0.012 U	0.011 U	0.013 U	0.012 U	0.015 U	0.021 U	0.012 U
ACETONE	--	--	--	0.028 U	0.014 U	0.014 U	0.018 U	0.018 U	0.044	0.064	0.013 U
BENZENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
BROMOCHLOROMETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
BROMODICHLOROMETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
BROMOFORM	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
BROMOMETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
CARBON DISULFIDE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
CARBON TETRACHLORIDE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
CHLOROBENZENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
CHLORODIBROMOMETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
CHLOROETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
CHLOROFORM	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
CHLOROMETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
CIS-1,2-DICHLOROETHENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
CIS-1,3-DICHLOROPROPENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
CYCLOHEXANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
DICHLORODIFLUOROMETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
ETHYLBENZENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
ISOPROPYLBENZENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
M+P-XYLENES	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
METHYL ACETATE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
METHYL CYCLOHEXANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
METHYL TERT-BUTYL ETHER	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
METHYLENE CHLORIDE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
O-XYLENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
STYRENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
TETRACHLOROETHENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
TOLUENE	--	--	--	0.0066 U	0.00076 J	0.0057 U	0.0065 U	0.0058 U	0.0029 J	0.011 U	0.006 U
TRANS-1,2-DICHLOROETHENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
TRANS-1,3-DICHLOROPROPENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
TRICHLOROETHENE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
TRICHLOROFLUOROMETHANE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
VINYL CHLORIDE	--	--	--	0.0066 U	0.0059 U	0.0057 U	0.0065 U	0.0058 U	0.0076 U	0.011 U	0.006 U
SEMIVOLATILES (MG/KG)											
1,1-BIPHENYL	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
1,2,4,5-TETRACHLOROBENZENE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
1,4-DIOXANE	--	--	--	0.1 U	0.086 U	0.087 U	0.1 U	0.09 U	0.1 U	0.12 U	0.085 U
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 U	0.42 U
2,3,4,6-TETRACHLOROPHENOL	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
2,4,5-TRICHLOROPHENOL	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
2,4,6-TRICHLOROPHENOL	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
2,4-DICHLOROPHENOL	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
2,4-DIMETHYLPHENOL	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
2,4-DINITROPHENOL	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 R	0.42 U
2,4-DINITROTOLUENE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
2,6-DINITROTOLUENE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
2-CHLORONAPHTHALENE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
2-CHLOROPHENOL	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
2-METHYLNAPHTHALENE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
2-METHYLPHENOL	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 U	0.42 U
2-NITROANILINE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 R	0.22 U
2-NITROPHENOL	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
3&4-METHYLPHENOL	--	--	--	0.25 J	0.42 U	0.43 U	0.11 J	0.14 J	0.94	0.6 U	0.42 U
3,3'-DICHLOROBENZIDINE	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 U	0.42 U
3-NITROANILINE	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 R	0.42 U
4,6-DINITRO-2-METHYLPHENOL	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 R	0.42 U
4-BROMOPHENYL PHENYL ETHER	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
4-CHLORO-3-METHYLPHENOL	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
4-CHLOROANILINE	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 U	0.42 U
4-CHLOROPHENYL PHENYL ETHER	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
4-NITROANILINE	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 R	0.42 U
4-NITROPHENOL	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 R	0.42 U

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T8-05	SEC-SD-TL-03	SEC-SD-TL-06	SW/SD300	SW/SD301	SW/SD302	SW/SD303	SW/SD304	SW/SD305	SW/SD318	SW/SD319
SAMPLE ID	SEC-SD-T8-05	SEC-SD-TL-03	SEC-SD-TL-06	SD300-20191206	SD301-20191206	SD302-20191206	SD303-20191206	SD304-20191206	SD305-20191205	SD318-20191205	SD319-20191205
SAMPLE DATE	20171213	20171213	20171213	20191206	20191206	20191206	20191206	20191206	20191205	20191205	20191205
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ACENAPHTHENE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
ACENAPHTHYLENE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
ACETOPHENONE	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 U	0.42 U
ANTHRACENE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
ATRAZINE	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 U	0.42 U
BAP EQUIVALENT-HALFND	--	--	--	0.28318	0.25479	0.186561	0.27027	0.31006	0.21907	0.31 U	0.203984
BAP EQUIVALENT-POS	--	--	--	0.15818	0.14479	0.064461	0.14402	0.19506	0.07477	0.31 U	0.092884
BENZALDEHYDE	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 U	0.42 U
BENZO(A)ANTHRACENE	--	--	--	0.11 J	0.1 J	0.048 J	0.13 J	0.16 J	0.058 J	0.31 U	0.075 J
BENZO(A)PYRENE	--	--	--	0.12 J	0.11 J	0.052 J	0.11 J	0.15 J	0.06 J	0.31 U	0.07 J
BENZO(B)FLUORANTHENE	--	--	--	0.18 J	0.17 J	0.076 J	0.15 J	0.2 J	0.089 J	0.31 U	0.11 J
BENZO(G,H,I)PERYLENE	--	--	--	0.11 J	0.09 J	0.043 J	0.07 J	0.095 J	0.26 U	0.31 U	0.053 J
BENZO(K)FLUORANTHENE	--	--	--	0.054 J	0.055 J	0.22 U	0.25 U	0.069 J	0.26 U	0.31 U	0.22 U
BIS(2-CHLOROETHOXY)METHANE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
BIS(2-CHLOROETHYL)ETHER	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 U	0.42 U
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
BUTYL BENZYL PHTHALATE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
CAPROLACTAM	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 U	0.42 U
CARBAZOLE	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 U	0.42 U
CHRYSENE	--	--	--	0.14 J	0.14 J	0.061 J	0.12 J	0.17 J	0.07 J	0.31 U	0.084 J
DIBENZO(A,H)ANTHRACENE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
DIBENZOFURAN	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
DIETHYL PHTHALATE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
DIMETHYL PHTHALATE	--	--	--	0.16 J	0.11 J	0.12 J	0.16 J	0.15 J	0.15 J	0.12 J	0.17 J
DI-N-BUTYL PHTHALATE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
DI-N-OCTYL PHTHALATE	--	--	--	0.49 U	0.42 U	0.43 U	0.49 UJ	0.44 UJ	0.5 UJ	0.6 UJ	0.42 UJ
FLUORANTHENE	--	--	--	0.26 J	0.27 J	0.12 J	0.32 J	0.34 J	0.13 J	0.6 U	0.19 J
FLUORENE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
HEXACHLOROBENZENE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
HEXACHLOROBUTADIENE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
HEXACHLOROCYCLOPENTADIENE	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 U	0.42 U
HEXACHLOROETHANE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
HIGH MOLECULAR WEIGHT PAHS	--	--	--	1.039	0.956	0.379	0.949	1.246	0.417	0 U	0.615
INDENO(1,2,3-CD)PYRENE	--	--	--	0.085 J	0.071 J	0.22 U	0.059 J	0.082 J	0.26 U	0.31 U	0.043 J
ISOPHORONE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
LOW MOLECULAR WEIGHT PAHS	--	--	--	0.37	0.37	0.165	0.5	0.49	0.13	0 U	0.279
NAPHTHALENE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
NITROBENZENE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
N-NITROSODIPHENYLAMINE	--	--	--	0.25 U	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
PENTACHLOROPHENOL	--	--	--	0.49 U	0.42 U	0.43 U	0.49 U	0.44 U	0.5 U	0.6 U	0.42 U
PHENANTHRENE	--	--	--	0.11 J	0.1 J	0.045 J	0.18 J	0.15 J	0.26 U	0.31 U	0.089 J
PHENOL	--	--	--	0.051 J	0.078 J	0.43 U	0.058 J	0.06 J	0.072 J	0.6 U	0.42 U
PYRENE	--	--	--	0.24 J	0.22	0.099 J	0.31	0.32	0.14 J	0.31 U	0.18 J
TOTAL PAHS	--	--	--	1.409	1.326	0.544	1.449	1.736	0.547	0 U	0.894
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K											
2-METHYLNAPHTHALENE	--	--	--	0.0026 J	0.0021 J	0.0014 J	0.0015 J	0.0016 J	0.002 J	0.006 U	0.0027 J
ACENAPHTHENE	--	--	--	0.0041 J	0.0027 J	0.0013 J	0.0051	0.0031 J	0.0013 J	0.006 U	0.0024 J
ACENAPHTHYLENE	--	--	--	0.0047 J	0.0029 J	0.0024 J	0.0098	0.0037 J	0.0026 J	0.006 U	0.0021 J
ANTHRACENE	--	--	--	0.015	0.012	0.0068	0.037	0.03	0.0068	0.006 U	0.012
BAP EQUIVALENT-HALFND	--	--	--	0.16804	0.15205	0.074536	0.1631	0.19513	0.083144	0.006 U	0.094661
BAP EQUIVALENT-POS	--	--	--	0.16804	0.15205	0.074536	0.1631	0.19513	0.083144	0.006 U	0.094661
BENZO(A)ANTHRACENE	--	--	--	0.1	0.093	0.046	0.13	0.14	0.052	0.006 U	0.066
BENZO(A)PYRENE	--	--	--	0.11	0.099	0.049	0.11	0.13	0.055	0.006 U	0.062
BENZO(B)FLUORANTHENE	--	--	--	0.16	0.14	0.072	0.15	0.16	0.076	0.006 U	0.085
BENZO(G,H,I)PERYLENE	--	--	--	0.1	0.084	0.043	0.074	0.095	0.048	0.006 U	0.05
BENZO(K)FLUORANTHENE	--	--	--	0.061	0.053	0.028	0.048	0.068	0.028	0.006 U	0.028
CHRYSENE	--	--	--	0.13	0.12	0.056	0.12	0.15	0.064	0.006 U	0.081
DIBENZO(A,H)ANTHRACENE	--	--	--	0.023	0.022	0.0098	0.018	0.026	0.011	0.006 U	0.013
FLUORANTHENE	--	--	--	0.23	0.2	0.094	0.31	0.27	0.1	0.006 U	0.15
FLUORENE	--	--	--	0.0056	0.004 J	0.0024 J	0.017	0.0056	0.0022 J	0.006 U	0.0033 J
HIGH MOLECULAR WEIGHT PAHS	--	--	--	1.037	0.902	0.4498	1.025	1.152	0.484	0 U	0.597
INDENO(1,2,3-CD)PYRENE	--	--	--	0.083	0.071	0.036	0.065	0.083	0.04	0.006 U	0.042
LOW MOLECULAR WEIGHT PAHS	--	--	--	0.3721	0.3148	0.1515	0.5708	0.444	0.1589	0 U	0.2523
NAPHTHALENE	--	--	--	0.0027 J	0.0022 J	0.0016 J	0.0019 J	0.0016 J	0.002 J	0.006 U	0.0025 J
PENTACHLOROPHENOL	--	--	--	0.01 U	0.0086 U	0.0087 U	0.01 U	0.009 U	0.01 U	0.012 U	0.0085 U
PHENANTHRENE	--	--	--	0.11	0.091	0.043	0.19	0.13	0.044	0.006 U	0.08
PYRENE	--	--	--	0.27	0.22	0.11	0.31	0.3	0.11	0.006 U	0.17
TOTAL PAHS	--	--	--	0.13	0.12	0.056	0.12	0.15	0.064	0.006	0.081
PESTICIDES (MG/KG)											
4,4'-DDD	--	--	--	0.0049 UJ	0.00041 J	0.00064 J	0.0049 U	0.00023 J	0.0011 J	0.006 U	0.0014 J
4,4'-DDE	--	--	--	0.0049 UJ	0.0042 U	0.0043 U	0.0049 U	0.0044 U	0.005 U	0.006 U	0.00041 J
4,4'-DDT	--	--	--	0.0049 UJ	0.0042 U	0.0043 U	0.0049 U	0.0044 U	0.005 U	0.006 U	0.012 J
ALDRIN	--	--	--	0.0025 UJ	0.0022 U	0.0022 U	0.0025 U	0.0023 U	0.0026 U	0.0031 U	0.0022 U
ALPHA-BHC	--	--	--	0.0025 UJ	0.0022 U	0.0022 U	0.0025 U	0.0023 U	0.0026 U	0.0031 U	0.0022 U
ALPHA-CHLORDANE	--	--	--	0.00039 J	0.00065 J	0.00042 J	0.0025 U	0.00036 J	0.00041 J	0.0031 U	0.00038 J
BETA-BHC	--	--	--	0.0025 UJ	0.0022 U	0.0022 U	0.0025 U	0.0023 U	0.0026 U	0.0031 U	0.0022 U
DELTA-BHC	--	--	--	0.0025 UJ	0.0022 U	0.0022 U	0.0025 U	0.0023 U	0.0026 U	0.0031 U	0.0022 U
DIELDRIN	--	--	--	0.0049 UJ	0.0042 U	0.0043 U	0.0049 U	0.0044 U	0.00032 J	0.006 U	0.0042 U
ENDOSULFAN I	--	--	--	0.0025 UJ	0.0022 U	0.0022 U	0.0025 U	0.0023 U	0.0026 U	0.0031 U	0.0022 U
ENDOSULFAN II	--	--	--	0.0049 UJ	0.0042 U	0.0043 U	0.0049 U	0.0044 U	0.005 U	0.006 U	0.00043 J

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T8-05	SEC-SD-TL-03	SEC-SD-TL-06	SW/SD300	SW/SD301	SW/SD302	SW/SD303	SW/SD304	SW/SD305	SW/SD318	SW/SD319
SAMPLE ID	SEC-SD-T8-05	SEC-SD-TL-03	SEC-SD-TL-06	SD300-20191206	SD301-20191206	SD302-20191206	SD303-20191206	SD304-20191206	SD305-20191205	SD318-20191205	SD319-20191205
SAMPLE DATE	20171213	20171213	20171213	20191206	20191206	20191206	20191206	20191206	20191205	20191205	20191205
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ENDOSULFAN SULFATE	--	--	--	0.0049 UJ	0.0042 U	0.0043 U	0.0049 U	0.0044 U	0.00054 J	0.006 U	0.0042 U
ENDRIN	--	--	--	0.0049 UJ	0.00033 J	0.0043 U	0.0049 U	0.0044 U	0.005 U	0.006 U	0.0042 U
ENDRIN ALDEHYDE	--	--	--	0.0049 UJ	0.0042 U	0.0043 U	0.0049 U	0.0044 U	0.005 U	0.006 U	0.0042 U
ENDRIN KETONE	--	--	--	0.0049 UJ	0.0042 U	0.0043 U	0.0049 U	0.0044 U	0.005 U	0.006 U	0.0042 U
GAMMA-BHC (LINDANE)	--	--	--	0.0025 UJ	0.0005 J	0.001 J	0.0025 U	0.0023 U	0.0026 U	0.0031 U	0.0022 U
GAMMA-CHLORDANE	--	--	--	0.00045 J	0.00079 J	0.0007 J	0.0025 U	0.00032 J	0.00037 J	0.0031 U	0.00048 J
HEPTACHLOR	--	--	--	0.0025 UJ	0.0022 U	0.0022 U	0.0025 U	0.0023 U	0.0026 U	0.0031 U	0.0022 U
HEPTACHLOR EPOXIDE	--	--	--	0.0025 UJ	0.0022 U	0.0022 U	0.0025 U	0.0023 U	0.0026 U	0.0031 U	0.0022 U
METHOXYCHLOR	--	--	--	0.00099 J	0.022 U	0.022 U	0.025 U	0.023 U	0.00098 J	0.031 U	0.022 U
TOXAPHENE	--	--	--	0.25 UJ	0.22 U	0.22 U	0.25 U	0.23 U	0.26 U	0.31 U	0.22 U
PCBS (MG/KG)											
AROCLOR-1016	0.041 U	0.04 U	0.04 U	0.049 U	0.042 U	0.043 U	0.049 U	0.044 U	0.05 U	0.061 U	0.042 U
AROCLOR-1221	0.041 U	0.04 U	0.04 U	0.049 U	0.042 U	0.043 U	0.049 U	0.044 U	0.05 U	0.061 U	0.042 U
AROCLOR-1232	0.041 U	0.04 U	0.04 U	0.049 U	0.042 U	0.043 U	0.049 U	0.044 U	0.05 U	0.061 U	0.042 U
AROCLOR-1242	0.041 U	0.04 U	0.04 U	0.049 U	0.042 U	0.043 U	0.049 U	0.044 U	0.05 U	0.061 U	0.042 U
AROCLOR-1248	0.041 U	0.04 U	0.04 U	0.049 U	0.042 U	0.043 U	0.049 U	0.044 U	0.05 U	0.061 U	0.042 U
AROCLOR-1254	0.041 U	0.04 U	0.04 U	0.049 U	0.042 U	0.043 U	0.049 U	0.044 U	0.05 U	0.061 U	0.042 U
AROCLOR-1260	0.41	0.031 J	0.055	0.049 U	0.042 U	0.043 U	0.0099 J	0.044 U	0.027 J	0.4 J	0.041 J
AROCLOR-1262	0.041 U	0.04 U	0.04 U	0.049 U	0.042 U	0.043 U	0.049 U	0.044 U	0.05 U	0.061 U	0.042 U
AROCLOR-1268	0.041 U	0.04 U	0.04 U	0.049 U	0.042 U	0.043 U	0.049 U	0.044 U	0.05 U	0.061 U	0.042 U
TOTAL AROCLOR	0.41	0.031	0.055	0 U	0 U	0 U	0.0099	0 U	0.027	0.4	0.041
TOTAL AROCLOR HALFND	0.574	0.191	0.215	0.2205	0.189	0.1935	0.2059	0.198	0.227	0.644	0.209
PCB CONGENERS (MG/KG)											
DICHLOROBIPHENYLS	--	--	--	0.000088 J	0.000086 J	0.00019 J	0.000069 J	0.00014 J	0.00014 J	0.0023 J	0.00013 J
HEPTACHLOROBIPHENYLS	--	--	--	0.00036 J	0.00039 J	0.00061 J	0.0026 J	0.0061 J	1.9 J	1.8 J	0.03 J
HEXACHLOROBIPHENYLS	--	--	--	0.001 J	0.00087 J	0.0013 J	0.0051 J	0.009 J	1.7 J	1.9 J	0.031 J
MONOCHLOROBIPHENYLS	--	--	--	0.00002 J	0.000018 J	0.000048 J	0.000032 J	0.000029 J	0.000021 J	0.00055 J	0.000039 J
NONACHLOROBIPHENYLS	--	--	--	0.000064 J	0.000053 J	0.000061 J	0.000083 J	0.00015 J	0.025 J	0.019 J	0.00041 J
OCTACHLOROBIPHENYLS	--	--	--	0.00011 J	0.0001 J	0.00014 J	0.00048 J	0.0013 J	0.41 J	0.29 J	0.0049 J
PCB-1	--	--	--	0.0000091	0.0000073	0.000021	0.000008	0.000013	0.0000082	0.00019	0.000013
PCB-10	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000018 J	0.000002 U	0.0000072	0.000002 U
PCB-100	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000067	0.0000074	0.00015	0.021 J	0.000057
PCB-101/90	--	--	--	0.00016	0.00015	0.00021	0.0005	0.001	0.12	0.21 J	0.0023
PCB-103	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000014	0.000038	0.0015	0.025 J	0.00013
PCB-104	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0021	0.000019
PCB-105	--	--	--	0.000077	0.000055	0.00009	0.000062	0.00013	0.0085	0.0059	0.00017
PCB-106	--	--	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/107	--	--	--	0.000011	0.0000086	0.000015	0.00001	0.000024	0.0013	0.0086	0.000041
PCB-108/124	--	--	--	--	--	--	--	--	--	--	--
PCB-109	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-11	--	--	--	0.000022	0.000016	0.000025	0.000013	0.000019	0.000015	0.00026	0.000015
PCB-110	--	--	--	0.0002	0.00019	0.00026	0.0003	0.00064	0.043	0.087 J	0.0012
PCB-110/115	--	--	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--	--	--
PCB-111/115	--	--	--	0.000003 J	0.0000026 J	0.0000038 J	0.0000025 J	0.0000052	0.00014	0.001	0.000004 U
PCB-112	--	--	--	--	--	--	--	--	--	--	--
PCB-113	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.004	0.000002 U
PCB-114	--	--	--	0.0000038	0.0000028	0.0000045	0.0000045	0.0000049	0.00025	0.00014	0.0000046
PCB-118	--	--	--	--	--	--	--	--	--	--	--
PCB-118/106	--	--	--	0.00016	0.00012	0.0002	0.00018	0.00035	0.037	0.038	0.00062
PCB-119	--	--	--	0.0000032	0.0000033	0.0000047	0.0000014	0.0000027	0.0014	0.018	0.000053
PCB-12	--	--	--	0.000002 U	0.0000013 J	0.000003	0.000002 U	0.0000021	0.0000016 J	0.000052	0.0000036
PCB-12/13	--	--	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000024	0.0000059	0.00071	0.0052	0.000018
PCB-121	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-122	--	--	--	0.000003	0.0000022	0.000003	0.0000029	0.0000056	0.00014	0.00016	0.0000041
PCB-123	--	--	--	0.0000023	0.0000024	0.0000041	0.0000024	0.0000036	0.00007	0.00024	0.0000034
PCB-124	--	--	--	0.0000068	0.0000064	0.0000099	0.000014	0.000026	0.0036	0.0035	0.000062
PCB-126	--	--	--	0.0000014 J	0.0000015 J	0.0000018 J	0.0000015 J	0.000003	0.00024	0.00021	0.0000057
PCB-127	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.00006	0.000002 U
PCB-128/162	--	--	--	0.000046	0.000034	0.000055	0.000072	0.00014	0.025	0.02	0.00037
PCB-128/166	--	--	--	--	--	--	--	--	--	--	--
PCB-129	--	--	--	0.000015	0.00001	0.000017	0.000021	0.000042	0.0068	0.005	0.000095
PCB-129/138/163	--	--	--	--	--	--	--	--	--	--	--
PCB-13	--	--	--	0.0000045	0.000004	0.0000089	0.0000034	0.0000047	0.0000046	0.00017	0.0000035
PCB-130	--	--	--	0.000019	0.000015	0.000025	0.00005	0.000087	0.016	0.025 J	0.00026
PCB-131	--	--	--	--	--	--	--	--	--	--	--
PCB-131/133	--	--	--	0.0000076	0.0000066	0.0000092	0.000022	0.000036	0.0072	0.018	0.00015
PCB-132	--	--	--	--	--	--	--	--	--	--	--
PCB-132/161	--	--	--	0.00007	0.000065	0.000088	0.00025	0.0005	0.096	0.075 J	0.0014
PCB-133	--	--	--	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--	--	--	--
PCB-134/143	--	--	--	0.000013	0.000011	0.000018	0.000047	0.000081	0.015	0.018	0.00024
PCB-135	--	--	--	0.000027	0.000023	0.000037	0.00019	0.00032	0.059	0.094 J	0.0011
PCB-135/151	--	--	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	0.000028	0.00003	0.000035	0.00021	0.00042	0.068	0.093 J	0.0013
PCB-137	--	--	--	0.000015	0.000013	0.000016	0.000012	0.000031	0.0016	0.0028	0.000032
PCB-138/163/164	--	--	--	0.00022	0.00019	0.00027	0.00082	0.0015	0.38 J	0.27 J	0.0054
PCB-139/140	--	--	--	--	--	--	--	--	--	--	--
PCB-139/149	--	--	--	0.00016	0.00015	0.0002	0.0011	0.0019	0.38 J	0.33 J	0.0062

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T8-05	SEC-SD-TL-03	SEC-SD-TL-06	SW/SD300	SW/SD301	SW/SD302	SW/SD303	SW/SD304	SW/SD305	SW/SD318	SW/SD319
SAMPLE ID	SEC-SD-T8-05	SEC-SD-TL-03	SEC-SD-TL-06	SD300-20191206	SD301-20191206	SD302-20191206	SD303-20191206	SD304-20191206	SD305-20191205	SD318-20191205	SD319-20191205
SAMPLE DATE	20171213	20171213	20171213	20191206	20191206	20191206	20191206	20191206	20191205	20191205	20191205
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PCB-14	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000022	0.000002 U
PCB-140	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000049	0.000012	0.0011	0.0061	0.000002 U
PCB-141	--	--	--	0.00004	0.000036	0.000052	0.00024	0.00043	0.14 J	0.091 J	0.0018
PCB-142	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-143	--	--	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	0.0000095	0.0000099	0.000011	0.000062	0.00011	0.031	0.018	0.00036
PCB-145	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000056	0.000039	0.000002 U
PCB-146	--	--	--	--	--	--	--	--	--	--	--
PCB-146/165	--	--	--	0.000029	0.000025	0.000048	0.00014	0.00025	0.063	0.096 J	0.0009
PCB-147	--	--	--	0.000005	0.0000043	0.0000073	0.000019	0.000021	0.0011	0.02	0.000045
PCB-147/149	--	--	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0042	0.000002 U
PCB-15	--	--	--	0.000027	0.000026	0.000071	0.000024	0.00004	0.000059	0.0011	0.000048
PCB-150	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000041	0.0000039	0.00028	0.006	0.000011
PCB-151	--	--	--	0.000041	0.000041	0.000055	0.00042	0.00077	0.17 J	0.18 J	0.0029
PCB-152	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000012	0.0013	0.0000035
PCB-153	--	--	--	0.00018	0.00015	0.00025	0.0012	0.002	0.35	0.39 J	0.0077
PCB-153/168	--	--	--	--	--	--	--	--	--	--	--
PCB-154	--	--	--	0.0000024	0.0000024	0.0000036	0.000015	0.000028	0.0021	0.027 J	0.000056
PCB-155	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.00036	0.000003
PCB-156	--	--	--	0.000026	0.000018	0.000033	0.000043	0.000099	0.029	0.018	0.00032
PCB-156/157	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	0.0000074	0.0000051	0.0000082	0.0000062	0.000015	0.0017	0.0013	0.000024
PCB-158	--	--	--	--	--	--	--	--	--	--	--
PCB-158/160	--	--	--	0.000029	0.000022	0.000034	0.000082	0.00015	0.039	0.028	0.00047
PCB-159	--	--	--	0.0000015 J	0.0000015 J	0.0000028	0.000012	0.000023	0.0002	0.0046	0.00011
PCB-16	--	--	--	0.0000053	0.0000066	0.000017	0.0000055	0.000015	0.000021	0.00046	0.000014
PCB-160	--	--	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--	--	--
PCB-166	--	--	--	0.0000013 J	0.0000011 J	0.0000021	0.000002 U	0.0000029	0.000077	0.000048	0.0000029
PCB-167	--	--	--	0.000011	0.0000088	0.000014	0.00002	0.000043	0.011	0.0081	0.00014
PCB-168	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0013	0.000002 U
PCB-169	--	--	--	0.00000085 U	0.00000075 U	0.00000089 U	0.0000011 U	0.00000088 U	0.00000089 U	0.000014	0.00000072 U
PCB-17	--	--	--	0.0000085	0.0000079	0.00002	0.0000082	0.000025	0.000028	0.0014	0.000069
PCB-170	--	--	--	0.000042	0.000044	0.000071	0.00027	0.00065	0.24 J	0.19 J	0.0031
PCB-171	--	--	--	0.000014	0.000015	0.000023	0.000095	0.00021	0.073	0.064 J	0.00092
PCB-171/173	--	--	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	0.0000097	0.00001	0.000017	0.000059	0.00013	0.046	0.04 J	0.00063
PCB-173	--	--	--	0.0000016 J	0.0000018 J	0.0000026	0.000012	0.000021	0.0065	0.0051	0.000089
PCB-174	--	--	--	0.000046	0.000048	0.000073	0.00035	0.00081	0.27 J	0.23 J	0.0041
PCB-175	--	--	--	0.0000017 J	0.0000022	0.0000034	0.000016	0.000027	0.013	0.01	0.00015
PCB-176	--	--	--	0.000006	0.0000067	0.0000089	0.000055	0.00011	0.041	0.035 J	0.00054
PCB-177	--	--	--	0.00003	0.000032	0.000046	0.00021	0.00047	0.16 J	0.15 J	0.0023
PCB-178	--	--	--	0.0000095	0.000011	0.000017	0.000092	0.00018	0.057	0.073 J	0.00092
PCB-179	--	--	--	0.000019	0.00002	0.000029	0.00017	0.00038	0.13 J	0.12 J	0.0017
PCB-18	--	--	--	0.000016	0.0000096	0.000034	0.000017	0.000054	0.000058	0.0005	0.000037
PCB-18/30	--	--	--	--	--	--	--	--	--	--	--
PCB-180	--	--	--	0.000075	0.000084	0.00014	0.00054	0.0013	0.43 J	0.31 J	0.0066
PCB-180/193	--	--	--	--	--	--	--	--	--	--	--
PCB-181	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-182	--	--	--	--	--	--	--	--	--	--	--
PCB-182/187	--	--	--	0.000054	0.000058	0.000094	0.00042	0.00094	0.31 J	0.28 J	0.0047
PCB-183	--	--	--	0.000025	0.000028	0.000044	0.0002	0.00044	0.16 J	0.13 J	0.002
PCB-183/185	--	--	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	0.000002 U	0.000002 U	0.0000023	0.000002 U	0.000002 U	0.000054	0.00015	0.0000016 J
PCB-185	--	--	--	0.0000059	0.0000067	0.0000097	0.000044	0.0001	0.036	0.028 J	0.0005
PCB-186	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-187	--	--	--	--	--	--	--	--	--	--	--
PCB-188	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000061	0.0012	0.0000041
PCB-189	--	--	--	0.0000022	0.0000022	0.0000034	0.0000086	0.000021	0.0076	0.0058	0.000082
PCB-19	--	--	--	0.0000025	0.0000037	0.0000039	0.0000032	0.0000099	0.0000073	0.00026	0.000018
PCB-190	--	--	--	0.0000097	0.0000091	0.000014	0.000057	0.00015	0.056	0.042 J	0.00063
PCB-191	--	--	--	0.0000021	0.0000018 J	0.0000042	0.000012	0.000026	0.011	0.0089	0.00014
PCB-192	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-193	--	--	--	0.0000047	0.0000054	0.0000088	0.000034	0.000085	0.029	0.027 J	0.00043
PCB-194	--	--	--	0.000023	0.00002	0.000029	0.00011	0.00031	0.12 J	0.077 J	0.0012
PCB-195	--	--	--	0.0000087	0.0000083	0.000014	0.000054	0.00015	0.058	0.044 J	0.00073
PCB-196	--	--	--	--	--	--	--	--	--	--	--
PCB-196/203	--	--	--	0.000029	0.000026	0.000038	0.00013	0.00036	0.14	0.068 J	0.001
PCB-197	--	--	--	0.0000011 J	0.000002 U	0.0000015 J	0.0000051	0.000013	0.0052	0.0036	0.000057
PCB-197/200	--	--	--	--	--	--	--	--	--	--	--
PCB-198	--	--	--	0.0000021	0.0000016 J	0.0000024	0.0000093	0.00002	0.0056	0.0048	0.0001
PCB-198/199	--	--	--	--	--	--	--	--	--	--	--
PCB-199	--	--	--	0.00003	0.000029	0.000035	0.0001	0.00031	0.12 J	0.049 J	0.001
PCB-2	--	--	--	0.0000026	0.0000029	0.000006	0.0000026	0.0000033	0.000003	0.000074	0.000005
PCB-20/21/33	--	--	--	0.000011	0.000012	0.00003	0.000013	0.000023	0.000061	0.0016	0.000031
PCB-20/28	--	--	--	--	--	--	--	--	--	--	--
PCB-200	--	--	--	0.0000036	0.0000036	0.0000045	0.000018	0.000045	0.016	0.012	0.00023

LOCATION	SEC-SD-T8-05	SEC-SD-TL-03	SEC-SD-TL-06	SW/SD300	SW/SD301	SW/SD302	SW/SD303	SW/SD304	SW/SD305	SW/SD318	SW/SD319
SAMPLE ID	SEC-SD-T8-05	SEC-SD-TL-03	SEC-SD-TL-06	SD300-20191206	SD301-20191206	SD302-20191206	SD303-20191206	SD304-20191206	SD305-20191205	SD318-20191205	SD319-20191205
SAMPLE DATE	20171213	20171213	20171213	20191206	20191206	20191206	20191206	20191206	20191205	20191205	20191205
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PCB-201	--	--	--	0.000004	0.0000041	0.0000052	0.000017	0.000044	0.017	0.012	0.0002
PCB-202	--	--	--	0.0000084	0.0000067	0.0000088	0.000026	0.000065	0.02	0.017	0.00028
PCB-203	--	--	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-205	--	--	--	0.00000098 J	0.0000013 J	0.0000021	0.0000057	0.000016	0.0058	0.0043	0.00007
PCB-206	--	--	--	0.000044	0.000035	0.000041	0.000055	0.00011	0.018	0.014	0.00029
PCB-207	--	--	--	0.0000037	0.000004	0.0000041	0.0000074	0.000012	0.0033	0.0022	0.000046
PCB-208	--	--	--	0.000016	0.000014	0.000016	0.000021	0.000031	0.0035	0.0029	0.000071
PCB-209	--	--	--	0.000052	0.00007	0.000051	0.000051	0.000053	0.00037	0.00055	0.000052
PCB-21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	0.000013	0.00001	0.000023	0.000012	0.000023	0.000054	0.0015	0.000025
PCB-23	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-24	--	--	--	0.0000013 J	0.0000021	0.0000028	0.0000021	0.0000026	0.0000027	0.00012	0.0000057
PCB-25	--	--	--	0.000003	0.0000022	0.0000058	0.0000023	0.0000076	0.000014	0.0011	0.0000062
PCB-26	--	--	--	0.0000061	0.0000048	0.000013	0.0000053	0.000012	0.000025	0.003	0.000013
PCB-26/29	--	--	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	0.0000012 J	0.0000013 J	0.0000029	0.0000012 J	0.0000038	0.0000041	0.0001	0.0000052
PCB-28	--	--	--	0.000037	0.000032	0.000087	0.000034	0.000066	0.00015	0.0016	0.000066
PCB-29	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000005	0.000002 U
PCB-3	--	--	--	0.0000085	0.0000079	0.000021	0.000021	0.000013	0.00001	0.00029	0.000021
PCB-30	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-31	--	--	--	0.000027	0.000023	0.000063	0.000027	0.000053	0.00012	0.0014	0.000052
PCB-32	--	--	--	0.000008	0.0000096	0.000014	0.000009	0.000023	0.000026	0.00064	0.000022
PCB-34	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.00016	0.0000015 J
PCB-35	--	--	--	0.000002 U	0.000002 U	0.0000032	0.0000018 J	0.0000028	0.0000059	0.00039	0.0000029
PCB-36	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.00042	0.000002 U
PCB-37	--	--	--	0.000017	0.000014	0.000037	0.000014	0.000024	0.000067	0.00058	0.00003
PCB-38	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000015 J	0.000012	0.0015	0.0000078
PCB-39	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.00028	0.000002 U
PCB-4	--	--	--	0.0000056	0.0000041	0.000012	0.000005	0.000021	0.000014	0.000076	0.000013
PCB-40	--	--	--	0.0000053	0.000011	0.000014	0.000007	0.000011	0.000024	0.00032	0.000011
PCB-40/71	--	--	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--	--	--
PCB-41/64/71/72	--	--	--	0.000031	0.00005	0.000072	0.000034	0.000063	0.00019	0.011	0.0001
PCB-42	--	--	--	--	--	--	--	--	--	--	--
PCB-42/59	--	--	--	0.000011	0.000018	0.000028	0.000013	0.000022	0.000068	0.0013	0.000025
PCB-43	--	--	--	--	--	--	--	--	--	--	--
PCB-43/49	--	--	--	0.000029	0.000041	0.000074	0.000049	0.00018	0.00096	0.085 J	0.00058
PCB-44	--	--	--	0.000037	0.00005	0.000078	0.000038	0.000088	0.00022	0.0056	0.0001
PCB-44/47/65	--	--	--	--	--	--	--	--	--	--	--
PCB-45	--	--	--	0.0000061	0.000011	0.000013	0.0000077	0.000012	0.000018	0.00043	0.000014
PCB-45/51	--	--	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	0.0000027	0.0000055	0.0000049	0.0000034	0.0000062	0.000008	0.0017	0.000021
PCB-47	--	--	--	0.00001	0.000013	0.000023	0.000042	0.00006	0.00035	0.062 J	0.00031
PCB-48	--	--	--	--	--	--	--	--	--	--	--
PCB-48/75	--	--	--	0.0000044	0.0000066	0.000018	0.0000051	0.0000095	0.000052	0.00058	0.00001
PCB-49/69	--	--	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-50	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.00032	0.000003
PCB-50/53	--	--	--	--	--	--	--	--	--	--	--
PCB-51	--	--	--	0.0000018 J	0.0000031	0.0000047	0.000014	0.000014	0.00003	0.033 J	0.0002
PCB-52	--	--	--	--	--	--	--	--	--	--	--
PCB-52/69	--	--	--	0.000061	0.000076	0.000098	0.000061	0.00028	0.0012	0.059 J	0.0006
PCB-53	--	--	--	0.0000056	0.000012	0.000013	0.000013	0.000029	0.00004	0.04 J	0.00038
PCB-54	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.00000088 J	0.0000023	0.0000044	0.0037	0.000052
PCB-55	--	--	--	0.0000011 J	0.0000018 J	0.0000023	0.0000023	0.0000034	0.000066	0.0013	0.0000041
PCB-56	--	--	--	--	--	--	--	--	--	--	--
PCB-56/60	--	--	--	0.000027	0.00003	0.000061	0.000025	0.000046	0.0004	0.001	0.00005
PCB-57	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000017 J	0.000029	0.00033	0.0000038
PCB-58	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000057	0.000002 U	0.0000011 J
PCB-59/62/75	--	--	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	0.000005	0.0000061	0.000014	0.0000039	0.000011	0.0000096	0.00018	0.0000084
PCB-60	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70	--	--	--	0.000054	0.000046	0.0001	0.000048	0.00011	0.0013	0.006	0.00011
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--	--	--
PCB-62	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-63	--	--	--	0.0000016 J	0.0000024	0.0000036	0.0000019 J	0.0000033	0.000037	0.00028	0.0000038
PCB-64	--	--	--	--	--	--	--	--	--	--	--
PCB-65	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-66	--	--	--	--	--	--	--	--	--	--	--
PCB-66/76	--	--	--	0.000047	0.000049	0.000004 U	0.000047	0.00011	0.0023	0.0095	0.00016
PCB-67	--	--	--	0.0000012 J	0.0000016 J	0.0000034	0.0000015 J	0.0000028	0.000031	0.00049	0.0000027
PCB-68	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.00000097 J	0.0000016 J	0.000019	0.0026	0.0000094
PCB-7	--	--	--	0.0000018 J	0.0000018 J	0.0000039	0.0000017 J	0.0000024	0.0000026	0.000032	0.0000021
PCB-72	--	--	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000016 J	0.000002 U	0.000002 U	0.0022	0.000021
PCB-74	--	--	--	0.000019	0.000021	0.000042	0.000018	0.000034	0.00043	0.00074	0.000031
PCB-77	--	--	--	0.000007	0.0000084	0.000014	0.0000065	0.000014	0.00009	0.0003	0.000015
PCB-78	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000012 J	0.000024	0.00013	0.0000012 J
PCB-79	--	--	--	0.000002 U	0.0000012 J	0.000002	0.0000024	0.0000045	0.00017	0.0046	0.000011
PCB-8	--	--	--	0.00002	0.000024	0.000051	0.000016	0.000037	0.000034	0.00034	0.000035

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T8-05	SEC-SD-TL-03	SEC-SD-TL-06	SW/SD300	SW/SD301	SW/SD302	SW/SD303	SW/SD304	SW/SD305	SW/SD318	SW/SD319
SAMPLE ID	SEC-SD-T8-05	SEC-SD-TL-03	SEC-SD-TL-06	SD300-20191206	SD301-20191206	SD302-20191206	SD303-20191206	SD304-20191206	SD305-20191205	SD318-20191205	SD319-20191205
SAMPLE DATE	20171213	20171213	20171213	20191206	20191206	20191206	20191206	20191206	20191205	20191205	20191205
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PCB-80	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0024	0.0000046
PCB-81	--	--	--	0.0000022	0.0000024	0.0000037	0.000003	0.0000063	0.00035	0.00065	0.0000099
PCB-82	--	--	--	0.000024	0.000019	0.000029	0.000015	0.000036	0.00083	0.001	0.00003
PCB-83	--	--	--	--	--	--	--	--	--	--	--
PCB-83/112	--	--	--	0.0000084	0.0000083	0.000011	0.0000074	0.000017	0.00042	0.0029	0.00002
PCB-84	--	--	--	--	--	--	--	--	--	--	--
PCB-84/92	--	--	--	0.00007	0.000072	0.000089	0.00012	0.00026	0.018	0.084 J	0.00052
PCB-85/116	--	--	--	0.000028	0.000026	0.00004	0.000025	0.000052	0.0014	0.0034	0.000055
PCB-85/116/117	--	--	--	--	--	--	--	--	--	--	--
PCB-86	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--	--	--
PCB-87/117/125	--	--	--	0.000065	0.000056	0.000085	0.000075	0.00016	0.011	0.021	0.00026
PCB-88/91	--	--	--	0.000023	0.000024	0.000032	0.000062	0.000079	0.0028	0.07 J	0.00015
PCB-89	--	--	--	0.0000015 J	0.000002	0.0000032	0.000002 U	0.0000032	0.000063	0.00064	0.0000042
PCB-9	--	--	--	0.0000019 J	0.0000022	0.0000037	0.0000015 J	0.0000031	0.0000023	0.00003	0.0000036
PCB-90/101/113	--	--	--	--	--	--	--	--	--	--	--
PCB-92	--	--	--	--	--	--	--	--	--	--	--
PCB-93	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U
PCB-93/100	--	--	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000031	0.0000049	0.000029	0.0084	0.000012
PCB-95	--	--	--	0.00013	0.00014	0.00017	0.00029	0.0012	0.05	0.27 J	0.0022
PCB-96	--	--	--	0.000002 U	0.000002 U	0.0000017 J	0.000002	0.0000048	0.000017	0.0086	0.000041
PCB-97	--	--	--	0.000041	0.000038	0.000054	0.000038	0.000085	0.0033	0.006	0.000096
PCB-98/102	--	--	--	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U	0.000004 U
PCB-99	--	--	--	0.000059	0.000063	0.000087	0.00012	0.00022	0.01	0.068 J	0.00027
PENTACHLOROBIPHENYLS	--	--	--	0.0011 J	0.00099 J	0.0014 J	0.0019 J	0.0044 J	0.32 J	0.97 J	0.0083 J
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	7.2158E-07	8.1822E-07	1.2638E-06	7.8688E-07	1.6556E-06	6.7632E-05	0.00010369	2.3641E-06
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	7.22E-07	8.186E-07	1.2642E-06	7.8743E-07	1.656E-06	6.7632E-05	0.00010369	2.3645E-06
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	9.448E-09	1.0011E-08	1.3035E-08	1.0383E-08	2.1132E-08	1.6746E-06	1.6031E-06	3.867E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	9.469E-09	1.0029E-08	1.3057E-08	1.041E-08	2.1154E-08	1.6746E-06	1.6031E-06	3.8688E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	1.4525E-07	1.5439E-07	1.8723E-07	1.5595E-07	3.1279E-07	2.5858E-05	2.2829E-05	5.9679E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	1.58E-07	1.6564E-07	2.0058E-07	1.7245E-07	3.2599E-07	2.5871E-05	2.2829E-05	6.0759E-07
TETRACHLOROBIPHENYLS	--	--	--	0.00037 J	0.00046 J	0.00067 J	0.00045 J	0.0011 J	0.0084 J	0.34 J	0.0028 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	0.0001403	0.0001066	0.0001767	0.0001577	0.0003398	0.0588	0.040654	0.0007746
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	0.00315938	0.0030721	0.0046568	0.01073495	0.0222899	4.7694546	5.2033652	0.0772486
TOTAL PCB CONGENERS ZEROND	--	--	--	0.00329968	0.0031787	0.0048335	0.01089265	0.0226297	4.8282546	5.2440192	0.0780232
TOTAL PCB CONGENERS-NOAA	--	--	--	0.0013367	0.0012389	0.001834	0.004437	0.008958	1.980832	1.84899	0.03303
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	0.00335111	0.00322908	0.00488195	0.0109342	0.02266514	4.82828605	5.2440362	0.07805256
TOTAL PCB CONGENERS-NOAA X2	--	--	--	0.0026734	0.0024778	0.003668	0.008874	0.017916	3.961664	3.69798	0.06606
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	0.0026734	0.0024778	0.003672	0.008874	0.017916	3.961664	3.69798	0.06606
TRICHLOROBIPHENYLS	--	--	--	0.00016 J	0.00014 J	0.00036 J	0.00016 J	0.00035 J	0.00066 J	0.017 J	0.00041 J
DIOXINS/FURANS (NG/KG)											
1,2,3,4,6,7,8,9-OCDD	--	--	--	290	280	340	270	240	360	2400	220
1,2,3,4,6,7,8,9-OCDF	--	--	--	20	17	24	22	15	30	230	17
1,2,3,4,6,7,8-HPCDD	--	--	--	19	22	27	25	16	31	200	22
1,2,3,4,6,7,8-HPCDF	--	--	--	9.8	9.8	12	12	7.7	14	84	9.2
1,2,3,4,7,8,9-HPCDF	--	--	--	0.47 J	0.51 J	0.72 J	0.76 J	0.49 J	0.84 J	23	0.75 J
1,2,3,4,7,8-HXCDD	--	--	--	0.34 J	0.43 J	0.53 J	0.56 J	0.33 J	0.94 J	3 J	0.6 J
1,2,3,4,7,8-HXCDF	--	--	--	0.46 J	0.54 J	0.73 J	0.82 J	0.56 J	1.1 J	52	2.5 J
1,2,3,6,7,8-HXCDD	--	--	--	0.86 J	0.92 J	1.1 J	1.2 J	0.76 J	1.5 J	10	1.7 J
1,2,3,6,7,8-HXCDF	--	--	--	0.54 J	0.59 J	0.66 J	0.83 J	0.47 J	0.98 J	11	1 J
1,2,3,7,8,9-HXCDD	--	--	--	0.83 J	0.8 J	1.1 J	0.83 J	0.74 J	1.2 J	7.8	1 J
1,2,3,7,8,9-HXCDF	--	--	--	0.16 U	0.19 U	0.21 U	0.24 U	0.19 U	0.25 J	6.3	0.43 J
1,2,3,7,8-PECDD	--	--	--	0.26 J	0.24 J	0.3 J	0.31 J	0.22 U	0.52 J	2.5 J	0.58 J
1,2,3,7,8-PECDF	--	--	--	0.15 U	0.16 J	0.19 J	0.26 J	0.22 J	0.31 J	3.3 J	2.9 J
2,3,4,6,7,8-HXCDF	--	--	--	0.63 J	0.62 J	0.71 J	0.76 J	0.56 J	1.1 J	11	0.95 J
2,3,4,7,8-PECDF	--	--	--	0.28 J	0.46 J	0.41 J	0.56 J	0.44 J	0.89 J	17	3 J
2,3,7,8-TCDD	--	--	--	0.23 J	0.22 J	0.21 J	0.26 J	0.17 J	0.3 J	2.6	0.32 J
2,3,7,8-TCDF	--	--	--	0.23 J	0.42 J	0.28 J	0.44 J	0.75 J	0.54 J	7.6	12
TEQ DIOXINS (BIRD)	--	--	--	1.4243	1.7965	1.7671	2.1418	1.7625	3.0244	40.623	16.9702
TEQ DIOXINS (BIRD) HALFND	--	--	--	1.4398	1.806	1.7776	2.1538	1.882	3.0244	40.623	16.9702
TEQ DIOXINS (FISH)	--	--	--	1.1441	1.281	1.4261	1.6081	0.9009	2.3659	25.386	4.1052
TEQ DIOXINS (FISH) HALFND	--	--	--	1.15585	1.2905	1.4366	1.6201	1.0204	2.3659	25.386	4.1052
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	1.3487	1.447	1.6561	1.755	1.044	2.4327	25.028	4.2956
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	1.35895	1.4565	1.6666	1.767	1.1635	2.4327	25.028	4.2956
TOTAL HPCDD	--	--	--	41 J	53 J	55 J	53 J	36 J	66 J	400 J	51 J
TOTAL HPCDF	--	--	--	21 J	21 J	29 J	26 J	17 J	31 J	230 J	20 J
TOTAL HXCDD	--	--	--	8.9 J	9.4 J	14 J	11 J	8 J	15 J	75 J	16 J
TOTAL HXCDF	--	--	--	11 J	12 J	15 J	15 J	10 J	21 J	200 J	18 J
TOTAL PECDD	--	--	--	3 J	2.7 J	5.6 J	4.2 J	2.6 J	4.9 J	26 J	7.8 J
TOTAL PECDF	--	--	--	4.8 J	5.7 J	6.5 J	7.4 J	5.3 J	12 J	180 J	21 J
TOTAL TCDD	--	--	--	2.1 J	2.1 J	3.4 J	3.5 J	2.2 J	5.2 J	23 J	6.9 J
TOTAL TCDF	--	--	--	2.7 J	4 J	4.4 J	6.2 J	5.4 J	9.1 J	140 J	38 J
METALS (MG/KG)											
ALUMINUM	--	--	--	1880	1880	1230	2480	1430	1970	5250	1930
ANTIMONY	--	--	--	1.1 U	0.95 U	0.96 U	1.1 U	0.98 U	1.1 U	1.3 U	0.86 U
ARSENIC	--	--	--	1.8	1.5	1.3	2	3.6	4.4	7.6	2.9
BARIUM	--	--	--	29.7	27.8	21.5	35.2	36.8	36.7	122	47.5
BERYLLIUM	--	--	--	0.53 U	0.48 U	0.48 U	0.53 U	0.49 U	0.54 U	1.5	0.43 U
CADMIUM	--	--	--	0.53 UJ	0.48 U	0.058 J	0.1 J	0.49 U	0.086 J	0.94	0.12 J
CALCIUM	--	--	--	2850	2090	1580	1400	949	1730	38000	3750

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-T8-05	SEC-SD-TL-03	SEC-SD-TL-06	SW/SD300	SW/SD301	SW/SD302	SW/SD303	SW/SD304	SW/SD305	SW/SD318	SW/SD319
SAMPLE ID	SEC-SD-T8-05	SEC-SD-TL-03	SEC-SD-TL-06	SD300-20191206	SD301-20191206	SD302-20191206	SD303-20191206	SD304-20191206	SD305-20191205	SD318-20191205	SD319-20191205
SAMPLE DATE	20171213	20171213	20171213	20191206	20191206	20191206	20191206	20191206	20191205	20191205	20191205
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek (Upstream)	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
CHROMIUM	--	--	--	4	4.6	2.8	7.7	8.6	8.6	28.1	4
COBALT	--	--	--	4.1	3.3	2.5	6.3	4.2	4	18.1	4.3
COPPER	--	--	--	6.3	5	5.8	18.8	6.5	14	62.4	9.3
CYANIDE	--	--	--	0.73 U	0.62 U	0.64 U	0.73 U	0.66 U	0.72 U	0.88 U	0.59 U
IRON	--	--	--	9870	15900	6180	10600	8360	15300	15800	10500
LEAD	--	--	--	13.3	8.3	9.4	19.3	13.4	60.7	110	11.3
MAGNESIUM	--	--	--	764	763	376 J	620	355 J	587	1300	1740
MANGANESE	--	--	--	234	216	163	300	181	166	208	181
MERCURY	--	--	--	0.13 U	0.12 U	0.13 U	0.13 U	0.13 U	0.14 U	0.36	0.11 U
NICKEL	--	--	--	6.3	4.8	3.8	8.5	5.8	7.1	32.9	7.4
POTASSIUM	--	--	--	247 J	284 J	176 J	403 J	256 J	303 J	424 J	335 J
SELENIUM	--	--	--	2.7 U	2.4 U	2.4 U	2.6 U	2.4 U	2.7 U	0.67 J	2.1 U
SILVER	--	--	--	0.53 U	0.13 J	0.13 J	0.53 U	0.49 U	0.54 U	1.8	0.43 U
SODIUM	--	--	--	48.6 J	458 UJ	454 UJ	547 UJ	471 UJ	527 UJ	652 UJ	444 UJ
THALLIUM	--	--	--	0.53 U	0.48 U	0.48 U	0.53 U	0.49 U	0.54 U	0.63 U	0.43 U
VANADIUM	--	--	--	4.1	3.1	2.4	4.1	6.9	11.6	6	3.4
ZINC	--	--	--	72.3	57.3	44.4	90.4	70.9	81.6	169	68.8
MISCELLANEOUS (%)											
TOTAL SOLIDS	--	--	--	--	--	71	--	80	--	--	--
MISCELLANEOUS (MG/KG)											
TOTAL ORGANIC CARBON	--	--	--	--	--	11900	--	13000	--	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD320	SW/SD321	SW/SD322	SW/SD323	SW/SD324	SW/SD325	SW/SD326	SW/SD327	SW/SD327	SW/SD328	SW/SD329
SAMPLE ID	SD320-20191205	SD321-20191204	SD322-20191204	SD323-20191204	SD324-20191204	SD325-20191204	SD326-20191204	SD327-20191205	SD327-20191205-D	SD328-20191203	SD329-20191203
SAMPLE DATE	20191205	20191204	20191204	20191204	20191204	20191204	20191204	20191205	20191205	20191203	20191203
DUPLICATE									SD327-20191205		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
VOLATILES (MG/KG)											
1,1,1-TRICHLOROETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
1,1,2,2-TETRACHLOROETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
1,1,2-TRICHLOROETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
1,1-DICHLOROETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
1,1-DICHLOROETHENE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
1,2,3-TRICHLOROBENZENE	0.0061 U	0.0059 U	0.006 R	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
1,2,4-TRICHLOROBENZENE	0.0061 U	0.0059 U	0.006 R	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
1,2-DIBROMO-3-CHLOROPROPANE	0.0061 U	0.0059 U	0.006 R	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
1,2-DIBROMOETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
1,2-DICHLOROBENZENE	0.0061 U	0.0059 U	0.006 R	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
1,2-DICHLOROETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
1,2-DICHLOROPROPANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
1,3-DICHLOROBENZENE	0.0061 U	0.0059 U	0.006 R	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
1,4-DICHLOROBENZENE	0.0061 U	0.0059 U	0.006 R	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
2-BUTANONE	0.012 U	0.0059 J	0.012 UJ	0.015	0.014 R	0.012 U	0.02	0.012	0.011	0.011 U	0.023
2-HEXANONE	0.012 U	0.012 U	0.012 UJ	0.013 U	0.014 R	0.012 U	0.014 UJ	0.012 U	0.01 U	0.011 U	0.014 U
4-METHYL-2-PENTANONE	0.012 U	0.012 U	0.012 UJ	0.013 U	0.014 R	0.012 U	0.014 UJ	0.012 U	0.01 U	0.011 U	0.014 U
ACETONE	0.015 U	0.022 U	0.039 J+	0.047	0.17 J+	0.018 U	0.061	0.038	0.034	0.011 U	0.063
BENZENE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
BROMOCHLOROMETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
BROMODICHLOROMETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
BROMOFORM	0.0061 U	0.0059 U	0.006 R	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
BROMOMETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
CARBON DISULFIDE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0025 J
CARBON TETRACHLORIDE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
CHLOROBENZENE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
CHLORODIBROMOMETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
CHLOROETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
CHLOROFORM	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
CHLOROMETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
CIS-1,2-DICHLOROETHENE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
CIS-1,3-DICHLOROPROPENE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
CYCLOHEXANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
DICHLORODIFLUOROMETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
ETHYLBENZENE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
ISOPROPYLBENZENE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
M+P-XYLENES	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
METHYL ACETATE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
METHYL CYCLOHEXANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
METHYL TERT-BUTYL ETHER	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
METHYLENE CHLORIDE	0.0061 U	0.0059 U	0.0069 U	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
O-XYLENE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
STYRENE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
TETRACHLOROETHENE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
TOLUENE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0041 J	0.0059 U	0.0052 U	0.0055 U	0.013
TRANS-1,2-DICHLOROETHENE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
TRANS-1,3-DICHLOROPROPENE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
TRICHLOROETHENE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 UJ	0.0059 U	0.0052 U	0.0055 U	0.0069 U
TRICHLOROFLUOROMETHANE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
VINYL CHLORIDE	0.0061 U	0.0059 U	0.006 UJ	0.0065 U	0.0071 R	0.0059 U	0.0069 U	0.0059 U	0.0052 U	0.0055 U	0.0069 U
SEMIVOLATILES (MG/KG)											
1,1-BIPHENYL	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
1,2,4,5-TETRACHLOROBENZENE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
1,4-DIOXANE	0.085 U	0.086 U	0.09 U	0.098 UJ	0.1 U	0.084 U	0.087 U	0.087 U	0.089 U	0.081 U	0.099 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.42 U	0.42 U	0.44 U	0.48 U	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
2,3,4,6-TETRACHLOROPHENOL	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
2,4,5-TRICHLOROPHENOL	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
2,4,6-TRICHLOROPHENOL	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
2,4-DICHLOROPHENOL	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
2,4-DIMETHYLPHENOL	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
2,4-DINITROPHENOL	0.42 U	0.42 U	0.44 U	0.48 R	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
2,4-DINITROTOLUENE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
2,6-DINITROTOLUENE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
2-CHLORONAPHTHALENE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
2-CHLOROPHENOL	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
2-METHYLNAPHTHALENE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
2-METHYLPHENOL	0.42 U	0.42 U	0.44 U	0.48 U	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
2-NITROANILINE	0.21 U	0.22 U	0.23 U	0.25 R	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
2-NITROPHENOL	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
3&4-METHYLPHENOL	0.42 U	0.42 U	0.11 J	0.48 U	0.27 J	0.42 U	0.48	0.43 U	0.44 U	0.4 U	0.1 J
3,3'-DICHLOROBENZIDINE	0.42 U	0.42 U	0.44 U	0.48 U	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
3-NITROANILINE	0.42 U	0.42 U	0.44 U	0.48 R	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
4,6-DINITRO-2-METHYLPHENOL	0.42 U	0.42 U	0.44 U	0.48 R	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
4-BROMOPHENYL PHENYL ETHER	0.21 U	0.22 U	0.23 U	0.25 UJ	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
4-CHLORO-3-METHYLPHENOL	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
4-CHLOROANILINE	0.42 U	0.42 U	0.44 U	0.48 U	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
4-CHLOROPHENYL PHENYL ETHER	0.21 U	0.22 U	0.23 U	0.25 UJ	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
4-NITROANILINE	0.42 U	0.42 U	0.44 U	0.48 R	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
4-NITROPHENOL	0.42 U	0.42 U	0.44 U	0.48 R	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD320	SW/SD321	SW/SD322	SW/SD323	SW/SD324	SW/SD325	SW/SD326	SW/SD327	SW/SD327	SW/SD328	SW/SD329
SAMPLE ID	SD320-20191205	SD321-20191204	SD322-20191204	SD323-20191204	SD324-20191204	SD325-20191204	SD326-20191204	SD327-20191205	SD327-20191205-D	SD328-20191203	SD329-20191203
SAMPLE DATE	20191205	20191204	20191204	20191204	20191204	20191204	20191204	20191205	20191205	20191203	20191203
DUPLICATE									SD327-20191205		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ACENAPHTHENE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.24	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
ACENAPHTHYLENE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
ACETOPHENONE	0.42 U	0.42 U	0.057 J	0.082 J	0.059 J	0.047 J	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
ANTHRACENE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.82	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
ATRAZINE	0.42 U	0.42 U	0.44 U	0.48 U	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
BAP EQUIVALENT-HALFND	0.207428	0.218997	0.25857	0.25 U	0.35391	1.6045	0.28269	0.22 U	0.23 U	0.173497	0.25 U
BAP EQUIVALENT-POS	0.101378	0.107897	0.14242	0.25 U	0.22391	1.6045	0.17269	0.22 U	0.23 U	0.056947	0.25 U
BENZALDEHYDE	0.42 U	0.42 U	0.44 U	0.48 U	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
BENZO(A)ANTHRACENE	0.063 J	0.089 J	0.1 J	0.25 U	0.17 J	1.4	0.14 J	0.22 U	0.23 U	0.044 J	0.25 U
BENZO(A)PYRENE	0.081 J	0.083 J	0.11 J	0.25 U	0.17 J	1.1	0.13 J	0.22 U	0.23 U	0.046 J	0.25 U
BENZO(B)FLUORANTHENE	0.092 J	0.11 J	0.16 J	0.25 U	0.26	1.4	0.2 J	0.22 U	0.23 U	0.065 J	0.25 U
BENZO(G,H,I)PERYLENE	0.091 J	0.059 J	0.085 J	0.25 U	0.12 J	0.67	0.098 J	0.22 U	0.23 U	0.21 U	0.25 U
BENZO(K)FLUORANTHENE	0.21 U	0.22 U	0.23 U	0.25 U	0.071 J	0.43	0.054 J	0.22 U	0.23 U	0.21 U	0.25 U
BIS(2-CHLOROETHOXY)METHANE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
BIS(2-CHLOROETHYL)ETHER	0.42 U	0.42 U	0.44 U	0.48 U	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.14 J	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
BUTYL BENZYL PHTHALATE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
CAPROLACTAM	0.42 U	0.42 U	0.44 U	0.48 U	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
CARBAZOLE	0.42 U	0.42 U	0.44 U	0.48 UJ	0.5 U	0.16 J	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
CHRYSENE	0.078 J	0.097 J	0.12 J	0.25 U	0.2 J	1.2	0.15 J	0.22 U	0.23 U	0.047 J	0.25 U
DIBENZO(A,H)ANTHRACENE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.16 J	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
DIBENZOFURAN	0.21 U	0.22 U	0.23 U	0.25 UJ	0.26 U	0.16 J	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
DIETHYL PHTHALATE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
DIMETHYL PHTHALATE	0.18 J	0.08 J	0.23	0.058 J	0.21 J	0.15 J	0.13 J	0.29	0.17 J	0.12 J	0.13 J
DI-N-BUTYL PHTHALATE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
DI-N-OCTYL PHTHALATE	0.42 UJ	0.42 U	0.44 UJ	0.48 UJ	0.5 UJ	0.42 UJ	0.43 UJ	0.43 U	0.44 U	0.4 UJ	0.49 UJ
FLUORANTHENE	0.11 J	0.24 J	0.25 J	0.48 U	0.42 J	3.1	0.3 J	0.43 U	0.44 U	0.1 J	0.057 J
FLUORENE	0.21 U	0.22 U	0.23 U	0.25 UJ	0.26 U	0.35	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
HEXACHLOROBENZENE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
HEXACHLOROBUTADIENE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
HEXACHLOROCYCLOPENTADIENE	0.42 U	0.42 U	0.44 U	0.48 U	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
HEXACHLOROETHANE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
HIGH MOLECULAR WEIGHT PAHS	0.583	0.677	0.878	0 U	1.491	10.65	1.152	0 U	0 U	0.296	0.054
INDENO(1,2,3-CD)PYRENE	0.048 J	0.049 J	0.063 J	0.25 U	0.1 J	0.59	0.08 J	0.22 U	0.23 U	0.21 U	0.25 U
ISOPHORONE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
LOW MOLECULAR WEIGHT PAHS	0.166	0.36	0.36	0 U	0.6	7.31	0.393	0 U	0 U	0.146	0.057
NAPHTHALENE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
NITROBENZENE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
N-NITROSO-DI-N-PROPYLAMINE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
N-NITROSODIPHENYLAMINE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 U	0.22 U	0.23 U	0.21 U	0.25 U
PENTACHLOROPHENOL	0.42 U	0.42 U	0.44 U	0.48 U	0.5 U	0.42 U	0.43 U	0.43 U	0.44 U	0.4 U	0.49 U
PHENANTHRENE	0.056 J	0.12 J	0.11 J	0.25 U	0.18 J	2.8	0.093 J	0.22 U	0.23 U	0.046 J	0.25 U
PHENOL	0.42 U	0.42 U	0.075 J	0.48 U	0.051 J	0.42 U	0.066 J	0.046 J	0.44 U	0.4 U	0.49 U
PYRENE	0.13 J	0.19 J	0.24	0.25 U	0.4	3.7	0.3	0.22 U	0.23 U	0.094 J	0.054 J
TOTAL PAHS	0.749	1.037	1.238	0 U	2.091	17.96	1.545	0 U	0 U	0.442	0.111
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K											
2-METHYLNAPHTHALENE	0.0051	0.0021 J	0.007	0.0048 U	0.0067	--	0.0033 J	0.0043 U	0.0044 U	0.0017 J	0.0014 J
ACENAPHTHENE	0.0016 J	0.0011 J	0.0035 J	0.0048 U	0.0051	--	0.0017 J	0.0043 U	0.0044 U	0.0012 J	0.0049 U
ACENAPHTHYLENE	0.0029 J	0.014	0.0061	0.0048 U	0.0074	--	0.0032 J	0.0043 U	0.0044 U	0.003 J	0.002 J
ANTHRACENE	0.008	0.02	0.019	0.0048 U	0.029	--	0.015	0.0043 U	0.0044 U	0.0076	0.0042 J
BAP EQUIVALENT-HALFND	0.107536	0.094415	0.15022	0.0048 U	0.20386	--	0.17971	0.0043 U	0.0044 U	0.066778	0.038949
BAP EQUIVALENT-POS	0.107536	0.094415	0.15022	0.0048 U	0.20386	--	0.17971	0.0043 U	0.0044 U	0.066778	0.038949
BENZO(A)ANTHRACENE	0.055	0.064	0.1	0.0048 U	0.14	--	0.13	0.0043 U	0.0044 U	0.043	0.026
BENZO(A)PYRENE	0.074	0.063	0.1	0.0048 U	0.13	--	0.12	0.0043 U	0.0044 U	0.045	0.026
BENZO(B)FLUORANTHENE	0.081	0.085	0.13	0.0048 U	0.17	--	0.16	0.0043 U	0.0044 U	0.064	0.038
BENZO(G,H,I)PERYLENE	0.087	0.046	0.087	0.0048 U	0.11	--	0.093	0.0043 U	0.0044 U	0.033	0.019
BENZO(K)FLUORANTHENE	0.027	0.034	0.041	0.0048 U	0.071	--	0.057	0.0043 U	0.0044 U	0.023	0.012
CHRYSENE	0.066	0.075	0.11	0.0048 U	0.15	--	0.14	0.0043 U	0.0044 U	0.048	0.029
DIBENZO(A,H)ANTHRACENE	0.015	0.012	0.02	0.0048 U	0.033	--	0.022	0.0043 U	0.0044 U	0.008	0.0048 J
FLUORANTHENE	0.095	0.17	0.21	0.0048 U	0.27	--	0.25	0.0043 U	0.0044 U	0.091	0.054
FLUORENE	0.0029 J	0.0045	0.0073	0.0048 U	0.009	--	0.0026 J	0.0043 U	0.0044 U	0.0032 J	0.0014 J
HIGH MOLECULAR WEIGHT PAHS	0.571	0.56	0.895	0 U	1.204	--	1.082	0 U	0 U	0.392	0.2228
INDENO(1,2,3-CD)PYRENE	0.046	0.041	0.067	0.0048 U	0.09	--	0.08	0.0043 U	0.0044 U	0.028	0.016
LOW MOLECULAR WEIGHT PAHS	0.1623	0.3093	0.3627	0 U	0.4688	--	0.3612	0 U	0 U	0.1555	0.0844
NAPHTHALENE	0.0039 J	0.0027 J	0.0068	0.0048 U	0.0083	--	0.0027 J	0.0043 U	0.0044 U	0.0015 J	0.0018 J
PENTACHLOROPHENOL	0.0085 U	0.0086 U	0.009 U	0.0098 U	0.01 U	--	0.0087 U	0.0087 U	0.0089 U	0.0081 U	0.0099 U
PHENANTHRENE	0.048	0.097	0.11	0.0048 U	0.14	--	0.086	0.0043 U	0.0044 U	0.048	0.021
PYRENE	0.12	0.14	0.24	0.0048 U	0.31	--	0.28	0.0043 U	0.0044 U	0.1	0.052
TOTAL PAHS	0.066	0.075	0.11	0.0048	0.15	--	0.14	0.0043	0.0044	0.048	0.029
PESTICIDES (MG/KG)											
4,4'-DDD	0.0042 U	0.0042 U	0.0044 J	0.0048 U	0.005 U	0.0041 U	0.0043 UJ	0.0043 U	0.0044 U	0.004 U	0.00058 J
4,4'-DDE	0.0042 U	0.0042 U	0.0044 U	0.0048 U	0.005 U	0.0041 U	0.0043 UJ	0.0043 U	0.0044 U	0.004 U	0.0049 U
4,4'-DDT	0.0042 U	0.0042 U	0.0014 J	0.0048 U	0.005 U	0.0041 U	0.0043 UJ	0.0043 U	0.0044 U	0.004 U	0.0049 U
ALDRIN	0.0021 U	0.0022 U	0.0023 U	0.0025 U	0.0026 U	0.0021 U	0.0022 UJ	0.0022 U	0.0023 U	0.0021 U	0.0025 U
ALPHA-BHC	0.0021 U	0.0022 U	0.0023 U	0.0025 U	0.0026 U	0.0021 U	0.0022 UJ	0.0022 U	0.0023 U	0.0021 U	0.0025 U
ALPHA-CHLORDANE	0.0021 U	0.0022 U	0.0053 J	0.0025 U	0.0026 U	0.0021 U	0.0022 UJ	0.0022 U	0.0023 U	0.00043 J	0.00055 J
BETA-BHC	0.0021 U	0.0022 U	0.0023 U	0.0025 U	0.0026 U	0.0021 U	0.0022 UJ	0.0022 U	0.0023 U	0.0021 U	0.0025 U
DELTA-BHC	0.0021 U	0.0022 U	0.0023 U	0.0025 U	0.0026 U	0.0021 U	0.0022 UJ	0.0022 U	0.0023 U	0.0021 U	0.0025 U
DIELDRIN	0.0042 U	0.0042 U	0.0044 U	0.0048 U	0.005 U	0.0041 U	0.0043 UJ	0.0043 U	0.0044 U	0.004 U	0.00033 J
ENDOSULFAN I	0.0021 U	0.0022 U	0.0023 U	0.0025 U	0.0026 U	0.0021 U	0.0022 UJ	0.0022 U	0.0023 U	0.0021 U	0.0025 U
ENDOSULFAN II	0.0042 U	0.0042 U	0.0044 U	0.0048 U	0.005 U	0.0041 U	0.0043 UJ	0.0043 U	0.0044 U	0.004 U	0.0049 U

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD320	SW/SD321	SW/SD322	SW/SD323	SW/SD324	SW/SD325	SW/SD326	SW/SD327	SW/SD327	SW/SD328	SW/SD329
SAMPLE ID	SD320-20191205	SD321-20191204	SD322-20191204	SD323-20191204	SD324-20191204	SD325-20191204	SD326-20191204	SD327-20191205	SD327-20191205-D	SD328-20191203	SD329-20191203
SAMPLE DATE	20191205	20191204	20191204	20191204	20191204	20191204	20191204	20191205	20191205	20191203	20191203
DUPLICATE									SD327-20191205		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ENDOSULFAN SULFATE	0.0042 U	0.0042 U	0.0015 J	0.0048 U	0.005 U	0.0041 U	0.0043 UJ	0.0043 U	0.0044 U	0.004 U	0.00057 J
ENDRIN	0.0042 U	0.0042 U	0.0044 U	0.0048 U	0.005 U	0.0041 U	0.0043 UJ	0.0043 U	0.0044 U	0.004 U	0.0049 U
ENDRIN ALDEHYDE	0.0042 U	0.0042 U	0.0044 U	0.0048 U	0.005 U	0.0041 U	0.0043 UJ	0.0043 U	0.0044 U	0.004 U	0.0049 U
ENDRIN KETONE	0.0042 U	0.0042 U	0.0044 U	0.0048 U	0.005 U	0.0041 U	0.0043 UJ	0.0043 U	0.0044 U	0.004 U	0.0049 U
GAMMA-BHC (LINDANE)	0.0021 U	0.00084 J	0.0027	0.0025 U	0.00037 J	0.0021 U	0.00048 J	0.0022 U	0.0023 U	0.00023 J	0.0025 U
GAMMA-CHLORDANE	0.0021 U	0.0022 U	0.012 R	0.0025 U	0.0026 U	0.0021 U	0.0022 UJ	0.0022 U	0.0023 U	0.00061 J	0.00065 J
HEPTACHLOR	0.0021 U	0.0022 U	0.0023 U	0.0025 U	0.0026 U	0.0021 U	0.0022 UJ	0.0022 U	0.0023 U	0.0021 U	0.0025 U
HEPTACHLOR EPOXIDE	0.0021 U	0.0022 U	0.0023 U	0.0025 U	0.0026 U	0.0021 U	0.0022 UJ	0.0022 U	0.0023 U	0.0021 U	0.0025 U
METHOXYCHLOR	0.022 U	0.022 U	0.023 U	0.00036 J	0.026 U	0.021 U	0.022 UJ	0.022 U	0.023 U	0.021 U	0.025 U
TOXAPHENE	0.21 U	0.22 U	0.23 U	0.25 U	0.26 U	0.21 U	0.22 UJ	0.22 U	0.23 U	0.21 U	0.25 U
PCBS (MG/KG)											
AROCLOR-1016	0.042 U	0.042 U	0.044 U	0.048 U	0.05 U	0.042 U	0.043 U	0.043 U	0.044 U	0.04 U	0.049 U
AROCLOR-1221	0.042 U	0.042 U	0.044 U	0.048 U	0.05 U	0.042 U	0.043 U	0.043 U	0.044 U	0.04 U	0.049 U
AROCLOR-1232	0.042 U	0.042 U	0.044 U	0.048 U	0.05 U	0.042 U	0.043 U	0.043 U	0.044 U	0.04 U	0.049 U
AROCLOR-1242	0.042 U	0.042 U	0.044 U	0.048 U	0.05 U	0.042 U	0.043 U	0.043 U	0.044 U	0.04 U	0.049 U
AROCLOR-1248	0.042 U	0.042 U	0.044 U	0.048 U	0.05 U	0.042 U	0.043 U	0.043 U	0.044 U	0.04 U	0.049 U
AROCLOR-1254	0.042 U	0.042 U	0.044 U	0.048 U	0.05 U	0.042 U	0.043 U	0.043 U	0.044 U	0.04 U	0.049 U
AROCLOR-1260	0.084 J	0.062 J	0.052	0.048 U	0.059	0.031 J	0.033 J	0.043 U	0.044 U	0.046	0.012 J
AROCLOR-1262	0.042 U	0.042 U	0.044 U	0.048 U	0.05 U	0.042 U	0.043 U	0.043 U	0.044 U	0.04 U	0.049 U
AROCLOR-1268	0.042 U	0.042 U	0.044 U	0.048 U	0.05 U	0.042 U	0.043 U	0.043 U	0.044 U	0.04 U	0.049 U
TOTAL AROCLOR	0.084	0.062	0.052	0 U	0.059	0.031	0.033	0 U	0 U	0.046	0.012
TOTAL AROCLOR HALFND	0.252	0.23	0.228	0.216	0.259	0.199	0.205	0.1935	0.198	0.206	0.208
PCB CONGENERS (MG/KG)											
DICHLOROBIPHENYLS	0.00029 J	0.00046 J	0.00054 J	0.000096 J	0.00045 J	0.0003 J	0.00029 J	0.0000015 J	0 UJ	0.00081 J	0.00055 J
HEPTACHLOROBIPHENYLS	0.058 J	0.097 J	0.062 J	0.01 J	0.052 J	0.048 J	0.056 J	0.00046 J	0.00045 J	0.2 J	0.1 J
HEXACHLOROBIPHENYLS	0.069 J	0.11 J	0.088 J	0.015 J	0.069 J	0.086 J	0.07 J	0.0007 J	0.00049 J	0.12 J	0.13 J
MONOCHLOROBIPHENYLS	0.000081 J	0.00011 J	0.000088 J	0.000032 J	0.00012 J	0.000085 J	0.00005 J	0.0000015 J	0.000001 J	0.000058 J	0.00014 J
NONACHLOROBIPHENYLS	0.00087 J	0.0026 J	0.001 J	0.00014 J	0.00074 J	0.0005 J	0.00055 J	0.0000062 J	0.000008 J	0.0046 J	0.0017 J
OCTACHLOROBIPHENYLS	0.01 J	0.019 J	0.013 J	0.0021 J	0.011 J	0.0088 J	0.01 J	0.000088 J	0.000087 J	0.072 J	0.023 J
PCB-1	0.000026	0.000048	0.000041 J	0.000011	0.000047 J	0.000043 J	0.000022	0.00000091 J	0.000001 J	0.000027 J	0.000052 J
PCB-10	0.000002	0.0000054	0.000002 U	0.000002 U	0.0000039	0.0000026	0.0000021	0.000002 U	0.000002 U	0.0000025	0.0000041
PCB-100	0.00013	0.00028	--	--	--	--	--	0.0000055	0.0000013 J	--	--
PCB-101/90	0.0057	0.0088	--	--	--	--	--	0.000071	0.000035	--	--
PCB-103	0.00023	0.00047	0.00035	0.000019	0.00011	0.00021	0.000078	0.000011	0.0000026	0.00004	0.00017
PCB-104	0.000025	0.000061	0.000065	0.0000028	0.000012	0.000018	0.0000091	0.0000025	0.000002 U	0.0000043	0.000018
PCB-105	0.00038	0.00053	0.00043	0.00007	0.00032	0.0014	0.00024	0.000004	0.0000028	0.00041	0.00073
PCB-106	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	--	--	0.0000019 U	0.0000023 U
PCB-107	--	--	0.00017	0.000016	0.000079	0.0003	0.000059	--	--	0.000083	0.00015
PCB-108/107	0.000085	0.0002	--	--	--	--	--	0.0000019 J	0.00000083 J	--	--
PCB-108/124	--	--	0.00005	0.0000082	0.000033	0.00016	0.000028	--	--	0.000046	0.000083
PCB-109	0.000002 U	0.000002 U	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-11	0.000019	0.000025	0.000041	0.000012	0.000035	0.000024	0.000026	0.000002 U	0.000002 U	0.0005	0.000076
PCB-110	0.0027	0.0039	--	--	--	--	--	0.000034	0.000018	--	--
PCB-110/115	--	--	0.004	0.00062	0.0026	0.0062	0.0022	--	--	0.0026	0.0049
PCB-111	--	--	0.000012	0.00000075 J	0.0000034	0.0000098	0.0000028	--	--	0.0000019 U	0.0000023 U
PCB-111/115	0.000017	0.000021	--	--	--	--	--	0.000004 U	0.000004 U	--	--
PCB-112	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	--	--	0.0000019 U	0.0000023 U
PCB-113	0.000002 U	0.000002 U	--	--	--	--	--	0.0000019 J	0.000002 U	--	--
PCB-114	0.0000081	0.000017	0.000025	0.0000041	0.000016	0.000087	0.000014	0.00000083 U	0.00000083 U	0.000023	0.000039
PCB-118	--	--	0.0018	0.00025	0.0012	0.0039	0.00097	--	--	0.0016	0.0026
PCB-118/106	0.0014	0.002	--	--	--	--	--	0.000014	0.00001	--	--
PCB-119	0.00011	0.00023	--	--	--	--	--	0.0000033	0.00000098 J	--	--
PCB-12	0.0000028	0.0000067	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-12/13	--	--	0.000019	0.0000052	0.000026	0.000015	0.000016	--	--	0.000026	0.00004
PCB-120	0.000027	0.000002 U	0.00004	0.0000032	0.000017	0.000082	0.000015	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-121	0.000002 U	0.000002 U	0.00001	0.00000099 J	0.0000053	0.000014	0.0000029	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-122	0.00001	0.000031	0.000002 U	0.0000021	0.0000059	0.000032	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000021
PCB-123	0.000011	0.000065	0.0000092	0.0000019 J	0.0000087	0.000042 Z	0.0000064 Z	0.0000005 U	0.0000005 U	0.0000074	0.000027
PCB-124	0.00012	0.00014	--	--	--	--	--	0.0000012 J	0.0000011 J	--	--
PCB-126	0.000014	0.000021	0.0000018 U	0.00000097 U	0.0000022 U	0.0000015 U	0.0000014 U	0.00000067 U	0.00000067 U	0.0000016 U	0.000088
PCB-127	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000063	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-128/162	0.0007	0.0012	--	--	--	--	--	0.0000078	0.0000054	--	--
PCB-128/166	--	--	0.00095	0.00016	0.00075	0.0012	0.00076	--	--	0.0014	0.0022
PCB-129	0.0002	0.00036	--	--	--	--	--	0.0000023	0.000002	--	--
PCB-129/138/163	--	--	0.02	0.0032	0.014	0.018	0.015	--	--	0.033	0.03
PCB-13	0.000012	0.000016	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-130	0.00055	0.00092	0.00062	0.000095	0.00044	0.00081	0.00046	0.0000047	0.0000049	0.00084	0.001
PCB-131	--	--	0.000098	0.000016	0.000073	0.00012	0.000078	--	--	0.0000019 U	0.00015
PCB-131/133	0.00025	0.00057	--	--	--	--	--	0.0000048	0.0000028 J	--	--
PCB-132	--	--	0.0052	0.0008	0.0038	0.0062	0.0042	--	--	0.0065	0.0074
PCB-132/161	0.0032	0.0048	--	--	--	--	--	0.000035	0.000022	--	--
PCB-133	--	--	0.00035	0.000042	0.00019	0.00053	0.00018	--	--	0.00013	0.00042
PCB-134	--	--	0.00088	0.00014	0.00068	0.001	0.00062	--	--	0.00091	0.0012
PCB-134/143	0.00051	0.00088	--	--	--	--	--	0.0000065	0.0000039 J	--	--
PCB-135	0.0024	0.0041	--	--	--	--	--	0.000025	0.000016	--	--
PCB-135/151	--	--	0.01	0.0016	0.0073	0.011	0.0072	--	--	0.012	0.014
PCB-136	0.0026	0.0038	0.0028	0.0004	0.0022	0.0027	0.0021	0.000033	0.00002	0.0026	0.0025 J
PCB-137	0.000083	0.00021	0.000086	0.000011	0.000037	0.00021	0.000055	0.0000013 J	0.000001 J	0.00012	0.00018
PCB-138/163/164	0.012	0.02	--	--	--	--	--	0.00012	0.000085	--	--
PCB-139/140	--	--	0.000092	0.0000093	0.000057	0.00037	0.000036	--	--	0.0001	0.00011
PCB-139/149	0.014	0.023	--	--	--	--	--	0.00015	0.000096	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD320	SW/SD321	SW/SD322	SW/SD323	SW/SD324	SW/SD325	SW/SD326	SW/SD327	SW/SD327	SW/SD328	SW/SD329
SAMPLE ID	SD320-20191205	SD321-20191204	SD322-20191204	SD323-20191204	SD324-20191204	SD325-20191204	SD326-20191204	SD327-20191205	SD327-20191205-D	SD328-20191203	SD329-20191203
SAMPLE DATE	20191205	20191204	20191204	20191204	20191204	20191204	20191204	20191205	20191205	20191203	20191203
DUPLICATE									SD327-20191205		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PCB-14	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-140	0.000002 U	0.000057	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-141	0.004	0.0067	0.0051	0.00078	0.0036	0.0032	0.0037	0.000038	0.000026	0.0089	0.0074
PCB-142	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-143	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	--	--	0.0000019 U	0.0000023 U
PCB-144	0.00074	0.00096	0.00076	0.00018	0.00083	0.00079	0.0009	0.000012	0.0000058	0.00097 J	0.00047 J
PCB-145	0.000002 U	0.0000023	0.00000046 J	0.000002 U	0.0000016 J	0.0000025	0.000002 U	0.000002 U	0.000002 U	0.0000009 J	0.0000023 U
PCB-146	--	--	0.0027	0.00039	0.002	0.005	0.0021	--	--	0.0047	0.0036
PCB-146/165	0.002	0.0036	--	--	--	--	--	0.00002	0.000015	--	--
PCB-147	0.000081	0.00023	--	--	--	--	--	0.0000014 J	0.0000012 J	--	--
PCB-147/149	--	--	0.019	0.0031	0.014	0.02	0.015	--	--	0.025	0.026
PCB-148	0.000002 U	0.000002 U	0.000037	0.0000033	0.000025	0.0002	0.000011	0.000002 U	0.000002 U	0.0000098	0.000041
PCB-15	0.000098	0.00013	0.00011	0.000021	0.00011	0.000086	0.000094	0.000002 U	0.000002 U	0.00011	0.00019
PCB-150	0.000018	0.000044	0.000031	0.0000036	0.000028	0.000023	0.000011	0.000002 U	0.000002 U	0.000011	0.000036
PCB-151	0.0063	0.011	--	--	--	--	--	0.000067	0.000046	--	--
PCB-152	0.0000065	0.000016	0.000007	0.000002 U	0.0000096	0.0000064	0.0000026	0.000002 U	0.000002 U	0.0000037	0.0000074
PCB-153	0.017	0.028 J	--	--	--	--	--	0.00015	0.00012	--	--
PCB-153/168	--	--	0.021	0.0031	0.015	0.02	0.016	--	--	0.038	0.031
PCB-154	0.00009	0.00024	0.00024	0.000024	0.00016	0.00084	0.000087	0.0000012 J	0.000002 U	0.0000019 U	0.00022
PCB-155	0.0000034	0.0000041	0.0000042	0.00000069 J	0.0000022	0.0000019	0.0000016 J	0.000002 U	0.000002 U	0.00000086 J	0.0000049
PCB-156	0.00071	0.0012	--	--	--	--	--	0.0000069	0.0000052	--	--
PCB-156/157	--	--	0.0011	0.00015	0.0008	0.0011	0.0008	--	--	0.0022	0.0017
PCB-157	0.000053	0.000098	--	--	--	--	--	0.00000047 U	0.00000072 U	--	--
PCB-158	--	--	0.0014	0.00023	0.0011	0.0012	0.0011	--	--	0.0026	0.0025
PCB-158/160	0.0011	0.0019	--	--	--	--	--	0.000011	0.0000081	--	--
PCB-159	0.00015	0.00027	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.0000021	0.000002	0.0000019 U	0.0000023 U
PCB-16	0.000039	0.000069	0.00017	0.000012	0.000041	0.000066	0.000025	0.000002 U	0.000002 U	0.000044	0.000062
PCB-160	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	--	--	0.0000019 U	0.0000023 U
PCB-161	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	--	--	0.0000019 U	0.0000023 U
PCB-162	--	--	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	--	--	0.0000019 U	0.0000023 U
PCB-164	--	--	0.0012	0.00021	0.001	0.0012	0.00098	--	--	0.0019	0.0023
PCB-165	--	--	0.000045	0.0000035	0.0000099	0.00005	0.000002 U	--	--	0.0000045	0.0000023 U
PCB-166	0.0000031	0.0000038	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-167	0.0003	0.00052	0.00043	0.000058	0.00032	0.00039	0.00032	0.0000031	0.0000022	0.00096	0.00087
PCB-168	0.000002 U	0.000002 U	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-169	0.000002	0.0000026	0.0000015 U	0.00000092 U	0.0000018 U	0.0000016 U	0.0000015 U	0.00000044 U	0.00000048 U	0.0000024 U	0.000064 Z
PCB-17	0.0001	0.00014	0.00033	0.000016	0.000064	0.0001	0.000045	0.000006	0.000002 U	0.000047	0.000098
PCB-170	0.0058	0.011	0.0069	0.001	0.0055	0.0046	0.0057	0.000051	0.000049	0.024	0.011
PCB-171	0.0019	0.0034	--	--	--	--	--	0.000016	0.000013	--	--
PCB-171/173	--	--	0.0022	0.00034	0.0018	0.0017	0.0021	--	--	0.0077	0.0039
PCB-172	0.0012	0.0021	0.0011	0.0002	0.00093 J	0.00085	0.0011	0.00001	0.000011	0.0049	0.0019 J
PCB-173	0.00017	0.0003	--	--	--	--	--	0.0000015 J	0.0000018 J	--	--
PCB-174	0.0083	0.013	0.0084	0.0013	0.0065	0.0061	0.0069	0.000058	0.000065	0.027	0.014
PCB-175	0.00023	0.00055	0.00031	0.000044	0.00025	0.00022	0.00029	0.0000032	0.000003	0.0011	0.00046
PCB-176	0.0011	0.0019	0.00099	0.00016	0.00085	0.00094	0.00096	0.0000082	0.0000079	0.0031	0.0016
PCB-177	0.0046	0.0076	0.0048	0.00076	0.0038	0.0044	0.004	0.000036	0.000035	0.015	0.008
PCB-178	0.0018	0.0034	0.0018	0.0003	0.0014	0.0017	0.0015	0.000015	0.000015	0.0054	0.0029
PCB-179	0.0037	0.0057	0.0035	0.00059	0.003	0.0032	0.0031	0.00003	0.000029	0.01	0.0062
PCB-18	0.00007	0.000094	--	--	--	--	--	0.0000022	0.000002 U	--	--
PCB-18/30	--	--	0.00038	0.000026	0.000096	0.00016	0.00006	--	--	0.000084	0.00013
PCB-180	0.013	0.018	--	--	--	--	--	0.0001	0.000088	--	--
PCB-180/193	--	--	0.017	0.0024	0.013	0.011	0.014	--	--	0.064	0.025
PCB-181	0.000002 U	0.000002 U	0.000018	0.0000033	0.000016	0.00002	0.000019	0.000002 U	0.000002 U	0.000058	0.000019
PCB-182	--	--	0.000002 U	0.0000019 J	0.000012	0.000028	0.000002 U	--	--	0.0000019 U	0.0000023 J
PCB-182/187	0.0084	0.016	--	--	--	--	--	0.000069	0.000067	--	--
PCB-183	0.0044	0.008	--	--	--	--	--	0.000032	0.000033	--	--
PCB-183/185	--	--	0.0054	0.0008	0.0042	0.0036	0.005	--	--	0.02	0.0065
PCB-184	0.000003	0.0000058	0.0000018 J	0.00000059 J	0.0000018 J	0.0000019 U	0.0000016 J	0.000002 U	0.000002 U	0.0000032	0.0000055
PCB-185	0.00092	0.0016	--	--	--	--	--	0.0000077	0.0000067	--	--
PCB-186	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.00000044 J	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-187	--	--	0.01	0.0022	0.0082	0.0093	0.0084	--	--	0.034	0.016
PCB-188	0.0000056	0.000014	0.0000069	0.000002 U	0.0000063	0.0000043	0.0000036	0.000002 U	0.000002 U	0.0000072	0.0000092
PCB-189	0.00019	0.00033	0.00026	0.000037	0.00021	0.00017	0.0002	0.0000017 J	0.0000014 J	0.001	0.00045
PCB-19	0.000028	0.000052	0.00021	0.0000075	0.00002	0.000034	0.000014	0.0000029	0.000002 U	0.000014	0.00003
PCB-190	0.0012	0.0021	0.0015	0.00024	0.0012	0.0011	0.0013	0.000012	0.00001	0.0054	0.0028
PCB-191	0.00026	0.00047	0.00027	0.00004	0.00022	0.0002	0.00024	0.0000025	0.0000023	0.0011	0.00045
PCB-192	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-193	0.00076	0.0011	--	--	--	--	--	0.0000063	0.0000069	--	--
PCB-194	0.0028	0.0041	0.0031	0.00043	0.0024	0.0019	0.002	0.00002	0.00002	0.016	0.0047
PCB-195	0.0014	0.0024	0.0014	0.00022	0.0011	0.001	0.0011	0.0000097	0.000011	0.0066	0.0026
PCB-196	--	--	0.0017	0.00023	0.0014	0.0011	0.0013	--	--	0.0086	0.0025
PCB-196/203	0.0023	0.005	--	--	--	--	--	0.000022	0.000024	--	--
PCB-197	0.000093	0.00022	--	--	--	--	--	0.0000011 J	0.0000011 J	--	--
PCB-197/200	--	--	0.00055	0.000091	0.00046	0.00041	0.00049	--	--	0.0027	0.001
PCB-198	0.00013	0.00012	--	--	--	--	--	0.0000016 J	0.0000017 J	--	--
PCB-198/199	--	--	0.0034	0.00061	0.0029	0.0022	0.0027	--	--	0.016	0.0058
PCB-199	0.002	0.0042	--	--	--	--	--	0.000021	0.000018	--	--
PCB-2	0.000011	0.000016	0.000014	0.0000073	0.000019	0.00001	0.0000066	0.000002 U	0.000002 U	0.0000073	0.000025
PCB-20/21/33	0.00012	0.00022	--	--	--	--	--	0.0000023 J	0.000006 U	--	--
PCB-20/28	--	--	0.00044	0.000055	0.00026	0.00026	0.00017	--	--	0.00024	0.00043
PCB-200	0.00034	0.00068	--	--	--	--	--	0.0000035	0.0000033	--	--

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD320	SW/SD321	SW/SD322	SW/SD323	SW/SD324	SW/SD325	SW/SD326	SW/SD327	SW/SD327	SW/SD328	SW/SD329
SAMPLE ID	SD320-20191205	SD321-20191204	SD322-20191204	SD323-20191204	SD324-20191204	SD325-20191204	SD326-20191204	SD327-20191205	SD327-20191205-D	SD328-20191203	SD329-20191203
SAMPLE DATE	20191205	20191204	20191204	20191204	20191204	20191204	20191204	20191205	20191205	20191203	20191203
DUPLICATE									SD327-20191205		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PCB-201	0.00036	0.00078	0.00041	0.000056	0.00033	0.00031	0.00035	0.0000029	0.0000028	0.0021	0.00053
PCB-202	0.00052	0.0011	0.00061	0.000097	0.00048	0.00045	0.00047	0.0000044	0.0000035	0.0029	0.0011
PCB-203	--	--	0.0021	0.00033	0.0018	0.0013	0.0016	--	--	0.01	0.0034
PCB-204	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000006 J	0.00000037 J	0.000002 U	0.000002 U	0.000002 U	0.0000019	0.0000023 U
PCB-205	0.00014	0.00022	0.00017	0.000025	0.00014	0.000099	0.00012	0.0000013 J	0.0000015 J	0.00087	0.0003
PCB-206	0.00064	0.0018	0.00074	0.0001	0.00054	0.00036	0.0004	0.0000049	0.0000053	0.0035	0.0012
PCB-207	0.000086	0.00026	0.000098	0.000014	0.000076	0.000057	0.00006	0.000002 U	0.00000098 J	0.00049	0.00017
PCB-208	0.00014	0.00052	0.00019	0.000028	0.00013	0.000088	0.000095	0.0000013 J	0.0000017 J	0.00065	0.00031
PCB-209	0.00013	0.0008	0.00027	0.000029	0.00012	0.000061	0.000068	0.0000026	0.0000028	0.00013	0.00059
PCB-21/33	--	--	0.00019	0.000021	0.00011	0.00013	0.000064	--	--	0.00011	0.00014
PCB-22	0.000085	0.0001	0.00012	0.000015	0.000074	0.000078	0.000053	0.000001 J	0.000002 U	0.000073	0.00011
PCB-23	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-24	0.00001	0.000014	0.000002 U	0.000002 U	0.0000012 J	0.0000019 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-25	0.00002	0.000033	0.000076	0.0000053	0.000028	0.000027	0.000016	0.000002 U	0.000002 U	0.00002	0.000041
PCB-26	0.000042	0.00007	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-26/29	--	--	0.00007	0.0000079	0.000041	0.000041	0.000023	--	--	0.000035	0.000055
PCB-27	0.0000083	0.000014	0.000055	0.0000033	0.000011	0.000019	0.000009	0.000002 U	0.000002 U	0.0000095	0.000019
PCB-28	0.00022	0.00034	--	--	--	--	--	0.0000013 J	0.000002 U	--	--
PCB-29	0.0000017 J	0.0000045	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-3	0.000044	0.000046	0.000032	0.000014	0.000059	0.000032	0.000021	0.0000006 J	0.000002 U	0.000024	0.000063
PCB-30	0.000002 U	0.000002 U	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-31	0.0002	0.00037	0.00034	0.000039	0.00018	0.00024	0.00012	0.0000012 J	0.000002 U	0.00017	0.00029
PCB-32	0.000038	0.000061	0.00013	0.000011	0.000049	0.000056	0.000027	0.000002 U	0.000002 U	0.000032	0.000043 J
PCB-34	0.0000038	0.0000064	0.0000017 J	0.000002 U	0.000002 U	0.0000011 J	0.000002 U	0.000002 U	0.000002 U	0.00000085 J	0.0000023 U
PCB-35	0.0000068	0.000017	0.0000074	0.0000012 J	0.0000059	0.0000065	0.0000041	0.000002 U	0.000002 U	0.000013	0.000011
PCB-36	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-37	0.000083	0.000091	0.0001	0.000016	0.000084	0.000078	0.000053	0.00000086 J	0.000002 U	0.000082	0.00013
PCB-38	0.000012	0.0000062	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-39	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000011 J	0.0000019 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-4	0.000031	0.000059	0.00017 J	0.000024	0.00006 J	0.000053 J	0.000031	0.000002 U	0.000002 U	0.000049 J	0.00006 J
PCB-40	0.000018	0.000021	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-40/71	--	--	0.00025	0.000024	0.00014	0.0002	0.000073	--	--	0.000068	0.00017
PCB-41	--	--	0.00001	0.0000024	0.0000094	0.000025	0.0000086	--	--	0.000018	0.000025
PCB-41/64/71/72	0.00013	0.00016	--	--	--	--	--	0.0000064 J	0.0000018 J	--	--
PCB-42	--	--	0.000084	0.000011	0.000058	0.0001	0.000036	--	--	0.000036	0.000091
PCB-42/59	0.000042	0.000053	--	--	--	--	--	0.0000012 J	0.000004 U	--	--
PCB-43	--	--	0.000002 U	0.0000019 J	0.0000068	0.00006	0.000002 U	--	--	0.0000066	0.000035
PCB-43/49	0.00087	0.0013	--	--	--	--	--	0.000067	0.0000093	--	--
PCB-44	0.00018	0.00023	--	--	--	--	--	0.0000076	0.0000023	--	--
PCB-44/47/65	--	--	0.0016	0.00015	0.00085	0.0011	0.00043	--	--	0.00033	0.0012
PCB-45	0.000027	0.000046	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-45/51	--	--	0.00096	0.000049	0.00032	0.00025	0.00014	--	--	0.00014	0.00035
PCB-46	0.000033	0.000053	0.00014	0.0000047	0.000023	0.00004	0.000016	0.0000031	0.000002 U	0.0000098	0.000035
PCB-47	0.00048	0.00067	--	--	--	--	--	0.000028	0.0000051	--	--
PCB-48	--	--	0.000045	0.0000065	0.000032	0.000074	0.000021	--	--	0.000036	0.000033
PCB-48/75	0.000018	0.000022	--	--	--	--	--	0.000004 U	0.000004 U	--	--
PCB-49/69	--	--	0.0015	0.0001	0.00056	0.00083	0.00035	--	--	0.00021	0.00059
PCB-5	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000035	0.0000019 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000063
PCB-50	0.0000059	0.000011	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-50/53	--	--	0.0019	0.000042	0.00028	0.0004	0.00019	--	--	0.000078	0.00032
PCB-51	0.00033	0.00035	--	--	--	--	--	0.000029	0.0000034	--	--
PCB-52	--	--	0.0031	0.00017	0.00084	0.0025	0.00069	--	--	0.00048	0.0015
PCB-52/69	0.00096	0.0015	--	--	--	--	--	0.000058	0.000011	--	--
PCB-53	0.00061	0.0012	--	--	--	--	--	0.000076	0.0000077	--	--
PCB-54	0.000088	0.00019	0.00054	0.0000081	0.000046	0.000065	0.00003	0.000012	0.0000013 J	0.000011 J	0.000053 J
PCB-55	0.00001	0.000015	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-56	--	--	0.00012	0.000021	0.000089	0.00023	0.000058	--	--	0.000094	0.00012 J
PCB-56/60	0.00011	0.00016	--	--	--	--	--	0.0000011 J	0.00000093 J	--	--
PCB-57	0.0000037	0.0000071	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000013
PCB-58	0.0000014 J	0.000002 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000022	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-59/62/75	--	--	0.000047	0.0000043 J	0.000023	0.000032	0.000015	--	--	0.000013	0.000025
PCB-6	0.00002	0.000039	0.000042	0.0000067	0.000041	0.000023	0.000021	0.000002 U	0.000002 U	0.000025	0.000038
PCB-60	--	--	0.000052	0.0000084	0.000041	0.000096	0.000025	--	--	0.00004	0.00008
PCB-61/70	0.00024	0.00023	--	--	--	--	--	0.0000027 J	0.0000019 J	--	--
PCB-61/70/74/76	--	--	0.00049	0.000089	0.00037	0.0016	0.00025	--	--	0.00033	0.00084
PCB-62	0.000002 U	0.000002 U	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-63	0.0000073	0.000012	0.000012	0.0000018 J	0.0000088	0.00002	0.0000048	0.000002 U	0.000002 U	0.0000053	0.0000023 U
PCB-64	--	--	0.00012	0.000018	0.000085	0.00024	0.000057	--	--	0.000051	0.00014
PCB-65	0.000002 U	0.000002 U	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-66	--	--	0.00032	0.000051	0.00022	0.00055	0.00014	--	--	0.00019	0.00031
PCB-66/76	0.00032	0.00037	--	--	--	--	--	0.0000022 J	0.0000023 J	--	--
PCB-67	0.0000073	0.000013	0.0000076	0.000002 U	0.0000083	0.000012	0.0000026	0.000002 U	0.000002 U	0.0000062	0.0000023 U
PCB-68	0.0000093	0.000011	0.000023	0.0000021	0.000013	0.0000061	0.0000013 J	0.000002 U	0.000002 U	0.0000054	0.0000023 U
PCB-7	0.0000052	0.000011	0.0000069	0.0000013 J	0.0000094	0.0000055	0.0000045	0.000002 U	0.000002 U	0.000006	0.0000098
PCB-72	--	--	0.000022	0.000002	0.000009	0.000015	0.000008	--	--	0.0000041	0.0000023 U
PCB-73	0.000002 U	0.000002 U	0.000002 U	0.0000045	0.00002	0.0000019 U	0.000002 U	0.0000026	0.000002 U	0.0000019 U	0.000022
PCB-74	0.000076	0.000093	--	--	--	--	--	0.0000029	0.000002 U	--	--
PCB-77	0.000033	0.000058	0.000035	0.0000052	0.000027	0.000059	0.000017	0.00000042 U	0.00000042 U	0.000038	0.000056
PCB-78	0.0000027	0.0000037	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000002 U	0.00000082 J	0.0000023 U
PCB-79	0.000017	0.00002	0.000002 U	0.0000065	0.000002 U	0.000033	0.000002 U	0.000002 U	0.000002 U	0.0000073	0.0000023 U
PCB-8	0.000092	0.00016	0.00014	0.000025	0.00014	0.000088	0.000089	0.0000015 J	0.000002 U	0.000088	0.00011

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD320	SW/SD321	SW/SD322	SW/SD323	SW/SD324	SW/SD325	SW/SD326	SW/SD327	SW/SD327	SW/SD328	SW/SD329
SAMPLE ID	SD320-20191205	SD321-20191204	SD322-20191204	SD323-20191204	SD324-20191204	SD325-20191204	SD326-20191204	SD327-20191205	SD327-20191205-D	SD328-20191203	SD329-20191203
SAMPLE DATE	20191205	20191204	20191204	20191204	20191204	20191204	20191204	20191205	20191205	20191203	20191203
DUPLICATE									SD327-20191205		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PCB-80	0.000006	0.000002 U	0.0000029	0.000002 U	0.000002 U	0.0000019 U	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-81	0.000022	0.000032	0.0000011 J	0.00000064 U	0.000001 Z	0.0000021	0.0000013 U	0.00000037 U	0.00000038 U	0.0000012 J	0.0000068 U
PCB-82	0.000068	0.000056	0.000078	0.000016	0.000058	0.00039	0.000044	0.000002 U	0.000002 U	0.000058	0.00014
PCB-83	--	--	0.00012	0.000016	0.000065	0.00022	0.000002 U	--	--	0.000077	0.000097
PCB-83/112	0.000044	0.000075	--	--	--	--	--	0.000004 U	0.000004 U	--	--
PCB-84	--	--	0.00032	0.000044	0.00021	0.0009	0.0002	--	--	0.00015	0.00051
PCB-84/92	0.0012	0.0019	--	--	--	--	--	0.00002	0.0000093	--	--
PCB-85/116	0.00011	0.00018	--	--	--	--	--	0.0000015 J	0.0000011 J	--	--
PCB-85/116/117	--	--	0.00015	0.000026	0.0001	0.00051	0.000077	--	--	0.000086	0.00023
PCB-86	0.000002 U	0.000002 U	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-86/87/97/109/119/125	--	--	0.0015	0.0002	0.0009	0.0032	0.00075	--	--	0.00086	0.0015
PCB-87/117/125	0.0006	0.00091	--	--	--	--	--	0.0000081	0.0000046 J	--	--
PCB-88/91	0.00039	0.00065	0.00038	0.000049	0.00036	0.00046	0.00016	0.0000082	0.0000031 J	0.00012	0.0000045 U
PCB-89	0.0000064	0.000021	0.0000068	0.0000011 J	0.0000045	0.000022	0.000002 U	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-9	0.0000065	0.000012	0.000011	0.000002 U	0.000012	0.0000071	0.0000063	0.000002 U	0.000002 U	0.0000088	0.000014
PCB-90/101/113	--	--	0.0077	0.001	0.0048	0.0087	0.0043	--	--	0.0052	0.0084
PCB-92	--	--	0.0015	0.00016	0.00078	0.0014	0.00065	--	--	0.00064	0.0011
PCB-93	0.000002 U	0.000002 U	--	--	--	--	--	0.000002 U	0.000002 U	--	--
PCB-93/100	--	--	0.00019	0.000017	0.00011	0.0000039 U	0.000004 U	--	--	0.000036	0.0000045 U
PCB-94	0.00003	0.000085	0.000034	0.0000038	0.000042	0.000022	0.000012	0.000002 U	0.000002 U	0.0000019 U	0.0000023 U
PCB-95	0.006	0.0093	0.007	0.00068	0.0033	0.007	0.0041	0.000085	0.000034	0.0026	0.0058
PCB-96	0.000068	0.00012	0.00013	0.0000054	0.000047	0.000043	0.000023	0.0000035	0.0000011 J	0.000013	0.000046
PCB-97	0.00021	0.00035	--	--	--	--	--	0.0000024	0.0000018 J	--	--
PCB-98/102	0.000004 U	0.000004 U	0.00006	0.000011	0.000059	0.000098	0.000032	0.000004 U	0.000004 U	0.00003	0.000086
PCB-99	0.00058	0.0011	0.0014	0.00013	0.00071	0.003	0.00045	0.0000079	0.000005	0.00041	0.0011
PENTACHLOROBIPHENYLS	0.02 J	0.032 J	0.026 J	0.0034 J	0.016 J	0.037 J	0.014 J	0.00029 J	0.00013 J	0.015 J	0.027 J
TEQ DIOXIN-LIKE PCBs (BIRD)	5.3721E-06	8.3963E-06	2.0405E-06	2.8588E-07	1.581E-06	3.4637E-06	9.7036E-07	1.138E-09	8.36E-10	2.319E-06	1.195E-05
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	5.3721E-06	8.3963E-06	2.1312E-06	3.6684E-07	1.6919E-06	3.5395E-06	1.1061E-06	6.3924E-08	6.4155E-08	2.4002E-06	1.229E-05
TEQ DIOXIN-LIKE PCBs (FISH)	9.266E-08	1.4073E-07	2.4321E-08	3.374E-09	1.7573E-08	4.2395E-08	1.4452E-08	7.7E-11	5.8E-11	3.5402E-08	4.8088E-07
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	9.266E-08	1.4073E-07	2.8858E-08	5.982E-09	2.3118E-08	4.6185E-08	1.8314E-08	1.88E-09	1.865E-09	3.9462E-08	4.8258E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.5195E-06	2.2762E-06	1.2546E-07	1.765E-08	8.9241E-08	2.192E-07	7.8212E-08	4.71E-10	3.48E-10	1.9017E-07	1.0918E-05
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	1.5195E-06	2.2762E-06	2.3796E-07	8.0046E-08	2.2624E-07	3.182E-07	1.7091E-07	4.0673E-08	4.1155E-08	3.0617E-07	1.0919E-05
TETRACHLOROBIPHENYLS	0.0047 J	0.0068 J	0.011 J	0.00078 J	0.0041 J	0.0085 J	0.0026 J	0.0003 J	0.000047 J	0.0022 J	0.0059 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0017231	0.0028736	0.0040903	0.0005762	0.0029027	0.0071501	0.0025674	0.0000157	0.0000116	0.0062396	0.006624
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.1627327	0.271204	0.21139366	0.03131242	0.1501514	0.19611291	0.1527133	0.00185127	0.00120222	0.45008283	0.2902655
TOTAL PCB CONGENERS ZEROND	0.1644558	0.2740776	0.21548396	0.03188862	0.1530541	0.20326301	0.1552807	0.00186697	0.00121382	0.45632243	0.2968895
TOTAL PCB CONGENERS-NOAA	0.068392	0.113224	0.09417	0.014206	0.066936	0.084179	0.068517	0.0006768	0.0004969	0.213252	0.135
TOTAL PCB CONGENERS-NOAA HALFND	0.1644818	0.2741046	0.21551461	0.03192089	0.1530781	0.20328836	0.1553178	0.00194282	0.00130882	0.45635483	0.29693765
TOTAL PCB CONGENERS-NOAA X2	0.136784	0.226448	0.18834	0.028412	0.133872	0.168358	0.137034	0.0013536	0.0009938	0.426504	0.27
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.136784	0.226448	0.18834	0.028412	0.133872	0.168358	0.137034	0.0013536	0.0009998	0.426504	0.27
TRICHLOROBIPHENYLS	0.0011 J	0.0017 J	0.0026 J	0.00024 J	0.0011 J	0.0013 J	0.00068 J	0.000018 J	0 UJ	0.00098 J	0.0016 J
DIOXINS/FURANS (NG/KG)											
1,2,3,4,6,7,8,9-OCDD	220	180	46	420	160	110	130	450	540	190	120
1,2,3,4,6,7,8,9-OCDF	14	10	3.5 J	2.7 J	12	8.9 J	18 U	0.59 U	0.71 U	9.4	11
1,2,3,4,6,7,8-HPCDD	20	16	4.8 J	10	14	7.6	11 U	8.6	8.3	14	15
1,2,3,4,6,7,8-HPCDF	9.1	5.4	2.2 U	2.1 U	7.7	10	22 U	0.23 U	0.25 U	5.7	13
1,2,3,4,7,8,9-HPCDF	0.75 J	0.59 J	2.2 U	2.1 U	2.3 U	2.7 J	22 U	0.32 U	0.3 U	2.1 U	2.2 U
1,2,3,4,7,8-HXCDD	0.34 J	0.37 J	1.4 U	1.4 U	1.5 U	1.5 U	1.4 U	0.28 U	0.26 U	1.4 U	1.5 U
1,2,3,4,7,8-HXCDF	2 J	1.3 J	1.6 U	1.5 U	1.6 U	12	16 U	0.21 U	0.21 U	1.5 U	1.7 J
1,2,3,6,7,8-HXCDD	0.92 J	1.1 J	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	0.28 U	0.29 U	1.2 U	1.2 U
1,2,3,6,7,8-HXCDF	0.89 J	0.65 J	1.9 U	1.8 U	1.9 U	4.7 J	19 U	0.2 U	0.2 U	1.8 U	1.9 U
1,2,3,7,8,9-HXCDD	0.55 J	0.79 J	2.4 U	2.3 U	2.4 U	2.4 U	2.4 U	0.25 U	0.25 U	2.3 U	2.4 U
1,2,3,7,8,9-HXCDF	0.28 J	0.16 J	1.4 U	1.4 U	1.5 U	2 J	1.4 U	0.23 U	0.26 U	1.4 U	1.5 U
1,2,3,7,8-PECDD	0.29 J	0.4 J	1.9 U	1.8 U	1.9 U	3.3 JZ	1.9 U	0.22 U	0.22 U	1.8 U	1.9 U
1,2,3,7,8-PECDF	0.56 J	0.34 J	1.9 J	1.6 U	2.4 J	4.1 J	1.7 U	0.17 U	0.17 U	2.4 J	4.1 J
2,3,4,6,7,8-HXCDF	1.1 J	0.56 J	0.95 U	0.91 U	0.97 U	2.8 J	0.95 U	0.18 U	0.22 U	0.9 U	0.96 U
2,3,4,7,8-PECDF	1.4 J	0.69 J	0.89 U	0.85 U	0.9 U	5.9	1.2 U	0.19 U	0.18 U	0.84 U	0.9 U
2,3,7,8-TCDD	0.2 J	0.25 J	0.26 U	0.23 U	0.28 U	0.23 U	0.34 U	0.1 U	0.13 U	0.29 U	0.31 U
2,3,7,8-TCDF	1.2	0.58 J	0.58 J	0.61 JZ	0.73 JZ	5.9	0.47 U	0.11 U	0.11 U	0.72 J	0.67 J
TEQ DIOXINS (BIRD)	3.7961	2.4244	0.77975	0.66227	1.0782	17.80649	0.013	0.0536	0.0623	1.05094	1.4081
TEQ DIOXINS (BIRD) HALFND	3.7961	2.4244	2.78025	2.63977	3.0922	18.08499	4.3079	0.4317795	0.4585355	2.96244	3.3556
TEQ DIOXINS (FISH)	2.0316	1.6068	0.13375	0.08277	0.2647	9.04649	0.013	0.0536	0.0623	0.24694	0.5666
TEQ DIOXINS (FISH) HALFND	2.0316	1.6068	2.11875	2.01927	2.2832	9.55449	3.94915	0.3842795	0.4042855	2.15994	2.5186
TEQ DIOXINS (HUMANS/MAMMALS)	2.0235	1.6951	0.17785	0.28781	0.4136	8.17167	0.039	0.221	0.245	0.40082	0.6793
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	2.0235	1.6951	1.95585	2.00081	2.2086	8.54167	3.7832	0.5013885	0.5424065	2.10732	2.4033
TOTAL HPCDD	39 J	37 J	12 J	19 J	28 J	14 J	18 J	20 J	19 J	24 J	28 J
TOTAL HPCDF	19 J	12 J	2.7 J	2.1 UJ	17 J	20 J	9.4 J	0 UJ	0 UJ	5.7 J	20 J
TOTAL HXCDD	9.5 J	14 J	5.4 J	1.5 J	3.5 J	1.6 J	4.7 J	2.3 J	1.9 J	7.6 J	1.9 J
TOTAL HXCDF	14 J	9.6 J	1.4 J	1.2 J	6.8 J	42 J	5.1 J	0 UJ	0 UJ	4.3 J	14 J
TOTAL PECDD	4.2 J	7.3 J	1.9 UJ	1.8 UJ	1.9 UJ	1.9 UJ	1.9 UJ	0 UJ	0 UJ	2 J	1.9 UJ
TOTAL PECDF	14 J	8.5 J	3.3 J	1 J	6.5 J	53 J	1.8 J	0 UJ	0 UJ	8.2 J	12 J
TOTAL TCDD	4.6 J	8.2 J	0.26 UJ	1.1 J	2.3 J	2.3 J	1.5 J	0.25 J	0 UJ	0.29 UJ	0.59 J
TOTAL TCDF	13 J	9.6 J	1 J	1.8 J	3.4 J	58 J	3.9 J	0.34 J	0.28 J	4.1 J	3.8 J
METALS (MG/KG)											
ALUMINUM	1940	2480	1710	5940	1520	3720	2880	4160	3230	2490	2120
ANTIMONY	0.92 U	0.92 U	0.96 U	1 U	1.1 U	0.89 U	0.93 U	0.94 U	0.81 U	0.86 U	1 U
ARSENIC	2.5	3.8	2.1	2.7	2.3	3.4	3.1	1.8	1.8	2.5	2.7
BARIUM	40.1	46.1	83.2	104	35.1	75.9	32.2	52.6	44	29.5	35.9
BERYLLIUM	0.46 U	0.46 U	0.48 U	1.1	0.53 U	0.44 U	0.46 U	0.59	0.58	0.43 U	0.52 U
CADMIUM	0.092 J	0.087 J	0.48 U	0.25 J	0.53 U	0.089 J	0.07 J	0.47 U	0.077 J	0.073 J	0.21 J
CALCIUM	4440	5660	1440	3420	1680	6230	15400	501	490	1540	1640

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD320	SW/SD321	SW/SD322	SW/SD323	SW/SD324	SW/SD325	SW/SD326	SW/SD327	SW/SD327	SW/SD328	SW/SD329
SAMPLE ID	SD320-20191205	SD321-20191204	SD322-20191204	SD323-20191204	SD324-20191204	SD325-20191204	SD326-20191204	SD327-20191205	SD327-20191205-D	SD328-20191203	SD329-20191203
SAMPLE DATE	20191205	20191204	20191204	20191204	20191204	20191204	20191204	20191205	20191205	20191203	20191203
DUPLICATE									SD327-20191205		
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
CHROMIUM	4.1	63.9	54.7	6.7	2.9	5.4	22.5	4	3.8	3.8	4.4
COBALT	3.1	11.1	3	11.4	3	4.2	4.6	5.3	5.7	3.2	4.3
COPPER	11.5	12.6	8.7	9.9	10.9	9.5	10.5	6.3	5	9.7	14.2
CYANIDE	0.63 U	0.63 U	0.65 U	0.69 U	0.74 U	0.61 U	0.65 U	0.63 U	0.51 U	0.59 U	0.72 U
IRON	9960	14100	8200	10900	5940	15100	9250	8510	8920	8840	8540
LEAD	16.5	15	14.5	13.2	14.3	11.9	29.4	8.9	7.6	13.1	20.7
MAGNESIUM	899	1970	469	1740	405 J	1330	2630	565	495	537	662
MANGANESE	109	317	119	157	85.6	167	181	162	183	113	65.7
MERCURY	0.11 U	0.11 U	0.12 U	0.15	0.14 U	0.11 U	0.12 U	0.12 U	0.093 U	0.11 U	0.13 U
NICKEL	6.4	7.9	6.1	16.6	5.9	8.5	8	9.6	8.6	8	9.8
POTASSIUM	311 J	444 J	297 J	440 J	257 J	668	425 J	510	452	384 J	375 J
SELENIUM	2.3 U	2.3 U	2.4 U	2.6 U	2.7 U	2.2 U	2.3 U	2.4 U	2 U	2.2 U	0.34 J
SILVER	0.46 U	0.46 U	0.48 U	0.51 U	0.53 U	0.44 U	0.46 U	0.47 U	0.4 U	0.43 U	0.52 U
SODIUM	464 UJ	454 UJ	465 UJ	528 UJ	534 UJ	443 UJ	492 UJ	462 UJ	387 UJ	425 UJ	553 UJ
THALLIUM	0.46 U	0.46 U	0.48 U	0.51 U	0.53 U	0.44 U	0.46 U	0.47 U	0.4 U	0.43 U	0.52 U
VANADIUM	3.3	5.1	3	10.1	2.6 J	4.2	4.3	6.7	6.8	3.2	4.2
ZINC	81.1	71.3	60.1	55.7	53.4	64.3	60.9	69.7	95.9	52.5	85.4
MISCELLANEOUS (%)											
TOTAL SOLIDS	--	75	--	--	65	--	--	75	--	73	--
MISCELLANEOUS (MG/KG)											
TOTAL ORGANIC CARBON	--	16300	--	--	21600	--	--	13800	--	4320	--

LOCATION	SW/SD330	SW/SD337	SW/SD338	SW/SD339	SW/SD355
SAMPLE ID	SD330-20191203	SD337-20200226	SD338-20200226	SD339-20200226	SD355-20191204
SAMPLE DATE	20191203	20200226	20200226	20200226	20191204
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5
VOLATILES (MG/KG)					
1,1,1-TRICHLOROETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
1,1,2,2-TETRACHLOROETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
1,1,2-TRICHLOROETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
1,1-DICHLOROETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
1,1-DICHLOROETHENE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
1,2,3-TRICHLOROBENZENE	0.005 UJ	0.0065 U	0.0073 U	0.0068 U	0.0064 U
1,2,4-TRICHLOROBENZENE	0.005 UJ	0.0065 U	0.0073 U	0.0068 U	0.0064 U
1,2-DIBROMO-3-CHLOROPROPANE	0.005 UJ	0.0065 U	0.0073 U	0.0068 U	0.0064 U
1,2-DIBROMOETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
1,2-DICHLOROBENZENE	0.005 UJ	0.0065 U	0.0073 U	0.0068 U	0.0064 U
1,2-DICHLOROETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
1,2-DICHLOROPROPANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
1,3-DICHLOROBENZENE	0.005 UJ	0.0065 U	0.0073 U	0.0068 U	0.0064 U
1,4-DICHLOROBENZENE	0.005 UJ	0.0065 U	0.0073 U	0.0068 U	0.0064 U
2-BUTANONE	0.01 U	0.013 U	0.015 U	0.014 U	0.013 U
2-HEXANONE	0.01 U	0.013 U	0.015 U	0.014 U	0.013 U
4-METHYL-2-PENTANONE	0.01 U	0.013 U	0.015 U	0.014 U	0.013 U
ACETONE	0.015 U	0.013 U	0.015 U	0.014 U	0.02 U
BENZENE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
BROMOCHLOROMETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
BROMODICHLOROMETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
BROMOFORM	0.005 UJ	0.0065 U	0.0073 U	0.0068 U	0.0064 U
BROMOMETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
CARBON DISULFIDE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
CARBON TETRACHLORIDE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
CHLOROBENZENE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
CHLORODIBROMOMETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
CHLOROETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
CHLOROFORM	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
CHLOROMETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
CIS-1,2-DICHLOROETHENE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
CIS-1,3-DICHLOROPROPENE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
CYCLOHEXANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
DICHLORODIFLUOROMETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
ETHYLBENZENE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
ISOPROPYLBENZENE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
M+P-XYLENES	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
METHYL ACETATE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
METHYL CYCLOHEXANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
METHYL TERT-BUTYL ETHER	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
METHYLENE CHLORIDE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
O-XYLENE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
STYRENE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
TETRACHLOROETHENE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
TOLUENE	0.00083 J	0.0065 U	0.0073 U	0.0068 U	0.0064 U
TRANS-1,2-DICHLOROETHENE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
TRANS-1,3-DICHLOROPROPENE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
TRICHLOROETHENE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
TRICHLOROFLUOROMETHANE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
VINYL CHLORIDE	0.005 U	0.0065 U	0.0073 U	0.0068 U	0.0064 U
SEMIVOLATILES (MG/KG)					
1,1-BIPHENYL	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
1,2,4,5-TETRACHLOROBENZENE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
1,4-DIOXANE	0.08 U	0.088 UJ	0.076 J	0.093 U	0.089 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.39 U	0.44 U	0.51 U	0.46 U	0.44 U
2,3,4,6-TETRACHLOROPHENOL	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
2,4,5-TRICHLOROPHENOL	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
2,4,6-TRICHLOROPHENOL	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
2,4-DICHLOROPHENOL	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
2,4-DIMETHYLPHENOL	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
2,4-DINITROPHENOL	0.39 U	0.44 R	0.51 U	0.46 R	0.44 U
2,4-DINITROTOLUENE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
2,6-DINITROTOLUENE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
2-CHLORONAPHTHALENE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
2-CHLOROPHENOL	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
2-METHYLNAPHTHALENE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
2-METHYLPHENOL	0.39 U	0.44 U	0.51 U	0.46 U	0.44 U
2-NITROANILINE	0.2 U	0.22 R	0.26 U	0.24 R	0.23 U
2-NITROPHENOL	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
3&4-METHYLPHENOL	0.39 U	0.44 U	0.51 U	0.46 U	0.051 J
3,3'-DICHLOROBENZIDINE	0.39 U	0.44 U	0.51 U	0.46 U	0.44 U
3-NITROANILINE	0.39 U	0.44 R	0.51 U	0.46 R	0.44 U
4,6-DINITRO-2-METHYLPHENOL	0.39 U	0.44 R	0.51 U	0.46 R	0.44 U
4-BROMOPHENYL PHENYL ETHER	0.2 U	0.22 UJ	0.26 U	0.24 U	0.23 U
4-CHLORO-3-METHYLPHENOL	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
4-CHLOROANILINE	0.39 U	0.44 U	0.51 U	0.46 U	0.44 U
4-CHLOROPHENYL PHENYL ETHER	0.2 U	0.22 UJ	0.26 U	0.24 U	0.23 U
4-NITROANILINE	0.39 U	0.44 R	0.51 U	0.46 R	0.44 U
4-NITROPHENOL	0.39 U	0.44 R	0.51 U	0.46 R	0.44 U

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD330	SW/SD337	SW/SD338	SW/SD339	SW/SD355
SAMPLE ID	SD330-20191203	SD337-20200226	SD338-20200226	SD339-20200226	SD355-20191204
SAMPLE DATE	20191203	20200226	20200226	20200226	20191204
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5
ACENAPHTHENE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
ACENAPHTHYLENE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
ACETOPHENONE	0.39 U	0.44 U	0.51 U	0.46 U	0.052 J
ANTHRACENE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
ATRAZINE	0.39 U	0.44 U	0.51 U	0.46 U	0.44 U
BAP EQUIVALENT-HALFND	0.190069	0.22 U	0.26 U	0.265357	0.35357
BAP EQUIVALENT-POS	0.079069	0.22 U	0.26 U	0.012157	0.23857
BENZALDEHYDE	0.39 U	0.44 U	0.51 U	0.46 U	0.44 U
BENZO(A)ANTHRACENE	0.073 J	0.22 U	0.26 U	0.054 J	0.22 J
BENZO(A)PYRENE	0.063 J	0.22 U	0.26 U	0.24 U	0.18 J
BENZO(B)FLUORANTHENE	0.087 J	0.22 U	0.26 U	0.067 J	0.26
BENZO(G,H,I)PERYLENE	0.2 U	0.22 U	0.26 U	0.24 U	0.11 J
BENZO(K)FLUORANTHENE	0.2 U	0.22 U	0.26 U	0.24 U	0.088 J
BIS(2-CHLOROETHOXY)METHANE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
BIS(2-CHLOROETHYL)ETHER	0.39 U	0.44 U	0.51 U	0.46 U	0.44 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
BUTYL BENZYL PHTHALATE	0.2 U	0.22 U	0.26 U	0.24 U	1.2
CAPROLACTAM	0.39 U	0.44 U	0.51 U	0.46 U	0.44 U
CARBAZOLE	0.39 U	0.44 UJ	0.51 U	0.46 U	0.44 U
CHRYSENE	0.069 J	0.22 U	0.26 U	0.057 J	0.19 J
DIBENZO(A,H)ANTHRACENE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
DIBENZOFURAN	0.2 U	0.22 UJ	0.26 U	0.24 U	0.23 U
DIETHYL PHTHALATE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
DIMETHYL PHTHALATE	0.1 J	0.22 U	0.26 U	0.093 J	0.19 J
DI-N-BUTYL PHTHALATE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
DI-N-OCTYL PHTHALATE	0.39 UJ	0.44 U	0.51 U	0.46 U	0.44 UJ
FLUORANTHENE	0.19 J	0.44 U	0.51 U	0.12 J	0.5
FLUORENE	0.2 U	0.22 UJ	0.26 U	0.24 U	0.23 U
HEXACHLOROBENZENE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
HEXACHLOROBUTADIENE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
HEXACHLOROCYCLOPENTADIENE	0.39 U	0.44 U	0.51 U	0.46 U	0.44 U
HEXACHLOROETHANE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
HIGH MOLECULAR WEIGHT PAHS	0.442	0 U	0 U	0.277	1.563
INDENO(1,2,3-CD)PYRENE	0.2 U	0.22 U	0.26 U	0.24 U	0.095 J
ISOPHORONE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
LOW MOLECULAR WEIGHT PAHS	0.3	0 U	0 U	0.193	0.62
NAPHTHALENE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
NITROBENZENE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
N-NITROSO-DI-N-PROPYLAMINE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
N-NITROSODIPHENYLAMINE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
PENTACHLOROPHENOL	0.39 U	0.44 U	0.51 U	0.46 U	0.44 U
PHENANTHRENE	0.11 J	0.22 U	0.26 U	0.073 J	0.12 J
PHENOL	0.39 U	0.44 U	0.51 U	0.46 U	0.049 J
PYRENE	0.15 J	0.22 U	0.26 U	0.099 J	0.42
TOTAL PAHS	0.742	0 U	0 U	0.47	2.183
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K					
2-METHYLNAPHTHALENE	0.0031 J	0.0013 J	0.0051 U	0.0046	0.0058
ACENAPHTHENE	0.0033 J	0.0044 U	0.0051 U	0.0036 J	0.0025 J
ACENAPHTHYLENE	0.0068	0.0044 UJ	0.0051 U	0.0058	0.016
ANTHRACENE	0.024	0.0015 J	0.0051 U	0.0095	0.027
BAP EQUIVALENT-HALFND	0.088968	0.009224	0.008101	0.07017	0.21609
BAP EQUIVALENT-POS	0.088968	0.009224	0.005551	0.07017	0.21609
BENZO(A)ANTHRACENE	0.069	0.0063	0.004 J	0.051	0.18
BENZO(A)PYRENE	0.058	0.0063	0.0043 J	0.048	0.14
BENZO(B)FLUORANTHENE	0.077	0.0082	0.0055	0.062	0.2
BENZO(G,H,I)PERYLENE	0.048	0.0036 J	0.003 J	0.027	0.1
BENZO(K)FLUORANTHENE	0.03	0.0028 J	0.0026 J	0.022	0.073
CHRYSENE	0.068	0.0067	0.0051	0.05	0.16
DIBENZO(A,H)ANTHRACENE	0.012	0.0011 J	0.0051 U	0.0081	0.028
FLUORANTHENE	0.15	0.012	0.01	0.097	0.35
FLUORENE	0.007	0.0044 U	0.0051 U	0.006	0.0059
HIGH MOLECULAR WEIGHT PAHS	0.562	0.0504	0.0366	0.3811	1.363
INDENO(1,2,3-CD)PYRENE	0.04	0.0034 J	0.0027 J	0.025	0.092
LOW MOLECULAR WEIGHT PAHS	0.2942	0.0212	0.0147	0.1906	0.5065
NAPHTHALENE	0.0031 J	0.0011 J	0.0051 U	0.0037 J	0.0051
PENTACHLOROPHENOL	0.008 U	0.0088 U	0.01 U	0.0093 U	0.0089 U
PHENANTHRENE	0.1	0.0066	0.0047 J	0.065	0.1
PYRENE	0.16	0.012	0.0094	0.088	0.39
TOTAL PAHS	0.068	0.0067	0.0051	0.05	0.16
PESTICIDES (MG/KG)					
4,4'-DDD	0.00029 J	0.00019 J	0.00028 J	0.0031 J	0.00056 J
4,4'-DDE	0.0039 U	0.0043 U	0.0051 U	0.00039 J	0.0044 U
4,4'-DDT	0.0039 U	0.0043 U	0.0051 U	0.0072	0.0044 U
ALDRIN	0.002 U	0.0022 U	0.0026 U	0.0024 U	0.0023 U
ALPHA-BHC	0.002 U	0.0022 U	0.0026 U	0.0024 U	0.0023 U
ALPHA-CHLORDANE	0.00032 J	0.0022 U	0.0026 U	0.0024 U	0.0023 U
BETA-BHC	0.002 U	0.0022 U	0.0026 U	0.0024 U	0.0023 U
DELTA-BHC	0.002 U	0.0022 U	0.0026 U	0.0024 U	0.0023 U
DIELDRIN	0.00033 J	0.0043 U	0.0051 U	0.0046 U	0.0011 J
ENDOSULFAN I	0.002 U	0.0022 U	0.0026 U	0.0024 U	0.0023 U
ENDOSULFAN II	0.0039 U	0.0043 U	0.0051 U	0.0046 U	0.0044 U

LOCATION	SW/SD330	SW/SD337	SW/SD338	SW/SD339	SW/SD355
SAMPLE ID	SD330-20191203	SD337-20200226	SD338-20200226	SD339-20200226	SD355-20191204
SAMPLE DATE	20191203	20200226	20200226	20200226	20191204
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5
ENDOSULFAN SULFATE	0.0039 U	0.0043 U	0.0051 U	0.0046 U	0.0044 U
ENDRIN	0.0039 U	0.0043 U	0.0051 U	0.00079 J	0.0044 U
ENDRIN ALDEHYDE	0.0039 U	0.0043 U	0.0051 U	0.0046 U	0.0044 U
ENDRIN KETONE	0.0039 U	0.0043 U	0.0051 U	0.0046 U	0.0044 U
GAMMA-BHC (LINDANE)	0.002 U	0.0022 U	0.0026 U	0.0024 U	0.0023 U
GAMMA-CHLORDANE	0.00027 J	0.0022 U	0.0026 U	0.0024 U	0.0023 U
HEPTACHLOR	0.002 U	0.0022 U	0.0026 U	0.0024 U	0.0023 U
HEPTACHLOR EPOXIDE	0.002 U	0.0022 U	0.0026 U	0.0024 U	0.0023 U
METHOXYCHLOR	0.02 U	0.022 U	0.026 U	0.024 U	0.023 U
TOXAPHENE	0.2 U	0.22 U	0.26 U	0.24 U	0.23 U
PCBS (MG/KG)					
AROCLOR-1016	0.039 U	0.043 U	0.051 U	0.046 U	0.044 UJ
AROCLOR-1221	0.039 U	0.043 U	0.051 U	0.046 U	0.044 UJ
AROCLOR-1232	0.039 U	0.043 U	0.051 U	0.046 U	0.044 UJ
AROCLOR-1242	0.039 U	0.043 U	0.051 U	0.046 U	0.044 UJ
AROCLOR-1248	0.039 U	0.043 U	0.051 U	0.046 U	0.044 UJ
AROCLOR-1254	0.039 U	0.043 U	0.051 U	0.046 U	0.044 UJ
AROCLOR-1260	0.017 J	0.011 J	0.0094 J	0.011 J	0.051 J
AROCLOR-1262	0.039 U	0.043 U	0.051 U	0.046 U	0.044 UJ
AROCLOR-1268	0.039 U	0.043 U	0.051 U	0.046 U	0.044 UJ
TOTAL AROCLOR	0.017	0.011	0.0094	0.011	0.051
TOTAL AROCLOR HALFND	0.173	0.183	0.2134	0.195	0.227
PCB CONGENERS (MG/KG)					
DICHLOROBIPHENYLS	0.00033 J	--	--	--	0.00038 J
HEPTACHLOROBIPHENYLS	0.019 J	--	--	--	0.083 J
HEXACHLOROBIPHENYLS	0.029 J	--	--	--	0.12 J
MONOCHLOROBIPHENYLS	0.000054 J	--	--	--	0.000065 J
NONACHLOROBIPHENYLS	0.00058 J	--	--	--	0.0011 J
OCTACHLOROBIPHENYLS	0.004 J	--	--	--	0.017 J
PCB-1	0.000027 J	--	--	--	0.000028 J
PCB-10	0.0000027	--	--	--	0.000002 U
PCB-100	--	--	--	--	--
PCB-101/90	--	--	--	--	--
PCB-103	0.000056	--	--	--	0.00032
PCB-104	0.0000066	--	--	--	0.000071
PCB-105	0.00034	0.0000916 J	0.000145	0.000224	0.00059
PCB-106	0.000002 U	--	--	--	0.000002 U
PCB-107	0.000063	--	--	--	0.00014
PCB-108/107	--	--	--	--	--
PCB-108/124	0.000031	--	--	--	0.000061
PCB-109	--	--	--	--	--
PCB-11	0.000025	--	--	--	0.00004
PCB-110	--	--	--	--	--
PCB-110/115	0.0018	--	--	--	0.005
PCB-111	0.0000015 J	--	--	--	0.0000088
PCB-111/115	--	--	--	--	--
PCB-112	0.000002 U	--	--	--	0.000002 U
PCB-113	--	--	--	--	--
PCB-114	0.00002	0.00000357 J	0.00000646 J	0.0000078 J	0.000032
PCB-118	0.00095	0.000318 J	0.00048	0.000834	0.0023
PCB-118/106	--	--	--	--	--
PCB-119	--	--	--	--	--
PCB-12	--	--	--	--	--
PCB-12/13	0.000014	--	--	--	0.000017
PCB-120	0.0000071	--	--	--	0.000028
PCB-121	0.0000034	--	--	--	0.0000097
PCB-122	0.0000094	--	--	--	0.000002 U
PCB-123	0.000011	0.00000354 J	0.00000611 J	0.00000865 J	0.000017
PCB-124	--	--	--	--	--
PCB-126	0.000017	0.00000958 U	0.0000108 U	0.00000925 U	0.0000028 U
PCB-127	0.00000086 J	--	--	--	0.000002 U
PCB-128/162	--	--	--	--	--
PCB-128/166	0.00034	0.000141 J	0.000228	0.000291	0.0012
PCB-129	--	--	--	--	--
PCB-129/138/163	0.0063	0.00225 J	0.00401	0.00499	0.027
PCB-13	--	--	--	--	--
PCB-130	0.00019	--	--	--	0.00078
PCB-131	0.000035	--	--	--	0.00014
PCB-131/133	--	--	--	--	--
PCB-132	0.0017	--	--	--	0.0075
PCB-132/161	--	--	--	--	--
PCB-133	0.00008	--	--	--	0.00037
PCB-134	0.00028	--	--	--	0.0012
PCB-134/143	--	--	--	--	--
PCB-135	--	--	--	--	--
PCB-135/151	0.003	--	--	--	0.016
PCB-136	0.00091	--	--	--	0.005
PCB-137	0.000033	--	--	--	0.000079
PCB-138/163/164	--	--	--	--	--
PCB-139/140	0.000022	--	--	--	0.000069
PCB-139/149	--	--	--	--	--

LOCATION	SW/SD330	SW/SD337	SW/SD338	SW/SD339	SW/SD355
SAMPLE ID	SD330-20191203	SD337-20200226	SD338-20200226	SD339-20200226	SD355-20191204
SAMPLE DATE	20191203	20200226	20200226	20200226	20191204
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5
PCB-14	0.0000016 J	--	--	--	0.000002 U
PCB-140	--	--	--	--	--
PCB-141	0.0015	--	--	--	0.0072
PCB-142	0.000002 U	--	--	--	0.000002 U
PCB-143	0.000002 U	--	--	--	0.000002 U
PCB-144	0.0003 J	--	--	--	0.0018
PCB-145	0.000002 U	--	--	--	0.000002 U
PCB-146	0.00079	--	--	--	0.0034
PCB-146/165	--	--	--	--	--
PCB-147	--	--	--	--	--
PCB-147/149	0.0059	--	--	--	0.028
PCB-148	0.0000091	--	--	--	0.000027
PCB-15	0.000074	--	--	--	0.00011
PCB-150	0.000013	--	--	--	0.000027
PCB-151	--	--	--	--	--
PCB-152	0.0000042	--	--	--	0.0000087
PCB-153	--	--	--	--	--
PCB-153/168	0.0064	0.00215 J	0.00396	0.0046	0.028
PCB-154	0.000068	--	--	--	0.00019
PCB-155	0.0000012 J	--	--	--	0.0000043
PCB-156	--	--	0.000255	0.000366	--
PCB-156/157	0.00035	0.000154 J	--	--	0.0015
PCB-157	--	--	--	--	--
PCB-158	0.00047	--	--	--	0.0019
PCB-158/160	--	--	--	--	--
PCB-159	0.000002 U	--	--	--	0.000002 U
PCB-16	0.000077	--	--	--	0.000079
PCB-160	0.000002 U	--	--	--	0.000002 U
PCB-161	0.000002 U	--	--	--	0.000002 U
PCB-162	0.000002 U	--	--	--	0.000002 U
PCB-164	0.00041	--	--	--	0.0016
PCB-165	0.0000055	--	--	--	0.000039
PCB-166	--	--	--	--	--
PCB-167	0.00014	0.0000599 J	0.0000998	0.000136	0.00058
PCB-168	--	--	--	--	--
PCB-169	0.00000075 U	0.00000958 U	0.0000108 U	0.00000925 U	0.000003 U
PCB-17	0.000088	--	--	--	0.00025
PCB-170	0.0021	0.000852 J	0.00171	0.00181	0.0093
PCB-171	--	--	--	--	--
PCB-171/173	0.00065	--	--	--	0.0029
PCB-172	0.00037	--	--	--	0.0015
PCB-173	--	--	--	--	--
PCB-174	0.0024	--	--	--	0.011
PCB-175	0.000087	--	--	--	0.00042
PCB-176	0.00029	--	--	--	0.0014
PCB-177	0.0014	--	--	--	0.0064
PCB-178	0.0005	--	--	--	0.0023
PCB-179	0.0011	--	--	--	0.0054
PCB-18	--	--	--	--	--
PCB-18/30	0.0002	0.0000248	0.0000174 J	0.0000375	0.00024
PCB-180	--	--	--	--	--
PCB-180/193	0.0048	0.00201 J	0.00402	0.0043	0.023
PCB-181	0.000006	--	--	--	0.000026
PCB-182	0.0000029	--	--	--	0.000024
PCB-182/187	--	--	--	--	--
PCB-183	--	--	--	--	--
PCB-183/185	0.0015	--	--	--	0.0071
PCB-184	0.00000058 J	--	--	--	0.000002 U
PCB-185	--	--	--	--	--
PCB-186	0.000002 U	--	--	--	0.000002 U
PCB-187	0.0028	0.00104 J	0.00218	0.00214	0.015
PCB-188	0.0000028	--	--	--	0.0000064
PCB-189	0.000071	0.0000315	0.0000651	0.0000702	0.00036
PCB-19	0.000023	--	--	--	0.00075
PCB-190	0.00047	--	--	--	0.002
PCB-191	0.000081	--	--	--	0.00035
PCB-192	0.000002 U	--	--	--	0.000002 U
PCB-193	--	--	--	--	--
PCB-194	0.00091	--	--	--	0.0038
PCB-195	0.00042	0.000168 J	0.000355	0.000343	0.0018
PCB-196	0.00046	--	--	--	0.0021
PCB-196/203	--	--	--	--	--
PCB-197	--	--	--	--	--
PCB-197/200	0.00016	--	--	--	0.0007
PCB-198	--	--	--	--	--
PCB-198/199	0.001	--	--	--	0.0044
PCB-199	--	--	--	--	--
PCB-2	0.0000071	--	--	--	0.0000098
PCB-20/21/33	--	--	--	--	--
PCB-20/28	0.00036	0.0000822	0.0000808 J	0.000126	0.00027
PCB-200	--	--	--	--	--

LOCATION	SW/SD330	SW/SD337	SW/SD338	SW/SD339	SW/SD355
SAMPLE ID	SD330-20191203	SD337-20200226	SD338-20200226	SD339-20200226	SD355-20191204
SAMPLE DATE	20191203	20200226	20200226	20200226	20191204
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5
PCB-201	0.00012	--	--	--	0.00053
PCB-202	0.0002	--	--	--	0.00074
PCB-203	0.00063	--	--	--	0.0027
PCB-204	0.000002 U	--	--	--	0.000002 U
PCB-205	0.000046	--	--	--	0.00023
PCB-206	0.00041	0.00011 J	0.000234	0.000224	0.00078
PCB-207	0.00004	--	--	--	0.00011
PCB-208	0.00013	--	--	--	0.00017
PCB-209	0.00023	0.0000503	0.000141	0.0000863 J	0.00012
PCB-21/33	0.00018	--	--	--	0.00012
PCB-22	0.00011	--	--	--	0.000064
PCB-23	0.000002 U	--	--	--	0.000002 U
PCB-24	0.000002 U	--	--	--	0.000002 U
PCB-25	0.000023	--	--	--	0.00015
PCB-26	--	--	--	--	--
PCB-26/29	0.000049	--	--	--	0.00004
PCB-27	0.000015	--	--	--	0.000051
PCB-28	--	--	--	--	--
PCB-29	--	--	--	--	--
PCB-3	0.00002	--	--	--	0.000027
PCB-30	--	--	--	--	--
PCB-31	0.00039	--	--	--	0.00019
PCB-32	0.00007	--	--	--	0.00012
PCB-34	0.0000026	--	--	--	0.0000011 J
PCB-35	0.0000037	--	--	--	0.0000066
PCB-36	0.000002 U	--	--	--	0.000002 U
PCB-37	0.000083	--	--	--	0.000097
PCB-38	0.000002 U	--	--	--	0.000002 U
PCB-39	0.000002 U	--	--	--	0.000002 U
PCB-4	0.000079 J	--	--	--	0.0001 J
PCB-40	--	--	--	--	--
PCB-40/71	0.00026	--	--	--	0.0003
PCB-41	0.000055	--	--	--	0.00001
PCB-41/64/71/72	--	--	--	--	--
PCB-42	0.00015	--	--	--	0.000085
PCB-42/59	--	--	--	--	--
PCB-43	0.000019	--	--	--	0.00011
PCB-43/49	--	--	--	--	--
PCB-44	--	--	--	--	--
PCB-44/47/65	0.001	0.000111 J	0.000134 J	0.000183 J	0.0023
PCB-45	--	--	--	--	--
PCB-45/51	0.00044	--	--	--	0.0016
PCB-46	0.000043	--	--	--	0.00053
PCB-47	--	--	--	--	--
PCB-48	0.00012	--	--	--	0.000039
PCB-48/75	--	--	--	--	--
PCB-49/69	0.00051	--	--	--	0.0022
PCB-5	0.000002 U	--	--	--	0.000002 U
PCB-50	--	--	--	--	--
PCB-50/53	0.0002	--	--	--	0.0059
PCB-51	--	--	--	--	--
PCB-52	0.001	0.00016 J	0.000166 J	0.000284 J	0.0088
PCB-52/69	--	--	--	--	--
PCB-53	--	--	--	--	--
PCB-54	0.000025 J	--	--	--	0.0015
PCB-55	0.000002 U	--	--	--	0.000002 U
PCB-56	0.00031	--	--	--	0.00013
PCB-56/60	--	--	--	--	--
PCB-57	0.000002 U	--	--	--	0.000002 U
PCB-58	0.000002 U	--	--	--	0.000002 U
PCB-59/62/75	0.000044	--	--	--	0.000057
PCB-6	0.000027	--	--	--	0.000026
PCB-60	0.00017	--	--	--	0.000048
PCB-61/70	--	--	--	--	--
PCB-61/70/74/76	0.001	--	--	--	0.00057
PCB-62	--	--	--	--	--
PCB-63	0.000024	--	--	--	0.000014
PCB-64	0.00025	--	--	--	0.00012
PCB-65	--	--	--	--	--
PCB-66	0.00059	0.0000783 J	0.0000837 J	0.000155 J	0.00034
PCB-66/76	--	--	--	--	--
PCB-67	0.000014	--	--	--	0.000013
PCB-68	0.000014	--	--	--	0.0000085
PCB-7	0.0000057	--	--	--	0.000005
PCB-72	0.0000053	--	--	--	0.00003
PCB-73	0.000011	--	--	--	0.00011
PCB-74	--	--	--	--	--
PCB-77	0.000052	0.0000105	0.0000128	0.0000187	0.000039
PCB-78	0.000002 U	--	--	--	0.000002 U
PCB-79	0.000002 U	--	--	--	0.000002 U
PCB-8	0.000092	0.0000291 J	0.0000181 J	0.0000475 J	0.000081

LOCATION	SW/SD330	SW/SD337	SW/SD338	SW/SD339	SW/SD355
SAMPLE ID	SD330-20191203	SD337-20200226	SD338-20200226	SD339-20200226	SD355-20191204
SAMPLE DATE	20191203	20200226	20200226	20200226	20191204
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5
PCB-80	0.000002 U	--	--	--	0.0000046
PCB-81	0.0000026	5.48E-07 J	5.83E-07 J	7.51E-07 J	0.0000017 Z
PCB-82	0.0001	--	--	--	0.00011
PCB-83	0.000063	--	--	--	0.00016
PCB-83/112	--	--	--	--	--
PCB-84	0.00019	--	--	--	0.00071
PCB-84/92	--	--	--	--	--
PCB-85/116	--	--	--	--	--
PCB-85/116/117	0.00014	--	--	--	0.00017
PCB-86	--	--	--	--	--
PCB-86/87/97/109/119/125	0.00076	--	--	--	0.0018
PCB-87/117/125	--	--	--	--	--
PCB-88/91	0.00023	--	--	--	0.00059
PCB-89	0.0000019 J	--	--	--	0.000013
PCB-9	0.0000091	--	--	--	0.0000075
PCB-90/101/113	0.003	0.000774 J	0.00108	0.00163	0.0097
PCB-92	0.00044	--	--	--	0.002
PCB-93	--	--	--	--	--
PCB-93/100	0.000061	--	--	--	0.00018
PCB-94	0.00002	--	--	--	0.000054
PCB-95	0.0017	--	--	--	0.013
PCB-96	0.000027	--	--	--	0.00041
PCB-97	--	--	--	--	--
PCB-98/102	0.000046	--	--	--	0.00011
PCB-99	0.00051	--	--	--	0.001
PENTACHLOROBIPHENYLS	0.011 J	--	--	--	0.037 J
TEQ DIOXIN-LIKE PCBs (BIRD)	4.6427E-06	6.0885E-07	7.4546E-07	1.0804E-06	2.3648E-06
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	4.6431E-06	1.0926E-06	1.2909E-06	1.5475E-06	2.5063E-06
TEQ DIOXIN-LIKE PCBs (FISH)	1.0091E-07	4.632E-09	6.857E-09	1.0478E-08	3.1645E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	1.0093E-07	2.8821E-08	3.4127E-08	3.3834E-08	3.872E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.7624E-06	2.1077E-08	3.3177E-08	5.1494E-08	1.6578E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	1.7737E-06	6.4378E-07	7.3518E-07	6.5274E-07	3.5078E-07
TETRACHLOROBIPHENYLS	0.0064 J	--	--	--	0.023 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0019536	0.00067316	0.00107085	0.0016661	0.0054197
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.06965784	0.0100307	0.018418	0.0212473	0.301185
TOTAL PCB CONGENERS ZEROND	0.07161144	0.01070386	0.01948885	0.0229134	0.3066047
TOTAL PCB CONGENERS-NOAA	0.031332	0.0104403	0.019043	0.0223053	0.130821
TOTAL PCB CONGENERS-NOAA HALFND	0.07163582	0.01071344	0.01949965	0.02292265	0.3066356
TOTAL PCB CONGENERS-NOAA X2	0.062664	0.0208806	0.038086	0.0446106	0.261642
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.062664	0.0208806	0.038086	0.0446106	0.261642
TRICHLOROBIPHENYLS	0.0017 J	--	--	--	0.0024 J
DIOXINS/FURANS (NG/KG)					
1,2,3,4,6,7,8,9-OCDD	150	133	512	283	46
1,2,3,4,6,7,8,9-OCDF	7.3 J	7.09 J	34.9	9.31 J	4.3 J
1,2,3,4,6,7,8-HPCDD	11	8.77	35.5	13.8	4.6 J
1,2,3,4,6,7,8-HPCDF	5.4	3.96 J	18.7	5.58	3.5 J
1,2,3,4,7,8,9-HPCDF	2.2 U	4.69 U	1.1 J	4.91 U	2.2 U
1,2,3,4,7,8-HXCDD	1.4 U	4.69 U	0.761 Z	4.91 U	1.5 U
1,2,3,4,7,8-HXCDF	2.1 J	0.563 Z	2.57 J	2.34 J	2.9 J
1,2,3,6,7,8-HXCDD	1.2 U	0.527 J	1.85 J	0.992 J	1.2 U
1,2,3,6,7,8-HXCDF	1.8 U	0.227 J	1.01 J	0.45 Z	1.9 U
1,2,3,7,8,9-HXCDD	2.3 U	4.69 U	1.37 J	0.509 Z	2.4 U
1,2,3,7,8,9-HXCDF	1.4 U	4.69 U	4.64 U	4.91 U	1.5 U
1,2,3,7,8-PECDD	1.8 U	4.69 U	0.735 Z	4.91 U	1.9 U
1,2,3,7,8-PECDF	3.9 J	1.35 J	3.88 J	0.485 J	3.1 J
2,3,4,6,7,8-HXCDF	0.92 U	0.293 Z	1.37 J	0.526 J	0.95 U
2,3,4,7,8-PECDF	1.6 J	4.69 U	1.03 Z	0.823 Z	1.3 J
2,3,7,8-TCDD	0.33 U	0.938 U	0.928 U	0.982 U	0.23 U
2,3,7,8-TCDF	3.5	0.743 J	2.13	2.34 Z	1
TEQ DIOXINS (BIRD)	5.78073	1.053949	5.25974	3.702751	2.94463
TEQ DIOXINS (BIRD) HALFND	7.21873	6.822649	5.95574	7.041551	4.40163
TEQ DIOXINS (FISH)	1.46073	0.280599	2.74639	0.998191	1.18963
TEQ DIOXINS (FISH) HALFND	3.11023	5.720999	3.44239	5.441741	2.87613
TEQ DIOXINS (HUMANS/MAMMALS)	1.36819	0.445127	2.98357	1.258643	0.96909
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	2.89519	4.689577	3.67957	4.720193	2.51759
TOTAL HPCDD	20 J	16.6 J	68.4 J	27.4 J	8.3 J
TOTAL HPCDF	5.4 J	3.96 J	20.3 J	12.1 J	3.5 J
TOTAL HXCDD	14 J	1.95 J	17.6 J	2.78 J	1.2 UJ
TOTAL HXCDF	8.9 J	3.2 J	21.2 J	6.52 J	8.1 J
TOTAL PECDD	2 J	0.625 J	1.96 J	11.5 J	1.9 UJ
TOTAL PECDF	20 J	4.12 J	20.4 J	8.54 J	13 J
TOTAL TCDD	3.4 J	1.56 J	5.67 J	8.84 J	1.1 J
TOTAL TCDF	15 J	3.11 J	8.77 J	6.42 J	4.4 J
METALS (MG/KG)					
ALUMINUM	2630	5960	4450	3630	2610
ANTIMONY	0.87 U	1.1	1.1 U	1 U	0.99 U
ARSENIC	3.8	6.5	5.1	7.6	4
BARIUM	46.9	82.8	92.8	132	49.7
BERYLLIUM	0.45	1.2	0.82	0.82	0.49 U
CADMIUM	0.17 J	0.48 U	0.55 U	0.51 U	0.13 J
CALCIUM	1180	2730	2220	2590	3320

TABLE 21

SEDIMENT ANALYTICAL DATA - ARBUCKLE CREEK
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD330	SW/SD337	SW/SD338	SW/SD339	SW/SD355
SAMPLE ID	SD330-20191203	SD337-20200226	SD338-20200226	SD339-20200226	SD355-20191204
SAMPLE DATE	20191203	20200226	20200226	20200226	20191204
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek	Arbuckle Creek
SUBMATRIX	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5
CHROMIUM	7	17.8	9.7	139	9.5
COBALT	5	14.1	17.5	15.3 J	5.3
COPPER	10.8	19.7	18.4	19.4	10.5
CYANIDE	0.6 U	0.66 U	0.75 U	0.67 U	0.65 U
IRON	17300	42500	32800	24900	10000
LEAD	35.7	86.7	27	28.8	20.2
MAGNESIUM	773	2110	1450	1060	854
MANGANESE	270	799	1240	1300	262
MERCURY	0.34	0.11 U	0.14 U	0.12 U	0.12 U
NICKEL	12.1	32.9	26.2	31	8.7
POTASSIUM	569	744	593	540	419 J
SELENIUM	2.2 U	0.36 J	0.36 J	0.44 J	2.5 U
SILVER	0.43 U	0.48 U	0.55 U	0.51 U	0.54
SODIUM	422 UJ	458 UJ	549 UJ	524 UJ	498 UJ
THALLIUM	0.43 U	0.48 U	0.55 U	0.51 U	0.49 U
VANADIUM	5.7	12.3	8.3	11.1	4.5
ZINC	76.9	146	140	140	87.3
MISCELLANEOUS (%)					
TOTAL SOLIDS	--	--	--	71	73
MISCELLANEOUS (MG/KG)					
TOTAL ORGANIC CARBON	--	--	--	46100	22400

TABLE 22

SOIL ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SB-001	SB-002	SB-003	SB-009	SEC-SS-BH-01	SEC-SS-T6-04	SS-021	SS-026	SS-028
SAMPLE ID	SB-01	SB-02	SB-03	SB-009	SEC-SS-BH-01	SEC-SS-T6-04	SS-021	SS-026	SS-028
SAMPLE DATE	20170613	20170613	20170613	20170615	20171213	20171213	20170615	20170615	20170613
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
SUBMATRIX	SB	SB	SB	SB	SS	SS	SS	SS	SS
TOP DEPTH	42	42	24	42	0	0	0	0	0
BOTTOM DEPTH	48	48	27	48	6	6	6	6	6
PCBS (MG/KG)									
AROCLOR-1016	0.052 U	0.046 U	0.038 U	0.048 U	0.07 UJ	0.058 U	0.048 U	0.067 U	0.17 U
AROCLOR-1221	0.052 U	0.046 U	0.038 U	0.048 U	0.07 UJ	0.058 U	0.048 U	0.067 U	0.17 U
AROCLOR-1232	0.052 U	0.046 U	0.038 U	0.048 U	0.07 UJ	0.058 U	0.048 U	0.067 U	0.17 U
AROCLOR-1242	0.052 U	0.046 U	0.038 U	0.048 U	0.07 UJ	0.058 U	0.048 U	0.067 U	0.17 U
AROCLOR-1248	0.052 U	0.046 U	0.038 U	0.048 U	0.07 UJ	0.058 U	0.048 U	0.067 U	0.17 U
AROCLOR-1254	0.052 U	0.046 U	0.038 U	0.048 U	0.07 UJ	0.058 U	0.048 U	0.067 U	0.17 U
AROCLOR-1260	0.052 U	0.046 U	0.038 U	0.048 U	0.038 J	0.0074 J	0.28	0.66	0.46
AROCLOR-1262	0.052 U	0.046 U	0.038 U	0.048 U	0.07 UJ	0.058 U	0.048 U	0.067 U	0.17 U
AROCLOR-1268	0.052 U	0.046 U	0.038 U	0.048 U	0.07 UJ	0.058 U	0.048 U	0.067 U	0.17 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U	0.038	0.0074	0.28	0.66	0.46
TOTAL AROCLOR HALFND	0.234	0.207	0.171	0.216	0.318	0.2394	0.472	0.928	1.14
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HPCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HPCDF	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDD	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HXCDF	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDD	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PECDF	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HXCDF	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PECDF	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (FISH) HALFND	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	--	--	--	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	--	--	--	--	--
TOTAL HPCDD	--	--	--	--	--	--	--	--	--
TOTAL HPCDF	--	--	--	--	--	--	--	--	--
TOTAL HXCDD	--	--	--	--	--	--	--	--	--
TOTAL HXCDF	--	--	--	--	--	--	--	--	--
TOTAL PECDD	--	--	--	--	--	--	--	--	--
TOTAL PECDF	--	--	--	--	--	--	--	--	--
TOTAL TCDD	--	--	--	--	--	--	--	--	--
TOTAL TCDF	--	--	--	--	--	--	--	--	--

TABLE 22

SOIL ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-029	SS-030	SS-031	SS-032	SS-039	SS-125
SAMPLE ID	SS-029	SS-030	SS-031	SS-032	SS-039	SS-125
SAMPLE DATE	20170613	20170613	20170613	20170613	20170613	20180320
DUPLICATE						
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO	SO	SO
EVENT	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Removal Assessment	Site Investigation (Unspecified)
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
SUBMATRIX	SS	SS	SS	SS	SS	SS
TOP DEPTH	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6
PCBS (MG/KG)						
AROCLOR-1016	0.17 U	0.074 U	0.1 U	0.056 U	0.16 U	0.052 U
AROCLOR-1221	0.17 U	0.074 U	0.1 U	0.056 U	0.16 U	0.052 U
AROCLOR-1232	0.17 U	0.074 U	0.1 U	0.056 U	0.16 U	0.052 U
AROCLOR-1242	0.17 U	0.074 U	0.1 U	0.056 U	0.16 U	0.052 U
AROCLOR-1248	0.17 U	0.074 U	0.1 U	0.056 U	0.16 U	0.052 U
AROCLOR-1254	0.17 U	0.074 U	0.1 U	0.056 U	0.16 U	0.052 U
AROCLOR-1260	0.19	0.27	0.68	0.024 J	0.41	0.058
AROCLOR-1262	0.17 U	0.074 U	0.1 U	0.056 U	0.16 U	0.052 U
AROCLOR-1268	0.17 U	0.074 U	0.1 U	0.056 U	0.16 U	0.052 U
TOTAL AROCLOR	0.19	0.27	0.68	0.024	0.41	0.058
TOTAL AROCLOR HALFND	0.87	0.566	1.08	0.248	1.05	0.266
DIOXINS/FURANS (NG/KG)						
1,2,3,4,6,7,8,9-OCDD	--	71	130	75	--	--
1,2,3,4,6,7,8,9-OCDF	--	4.2 J	8.6 J	2.9 J	--	--
1,2,3,4,6,7,8-HPCDD	--	6.2	10	5.3	--	--
1,2,3,4,6,7,8-HPCDF	--	1.9 J	3.7 J	1.9 J	--	--
1,2,3,4,7,8,9-HPCDF	--	0.17 U	0.3 Z	0.26 Z	--	--
1,2,3,4,7,8-HXCDD	--	0.2 U	0.31 U	0.2 U	--	--
1,2,3,4,7,8-HXCDF	--	0.41 U	0.6 U	0.58 J	--	--
1,2,3,6,7,8-HXCDD	--	0.35 U	0.51 U	0.51 J	--	--
1,2,3,6,7,8-HXCDF	--	0.2 U	0.31 Z	0.4 J	--	--
1,2,3,7,8,9-HXCDD	--	0.25 Z	0.34 U	0.38 Z	--	--
1,2,3,7,8,9-HXCDF	--	0.14 U	0.25 U	0.25 U	--	--
1,2,3,7,8-PECDD	--	0.17 U	0.26 U	0.23 U	--	--
1,2,3,7,8-PECDF	--	0.23 U	0.34 J	0.49 J	--	--
2,3,4,6,7,8-HXCDF	--	0.18 Z	0.39 J	0.42 J	--	--
2,3,4,7,8-PECDF	--	0.17 U	0.34 J	0.61 J	--	--
2,3,7,8-TCDD	--	0.2 U	0.29 U	0.2 U	--	--
2,3,7,8-TCDF	--	0.33 J	0.43 Z	0.9 J	--	--
TEQ DIOXINS (BIRD)	--	0.40572	0.93786	1.77679	--	--
TEQ DIOXINS (BIRD) HALFND	--	0.73232	1.28266	2.00929	--	--
TEQ DIOXINS (FISH)	--	0.06972	0.34236	0.55809	--	--
TEQ DIOXINS (FISH) HALFND	--	0.39307	0.74161	0.83559	--	--
TEQ DIOXINS (HUMANS/MAMMALS)	--	0.17956	0.40678	0.61467	--	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	0.45936	0.78228	0.85217	--	--
TOTAL HPCDD	--	12 J	21 J	11 J	--	--
TOTAL HPCDF	--	4.5 J	9 J	1.9 J	--	--
TOTAL HXCDD	--	1 J	2.4 J	5 J	--	--
TOTAL HXCDF	--	1.7 J	4.2 J	3.2 J	--	--
TOTAL PECDD	--	0.085 UJ	0.52 J	2.8 J	--	--
TOTAL PECDF	--	1.1 J	2.3 J	5.9 J	--	--
TOTAL TCDD	--	0.088 UJ	0.22 J	3.2 J	--	--
TOTAL TCDF	--	1 J	0.88 J	10 J	--	--

TABLE 23

SURFACE WATER ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD306	SW/SD306	SW/SD307	SW/SD307	SW/SD308	SW/SD308	SW/SD309	SW/SD309	SW/SD310	SW/SD310	SW/SD311
SAMPLE ID	SW306-20191212	SW306-20191212-F	SW307-20191211	SW307-20191211-F	SW308-20191211	SW308-20191211-F	SW309-20191211	SW309-20191211-F	SW310-20191211	SW310-20191211-F	SW311-20191211
SAMPLE DATE	20191212	20191212	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
VOLATILES (UG/L)											
1,1,1-TRICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,1,2,2-TETRACHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,1,2-TRICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,1-DICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,1-DICHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,2,3-TRICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,2,4-TRICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DIBROMO-3-CHLOROPROPANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DIBROMOETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,2-DICHLOROPROPANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,3-DICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,4-DICHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2-BUTANONE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
2-HEXANONE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
4-METHYL-2-PENTANONE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
ACETONE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
BENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BROMOCHLOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BROMODICHLOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BROMOFORM	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BROMOMETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CARBON DISULFIDE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CARBON TETRACHLORIDE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CHLORODIBROMOMETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROFORM	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CHLOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--	0.93 J	--	5 U
CIS-1,2-DICHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CIS-1,3-DICHLOROPROPENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CYCLOHEXANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
DICHLORODIFLUOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
ETHYLBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
ISOPROPYLBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
M+P-XYLENES	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
METHYL ACETATE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
METHYL CYCLOHEXANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
METHYL TERT-BUTYL ETHER	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
METHYLENE CHLORIDE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
O-XYLENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
STYRENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
TETRACHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
TOLUENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
TRANS-1,2-DICHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
TRANS-1,3-DICHLOROPROPENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
TRICHLOROETHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
TRICHLOROFLUOROMETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
VINYL CHLORIDE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
SEMIVOLATILES (UG/L)											
1,1-BIPHENYL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,2,4,5-TETRACHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
1,4-DIOXANE	2 U	--	2 U	--	2 U	--	2 U	--	2 U	--	2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
2,3,4,6-TETRACHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2,4,5-TRICHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2,4,6-TRICHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2,4-DICHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2,4-DIMETHYLPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 UJ	--	5 U
2,4-DINITROPHENOL	10 R	--	10 U	--	10 U	--	10 R	--	10 R	--	10 U
2,4-DINITROTOLUENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2,6-DINITROTOLUENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2-CHLORONAPHTHALENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2-CHLOROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2-METHYLNAPHTHALENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
2-METHYLPHENOL	10 U	--	10 U	--	10 U	--	10 U	--	10 UJ	--	10 U
2-NITROANILINE	5 R	--	5 U	--	5 U	--	5 R	--	5 R	--	5 U
2-NITROPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
3&4-METHYLPHENOL	10 U	--	10 U	--	10 U	--	10 U	--	10 UJ	--	10 U
3,3'-DICHLOROBENZIDINE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
3-NITROANILINE	10 R	--	10 U	--	10 U	--	10 R	--	10 R	--	10 U
4,6-DINITRO-2-METHYLPHENOL	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
4-BROMOPHENYL PHENYL ETHER	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
4-CHLORO-3-METHYLPHENOL	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
4-CHLOROANILINE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
4-CHLOROPHENYL PHENYL ETHER	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
4-NITROANILINE	10 R	--	10 U	--	10 U	--	10 R	--	10 R	--	10 U
4-NITROPHENOL	10 R	--	10 U	--	10 U	--	10 R	--	10 R	--	10 U
ACENAPHTHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
ACENAPHTHYLENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
ACETOPHENONE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U

TABLE 23

SURFACE WATER ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD306	SW/SD306	SW/SD307	SW/SD307	SW/SD308	SW/SD308	SW/SD309	SW/SD309	SW/SD310	SW/SD310	SW/SD311
SAMPLE ID	SW306-20191212	SW306-20191212-F	SW307-20191211	SW307-20191211-F	SW308-20191211	SW308-20191211-F	SW309-20191211	SW309-20191211-F	SW310-20191211	SW310-20191211-F	SW311-20191211
SAMPLE DATE	20191212	20191212	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
ANTHRACENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
ATRAZINE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
BAP EQUIVALENT-HALFND	5 U	--	5 U	--	5 U	--	5 U	--	4.6066	--	5 U
BAP EQUIVALENT-POS	5 U	--	5 U	--	5 U	--	5 U	--	2.0816	--	5 U
BENZALDEHYDE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
BENZO(A)ANTHRACENE	5 U	--	5 U	--	5 U	--	5 U	--	1.3 J	--	5 U
BENZO(A)PYRENE	5 U	--	5 U	--	5 U	--	5 U	--	1.6 J	--	5 U
BENZO(B)FLUORANTHENE	5 U	--	5 U	--	5 U	--	5 U	--	2.4 J	--	5 U
BENZO(G,H,I)PERYLENE	5 U	--	5 U	--	5 U	--	5 U	--	1.5 J	--	5 U
BENZO(K)FLUORANTHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BIS(2-CHLOROETHOXY)METHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BIS(2-CHLOROETHYL)ETHER	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
BUTYL BENZYL PHTHALATE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
CAPROLACTAM	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
CARBAZOLE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
CHRYSENE	5 U	--	5 U	--	5 U	--	5 U	--	1.6 J	--	5 U
DIBENZO(A,H)ANTHRACENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
DIBENZOFURAN	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
DIETHYL PHTHALATE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
DIMETHYL PHTHALATE	5 U	--	1.4 J	--	1.4 J	--	5 U	--	1.9 J	--	1.9 J
DI-N-BUTYL PHTHALATE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
DI-N-OCTYL PHTHALATE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
FLUORANTHENE	10 U	--	10 U	--	10 U	--	10 U	--	2.7 J	--	10 U
FLUORENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROBUTADIENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
HEXACHLOROCYCLOPENTADIENE	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
HEXACHLOROETHANE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0 U	--	0 U	--	11.9	--	0 U
INDENO(1,2,3-CD)PYRENE	5 U	--	5 U	--	5 U	--	5 U	--	1.1 J	--	5 U
ISOPHORONE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0 U	--	0 U	--	2.7	--	0 U
NAPHTHALENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
NITROBENZENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
N-NITROSO-DI-N-PROPYLAMINE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
N-NITROSODIPHENYLAMINE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
PENTACHLOROPHENOL	10 U	--	10 U	--	10 U	--	10 U	--	10 U	--	10 U
PHENANTHRENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
PHENOL	10 U	--	10 U	--	10 U	--	10 U	--	3 J	--	10 U
PYRENE	5 U	--	5 U	--	5 U	--	5 U	--	2.4 J	--	5 U
TOTAL PAHS	0 U	--	0 U	--	0 U	--	0 U	--	14.6	--	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L											
2-METHYLNAPHTHALENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.07 J	--	0.1 U
ACENAPHTHENE	0.1 U	--	0.1 U	--	0.04 J	--	0.1 U	--	0.03 J	--	0.1 U
ACENAPHTHYLENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.22	--	0.1 U
ANTHRACENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.19	--	0.1 U
BAP EQUIVALENT-HALFND	0.1 U	--	0.11355	--	0.11322	--	0.1 U	--	1.929	--	0.11252
BAP EQUIVALENT-POS	0.1 U	--	0.003	--	0.00322	--	0.1 U	--	1.929	--	0.00202
BENZO(A)ANTHRACENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.96	--	0.1 U
BENZO(A)PYRENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	1.3	--	0.1 U
BENZO(B)FLUORANTHENE	0.1 U	--	0.03 J	--	0.03 J	--	0.1 U	--	1.7	--	0.02 J
BENZO(G,H,I)PERYLENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	1.2	--	0.1 U
BENZO(K)FLUORANTHENE	0.1 U	--	0.1 U	--	0.02 J	--	0.1 U	--	0.67	--	0.1 U
CHRYSENE	0.1 U	--	0.1 U	--	0.02 J	--	0.1 U	--	1.3	--	0.02 J
DIBENZO(A,H)ANTHRACENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.26	--	0.1 U
FLUORANTHENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	1.9	--	0.1 U
FLUORENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.04 J	--	0.1 U
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0.03	--	0.07	--	0 U	--	10.04	--	0.04
INDENO(1,2,3-CD)PYRENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.95	--	0.1 U
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0.04	--	0 U	--	3.07	--	0 U
NAPHTHALENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.06 J	--	0.1 U
PENTACHLOROPHENOL	0.2 U	--	0.2 U	--	0.02 J	--	0.2 U	--	0.2 U	--	0.2 U
PHENANTHRENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.63	--	0.1 U
PYRENE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	1.7	--	0.1 U
TOTAL PAHS	0.1	--	0.1	--	0.02	--	0.1	--	1.3	--	0.02
PESTICIDES (UG/L)											
4,4'-DDD	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
4,4'-DDE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
4,4'-DDT	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ALDRIN	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ALPHA-BHC	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ALPHA-CHLORDANE	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
BETA-BHC	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
DELTA-BHC	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
DIELDRIN	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDOSULFAN I	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
ENDOSULFAN II	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDOSULFAN SULFATE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN ALDEHYDE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
ENDRIN KETONE	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U
GAMMA-BHC (LINDANE)	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
GAMMA-CHLORDANE	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U

TABLE 23

SURFACE WATER ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD306	SW/SD306	SW/SD307	SW/SD307	SW/SD308	SW/SD308	SW/SD309	SW/SD309	SW/SD310	SW/SD310	SW/SD311
SAMPLE ID	SW306-20191212	SW306-20191212-F	SW307-20191211	SW307-20191211-F	SW308-20191211	SW308-20191211-F	SW309-20191211	SW309-20191211-F	SW310-20191211	SW310-20191211-F	SW311-20191211
SAMPLE DATE	20191212	20191212	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
HEPTACHLOR	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
HEPTACHLOR EPOXIDE	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U
METHOXYCHLOR	0.5 U	--	0.5 U	--	0.5 U	--	0.5 U	--	0.5 U	--	0.5 U
TOXAPHENE	5 U	--	5 U	--	5 U	--	5 U	--	5 U	--	5 U
PCBS (UG/L)											
AROCLOR-1016	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1221	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1232	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1242	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1248	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1254	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1260	1 U	--	1 U	--	1 U	--	1 U	--	0.25 J	--	1 U
AROCLOR-1262	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
AROCLOR-1268	1 U	--	1 U	--	1 U	--	1 U	--	1 U	--	1 U
TOTAL AROCLOR	0 U	--	0 U	--	0 U	--	0 U	--	0.25	--	0 U
TOTAL AROCLOR HALFND	4.5	--	4.5	--	4.5	--	4.5	--	4.25	--	4.5
PCB CONGENERS (UG/L)											
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--	--	--
PCB-105	0.0000127 J	--	0.0000619 J	--	0.0000106 Z	--	0.0000218 J	--	0.00191	--	0.000305
PCB-106	--	--	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--	--	--
PCB-114	0.0001 U	--	0.0000985 U	--	0.0001 U	--	0.0000983 U	--	0.0000981 J	--	0.0000184 Z
PCB-118	0.0000349 J	--	0.000205	--	0.0000328 J	--	0.0000779 J	--	0.00713	--	0.00117
PCB-12/13	--	--	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--	--	--
PCB-123	0.0001 U	--	0.0000985 U	--	0.0001 U	--	0.0000983 U	--	0.0000602 J	--	0.0000113 J
PCB-126	0.0001 U	--	0.0000985 U	--	0.0001 U	--	0.0000983 U	--	0.000101 U	--	0.0001 U
PCB-127	--	--	--	--	--	--	--	--	--	--	--
PCB-128/166	0.0000158 J	--	0.0000942 J	--	0.0000142 J	--	0.000037 J	--	0.00392	--	0.000621
PCB-129/138/163	0.000317	--	0.00176	--	0.000347	--	0.000717	--	0.076	--	0.0118
PCB-130	--	--	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--	--	--
PCB-14	--	--	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--	--	--
PCB-153/168	0.000385	--	0.00177	--	0.000369	--	0.000718	--	0.0756	--	0.0119
PCB-154	--	--	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--	--	--
PCB-156	0.000018 J	--	0.0000976 J	--	0.0002 U	--	0.0000426 J	--	0.00455	--	0.000629
PCB-156/157	--	--	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--	--	--
PCB-167	0.00000914 J	--	0.0000444 J	--	0.0001 U	--	0.0000146 J	--	0.00169	--	0.000254
PCB-169	0.0001 U	--	0.0000985 U	--	0.0001 U	--	0.0000983 U	--	0.000101 U	--	0.0001 U
PCB-17	--	--	--	--	--	--	--	--	--	--	--
PCB-170	0.000114	--	0.000664	--	0.000121	--	0.000248	--	0.03	--	0.00535

TABLE 23

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SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD306	SW/SD306	SW/SD307	SW/SD307	SW/SD308	SW/SD308	SW/SD309	SW/SD309	SW/SD310	SW/SD310	SW/SD311
SAMPLE ID	SW306-20191212	SW306-20191212-F	SW307-20191211	SW307-20191211-F	SW308-20191211	SW308-20191211-F	SW309-20191211	SW309-20191211-F	SW310-20191211	SW310-20191211-F	SW311-20191211
SAMPLE DATE	20191212	20191212	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
PCB-171/173	--	--	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--	--	--
PCB-18/30	0.00000496 Z	--	0.0000157 J	--	0.00000675 J	--	0.00000842 Z	--	0.000142 J	--	0.0000945 J
PCB-180/193	0.000347	--	0.00166	--	0.000293	--	0.000507	--	0.0673	--	0.0121
PCB-181	--	--	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--	--	--
PCB-187	0.000188	--	0.00093	--	0.000192	--	0.000407	--	0.0395	--	0.00754
PCB-188	--	--	--	--	--	--	--	--	--	--	--
PCB-189	0.00000616 J	--	0.000024 J	--	0.00000506 J	--	0.0000102 J	--	0.00112	--	0.000183
PCB-19	--	--	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--	--	--
PCB-195	0.0000246 J	--	0.000137	--	0.0000282 J	--	0.0000572 J	--	0.00712	--	0.00125
PCB-196	--	--	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--	--	--
PCB-20/28	0.0002 U	--	0.0000733 J	--	0.0002 U	--	0.000198 U	--	0.00116	--	0.000498
PCB-201	--	--	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--	--	--
PCB-206	0.0000161 J	--	0.0000785 J	--	0.0000129 J	--	0.0000322 J	--	0.00332	--	0.000689
PCB-207	--	--	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--	--	--
PCB-209	0.00000766 Z	--	0.0000363 J	--	0.00000308 J	--	0.0000164 J	--	0.000908	--	0.000216
PCB-21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--	--	--
PCB-44/47/65	0.0003 U	--	0.0000762 J	--	0.0003 U	--	0.000295 U	--	0.00103	--	0.000328
PCB-45/51	--	--	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--	--	--
PCB-52	0.0002 U	--	0.0000971 J	--	0.0002 U	--	0.000197 U	--	0.00179	--	0.000552
PCB-54	--	--	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--	--	--
PCB-66	0.0000112 J	--	0.0000777 J	--	0.0000152 J	--	0.0000228 J	--	0.00128	--	0.00036
PCB-67	--	--	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--	--	--

TABLE 23

SURFACE WATER ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD306	SW/SD306	SW/SD307	SW/SD307	SW/SD308	SW/SD308	SW/SD309	SW/SD309	SW/SD310	SW/SD310	SW/SD311
SAMPLE ID	SW306-20191212	SW306-20191212-F	SW307-20191211	SW307-20191211-F	SW308-20191211	SW308-20191211-F	SW309-20191211	SW309-20191211-F	SW310-20191211	SW310-20191211-F	SW311-20191211
SAMPLE DATE	20191212	20191212	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
PCB-77	0.0001 U	--	0.0000113 Z	--	0.0001 U	--	0.00000452 Z	--	0.00018	--	0.0000427 J
PCB-78	--	--	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--	--	--
PCB-8	0.0001 U	--	0.0000305 Z	--	0.0001 UJ	--	0.0000112 Z	--	0.000238	--	0.00014
PCB-80	--	--	--	--	--	--	--	--	--	--	--
PCB-81	0.0001 U	--	0.0000985 U	--	0.0001 U	--	0.0000983 U	--	0.000101 U	--	0.0001 U
PCB-82	--	--	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--	--	--
PCB-90/101/113	0.0000994 J	--	0.000513	--	0.000134 J	--	0.000221 J	--	0.0181	--	0.00349
PCB-92	--	--	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	3.571E-09	--	5.8368E-07	--	1.438E-09	--	2.3347E-07	--	9.7558E-06	--	2.2464E-06
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.2559E-05	--	1.0488E-05	--	1.2567E-05	--	1.0118E-05	--	1.9906E-05	--	1.2296E-05
TEQ DIOXIN-LIKE PCBs (FISH)	4.02E-10	--	3.294E-09	--	2.42E-10	--	1.287E-09	--	1.0079E-07	--	1.7123E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	2.834E-07	--	2.7712E-07	--	2.8399E-07	--	2.7456E-07	--	3.8107E-07	--	2.9462E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	2.426E-09	--	1.4117E-08	--	1.453E-09	--	5.465E-09	--	5.1475E-07	--	8.1391E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	6.5254E-06	--	6.4343E-06	--	6.529E-06	--	6.4127E-06	--	7.0949E-06	--	6.5964E-06
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0000809	--	0.0004442	--	0.00004846	--	0.00017162	--	0.0167383	--	0.0026134
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00153072	--	0.0080135	--	0.00153633	--	0.00300322	--	0.327408	--	0.0569285
TOTAL PCB CONGENERS ZEROND	0.00161162	--	0.0084577	--	0.00158479	--	0.00317484	--	0.3441463	--	0.0595419
TOTAL PCB CONGENERS-NOAA	0.00157832	--	0.0082804	--	0.00157973	--	0.00310292	--	0.336448	--	0.0584035
TOTAL PCB CONGENERS-NOAA HALFND	0.00231162	--	0.00870395	--	0.00243479	--	0.00376559	--	0.3442978	--	0.0596919
TOTAL PCB CONGENERS-NOAA X2	0.00315664	--	0.0165608	--	0.00315946	--	0.00620584	--	0.672896	--	0.116807
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.00395664	--	0.0165608	--	0.00395946	--	0.00689584	--	0.672896	--	0.116807
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (PG/L)											
1,2,3,4,6,7,8,9-OCDD	99.8 U	--	101 U	--	97 U	--	99.5 U	--	1230	--	457
1,2,3,4,6,7,8,9-OCDF	99.8 U	--	101 U	--	97 U	--	99.5 U	--	108	--	34.8 J
1,2,3,4,6,7,8-HPCDD	49.9 U	--	3.19 J	--	48.5 U	--	3.82 Z	--	102	--	38.1 J
1,2,3,4,6,7,8-HPCDF	49.9 U	--	50.7 U	--	48.5 U	--	49.7 U	--	45.4 J	--	16.4 J
1,2,3,4,7,8,9-HPCDF	49.9 U	--	50.7 U	--	48.5 U	--	49.7 U	--	49.2 U	--	50.1 U
1,2,3,4,7,8-HXCDD	49.9 U	--	50.7 U	--	48.5 U	--	49.7 U	--	49.2 U	--	50.1 U
1,2,3,4,7,8-HXCDF	49.9 U	--	50.7 U	--	48.5 U	--	49.7 U	--	49.2 U	--	50.1 U
1,2,3,6,7,8-HXCDD	49.9 U	--	50.7 U	--	48.5 U	--	49.7 U	--	49.2 U	--	50.1 U
1,2,3,6,7,8-HXCDF	49.9 U	--	50.7 U	--	48.5 U	--	49.7 U	--	49.2 U	--	50.1 U
1,2,3,7,8,9-HXCDD	49.9 U	--	50.7 U	--	48.5 U	--	49.7 U	--	49.2 U	--	50.1 U
1,2,3,7,8,9-HXCDF	49.9 U	--	50.7 U	--	48.5 U	--	49.7 U	--	49.2 U	--	50.1 U
1,2,3,7,8-PECDD	49.9 U	--	50.7 U	--	48.5 U	--	49.7 U	--	49.2 U	--	50.1 U
1,2,3,7,8-PECDF	49.9 U	--	50.7 U	--	48.5 U	--	49.7 U	--	72.1	--	50.1 U
2,3,4,6,7,8-HXCDF	49.9 U	--	50.7 U	--	48.5 U	--	49.7 U	--	49.2 U	--	50.1 U
2,3,4,7,8-PECDF	49.9 U	--	50.7 U	--	48.5 U	--	49.7 U	--	49.2 U	--	50.1 U
2,3,7,8-TCDD	9.98 U	--	10.1 U	--	9.7 U	--	9.95 U	--	9.85 U	--	10 U
2,3,7,8-TCDF	9.98 U	--	10.1 U	--	9.7 U	--	9.95 U	--	3.41 J	--	10 U
TEQ DIOXINS (BIRD)	9.98 U	--	0.00319	--	9.7 U	--	0.00382	--	11.3098	--	0.25128
TEQ DIOXINS (BIRD) HALFND	9.98 U	--	78.05129	--	9.7 U	--	76.56177	--	79.4568	--	77.13478
TEQ DIOXINS (FISH)	9.98 U	--	0.00319	--	9.7 U	--	0.00382	--	4.4653	--	0.25128
TEQ DIOXINS (FISH) HALFND	9.98 U	--	68.43729	--	9.7 U	--	67.11402	--	69.1683	--	67.62528
TEQ DIOXINS (HUMANS/MAMMALS)	9.98 U	--	0.0319	--	9.7 U	--	0.0382	--	4.3794	--	0.69254
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	9.98 U	--	57.5847	--	9.7 U	--	56.48305	--	58.7504	--	57.29454
TOTAL HPCDD	49.9 UJ	--	3.19 J	--	48.5 UJ	--	3.94 J	--	219	--	76 J
TOTAL HPCDF	49.9 UJ	--	2.01 J	--	48.5 UJ	--	1.99 J	--	107 J	--	38.1 J
TOTAL HXCDD	49.9 UJ	--	50.7 UJ	--	48.5 UJ	--	49.7 UJ	--	16.5 J	--	3.85 J
TOTAL HXCDF	49.9 UJ	--	50.7 UJ	--	48.5 UJ	--	49.7 UJ	--	64 J	--	19 J
TOTAL PECDD	49.9 UJ	--	50.7 UJ	--	48.5 UJ	--	49.7 UJ	--	5.77 J	--	2.74 J
TOTAL PECDF	49.9 UJ	--	50.7 UJ	--	48.5 UJ	--	49.7 UJ	--	187 J	--	8.55 J
TOTAL TCDD	9.98 UJ	--	10.1 UJ	--	9.7 UJ	--	9.95 UJ	--	9.85 UJ	--	10 UJ
TOTAL TCDF	9.98 UJ	--	10.1 UJ	--	9.7 UJ	--	9.95 UJ	--	51.8 J	--	4.15 J
METALS (UG/L)											
ALUMINUM	10 J	20 U	75.6	20 U	20 U	20 U	32.5	20 U	2480	20 U	579
ANTIMONY	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
ARSENIC	1 U	0.11 J	1.1	0.95 J	1.9	1.7	0.43 J	0.26 J	4.8	0.12 J	3.3
BARIUM	36	37.6	53.9	51.2	65.8	61.9	28.5	26.4	178	47.2	60.5
BERYLLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1	1 U	1 U
CADMIUM	1 U	1 U	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
CALCIUM	34200	36100	77000	76900	59000	58800	69300	66700	56900	48300	48300
CHROMIUM	2 U	2 U	0.27 J	0.14 J	2 U	2 U	0.15 J	2 U	3.7	2 U	0.8 J
COBALT	0.2 J	0.18 J	1 U	1 U	6.7	6.8	1.8	0.78 J	17.8	0.61 J	69.1
COPPER	1.1 J	2 U	6	3.7	2.4	2 U	3.7	0.83 J	52.2	0.75 J	12.3
CYANIDE	10 U	--	1.9 J	--	10 U	--	10 U	--	10 U	--	10 U
IRON	200 U	200 U	200 U	200 U	7000	5330	200 U	200 U	8190	200 U	73400
LEAD	0.08 J	1 U	2.5	0.05 J	1.1	1.1	1.5	0.06 J	108	0.04 J	15.4

TABLE 23

SURFACE WATER ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD306	SW/SD306	SW/SD307	SW/SD307	SW/SD308	SW/SD308	SW/SD309	SW/SD309	SW/SD310	SW/SD310	SW/SD311
SAMPLE ID	SW306-20191212	SW306-20191212-F	SW307-20191211	SW307-20191211-F	SW308-20191211	SW308-20191211-F	SW309-20191211	SW309-20191211-F	SW310-20191211	SW310-20191211-F	SW311-20191211
SAMPLE DATE	20191212	20191212	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211
DUPLICATE											
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
MAGNESIUM	8090	8120	6860	6770	13600	14000	20900	21200	15100	14000	16600
MANGANESE	25.8	26	41	2.5	939	908	45.3	17.4	3290	192	1590
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.32	0.2 U	0.2 U
NICKEL	4.3	4.5	1.9	1.2	10.8	10.9	71	68.8	36.7	2.7	107
POTASSIUM	2520	2540	5380	5130	3480	3200	3980	3640	5680	5140	4950
SELENIUM	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SILVER	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
SODIUM	2040	2060	4020	3840	6490	6370	5490	5190	3750	3470	3990
THALLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VANADIUM	0.04 J	5 U	5 U	5 U	5 U	5 U	5 U	0.1 J	7.4	0.1 J	5 U
ZINC	25.4	24.2	43.2	6.2	51.8	16.7	362	313	292	18.4	593

TABLE 23

SURFACE WATER ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD311	SW/SD311	SW/SD311	SW/SD312	SW/SD312	SW/SD314	SW/SD314	SW/SD315	SW/SD315	SW/SD316	SW/SD316
SAMPLE ID	SW311-20191211-D	SW311-20191211-F	SW311-20191211-F-D	SW312-20191211	SW312-20191211-F	SW314-20191210	SW314-20191210-F	SW315-20191210	SW315-20191210-F	SW316-20191210	SW316-20191210-F
SAMPLE DATE	20191211	20191211	20191211	20191211	20191211	20191210	20191210	20191210	20191210	20191210	20191210
DUPLICATE	SW311-20191211		SW311-20191211-F								
SAMPLE CODE	DUP	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
VOLATILES (UG/L)											
1,1,1-TRICHLOROETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,1,2,2-TETRACHLOROETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,1,2-TRICHLOROETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,1-DICHLOROETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,1-DICHLOROETHENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,2,3-TRICHLOROBENZENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,2,4-TRICHLOROBENZENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,2-DIBROMO-3-CHLOROPROPANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,2-DIBROMOETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,2-DICHLOROBENZENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,2-DICHLOROETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,2-DICHLOROPROPANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,3-DICHLOROBENZENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,4-DICHLOROBENZENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
2-BUTANONE	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
2-HEXANONE	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
4-METHYL-2-PENTANONE	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
ACETONE	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
BENZENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
BROMOCHLOROMETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
BROMODICHLOROMETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
BROMOFORM	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
BROMOMETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
CARBON DISULFIDE	5 U	--	--	5 U	--	5 U	--	5 UJ	--	5 UJ	--
CARBON TETRACHLORIDE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
CHLOROBENZENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
CHLORODIBROMOMETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
CHLOROETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
CHLOROFORM	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
CHLOROMETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
CIS-1,2-DICHLOROETHENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
CIS-1,3-DICHLOROPROPENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
CYCLOHEXANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
DICHLORODIFLUOROMETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
ETHYLBENZENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
ISOPROPYLBENZENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
M+P-XYLENES	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
METHYL ACETATE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
METHYL CYCLOHEXANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
METHYL TERT-BUTYL ETHER	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
METHYLENE CHLORIDE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
O-XYLENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
STYRENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
TETRACHLOROETHENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
TOLUENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
TRANS-1,2-DICHLOROETHENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
TRANS-1,3-DICHLOROPROPENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
TRICHLOROETHENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
TRICHLOROFLUOROMETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
VINYL CHLORIDE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
SEMIVOLATILES (UG/L)											
1,1-BIPHENYL	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,2,4,5-TETRACHLOROBENZENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
1,4-DIOXANE	2 U	--	--	2 U	--	2 U	--	2 U	--	2 U	--
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
2,3,4,6-TETRACHLOROPHENOL	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
2,4,5-TRICHLOROPHENOL	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
2,4,6-TRICHLOROPHENOL	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
2,4-DICHLOROPHENOL	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
2,4-DIMETHYLPHENOL	5 U	--	--	5 UJ	--	5 U	--	5 U	--	5 U	--
2,4-DINITROPHENOL	10 U	--	--	10 R	--	10 U	--	10 U	--	10 U	--
2,4-DINITROTOLUENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
2,6-DINITROTOLUENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
2-CHLORONAPHTHALENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
2-CHLOROPHENOL	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
2-METHYLNAPHTHALENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
2-METHYLPHENOL	10 U	--	--	10 UJ	--	10 U	--	10 U	--	10 U	--
2-NITROANILINE	5 U	--	--	5 R	--	5 U	--	5 U	--	5 U	--
2-NITROPHENOL	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
3&4-METHYLPHENOL	10 U	--	--	10 UJ	--	10 U	--	10 U	--	10 U	--
3,3'-DICHLOROBENZIDINE	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
3-NITROANILINE	10 U	--	--	10 R	--	10 U	--	10 U	--	10 U	--
4,6-DINITRO-2-METHYLPHENOL	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
4-BROMOPHENYL PHENYL ETHER	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
4-CHLORO-3-METHYLPHENOL	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
4-CHLOROANILINE	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
4-CHLOROPHENYL PHENYL ETHER	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
4-NITROANILINE	10 U	--	--	10 R	--	10 U	--	10 U	--	10 U	--
4-NITROPHENOL	10 U	--	--	10 R	--	10 U	--	10 U	--	10 U	--
ACENAPHTHENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
ACENAPHTHYLENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
ACETOPHENONE	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--

TABLE 23

SURFACE WATER ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD311	SW/SD311	SW/SD311	SW/SD312	SW/SD312	SW/SD314	SW/SD314	SW/SD315	SW/SD315	SW/SD316	SW/SD316
SAMPLE ID	SW311-20191211-D	SW311-20191211-F	SW311-20191211-F-D	SW312-20191211	SW312-20191211-F	SW314-20191210	SW314-20191210-F	SW315-20191210	SW315-20191210-F	SW316-20191210	SW316-20191210-F
SAMPLE DATE	20191211	20191211	20191211	20191211	20191211	20191210	20191210	20191210	20191210	20191210	20191210
DUPLICATE	SW311-20191211		SW311-20191211-F								
SAMPLE CODE	DUP	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
ANTHRACENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
ATRAZINE	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
BAP EQUIVALENT-HALFND	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
BAP EQUIVALENT-POS	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
BENZALDEHYDE	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
BENZO(A)ANTHRACENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
BENZO(A)PYRENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
BENZO(B)FLUORANTHENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
BENZO(G,H,I)PERYLENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
BENZO(K)FLUORANTHENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
BIS(2-CHLOROETHOXY)METHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
BIS(2-CHLOROETHYL)ETHER	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
BUTYL BENZYL PHTHALATE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
CAPROLACTAM	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
CARBAZOLE	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
CHRYSENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
DIBENZO(A,H)ANTHRACENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
DIBENZOFURAN	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
DIETHYL PHTHALATE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
DIMETHYL PHTHALATE	2.4 J	--	--	5 U	--	5 U	--	2.5 J	--	2.5 J	--
DI-N-BUTYL PHTHALATE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
DI-N-OCTYL PHTHALATE	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
FLUORANTHENE	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
FLUORENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
HEXACHLOROBENZENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
HEXACHLOROBUTADIENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
HEXACHLOROCYCLOPENTADIENE	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
HEXACHLOROETHANE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
HIGH MOLECULAR WEIGHT PAHS	0 U	--	--	0 U	--	0 U	--	0 U	--	0 U	--
INDENO(1,2,3-CD)PYRENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
ISOPHORONE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
LOW MOLECULAR WEIGHT PAHS	0 U	--	--	0 U	--	0 U	--	0 U	--	0 U	--
NAPHTHALENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
NITROBENZENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
N-NITROSO-DI-N-PROPYLAMINE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
N-NITROSODIPHENYLAMINE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
PENTACHLOROPHENOL	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
PHENANTHRENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
PHENOL	10 U	--	--	10 U	--	10 U	--	10 U	--	1.1 J	--
PYRENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
TOTAL PAHS	0 U	--	--	0 U	--	0 U	--	0 U	--	0 U	--
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L											
2-METHYLNAPHTHALENE	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ACENAPHTHENE	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ACENAPHTHYLENE	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ANTHRACENE	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
BAP EQUIVALENT-HALFND	0.10334	--	--	0.1 U	--	0.13147	--	0.08153	--	0.1 U	--
BAP EQUIVALENT-POS	0.05334	--	--	0.1 U	--	0.08147	--	0.02603	--	0.1 U	--
BENZO(A)ANTHRACENE	0.03 J	--	--	0.1 U	--	0.05 J	--	0.02 J	--	0.1 U	--
BENZO(A)PYRENE	0.04 J	--	--	0.1 U	--	0.06 J	--	0.02 J	--	0.1 U	--
BENZO(B)FLUORANTHENE	0.07 J	--	--	0.1 U	--	0.11	--	0.04 J	--	0.1 U	--
BENZO(G,H,I)PERYLENE	0.04 J	--	--	0.1 U	--	0.06 J	--	0.03 J	--	0.1 U	--
BENZO(K)FLUORANTHENE	0.03 J	--	--	0.1 U	--	0.04 J	--	0.1 U	--	0.1 U	--
CHRYSENE	0.04 J	--	--	0.1 U	--	0.07 J	--	0.03 J	--	0.1 U	--
DIBENZO(A,H)ANTHRACENE	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
FLUORANTHENE	0.06 J	--	--	0.1 U	--	0.09 J	--	0.04 J	--	0.1 U	--
FLUORENE	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
HIGH MOLECULAR WEIGHT PAHS	0.33	--	--	0 U	--	0.52	--	0.19	--	0 U	--
INDENO(1,2,3-CD)PYRENE	0.03 J	--	--	0.1 U	--	0.05 J	--	0.1 U	--	0.1 U	--
LOW MOLECULAR WEIGHT PAHS	0.08	--	--	0 U	--	0.13	--	0.07	--	0 U	--
NAPHTHALENE	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
PENTACHLOROPHENOL	0.2 U	--	--	0.2 U	--	0.2 U	--	0.2 U	--	0.2 U	--
PHENANTHRENE	0.02 J	--	--	0.1 U	--	0.04 J	--	0.03 J	--	0.1 U	--
PYRENE	0.05 J	--	--	0.1 U	--	0.08 J	--	0.05 J	--	0.1 U	--
TOTAL PAHS	0.04	--	--	0.1	--	0.07	--	0.03	--	0.1	--
PESTICIDES (UG/L)											
4,4'-DDD	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
4,4'-DDE	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
4,4'-DDT	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ALDRIN	0.05 U	--	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
ALPHA-BHC	0.05 U	--	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
ALPHA-CHLORDANE	0.05 U	--	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
BETA-BHC	0.05 U	--	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
DELTA-BHC	0.05 U	--	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
DIELDRIN	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDOSULFAN I	0.05 U	--	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
ENDOSULFAN II	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDOSULFAN SULFATE	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDRIN	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDRIN ALDEHYDE	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
ENDRIN KETONE	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
GAMMA-BHC (LINDANE)	0.05 U	--	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
GAMMA-CHLORDANE	0.05 U	--	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--

TABLE 23

SURFACE WATER ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD311	SW/SD311	SW/SD311	SW/SD312	SW/SD312	SW/SD314	SW/SD314	SW/SD315	SW/SD315	SW/SD316	SW/SD316
SAMPLE ID	SW311-20191211-D	SW311-20191211-F	SW311-20191211-F-D	SW312-20191211	SW312-20191211-F	SW314-20191210	SW314-20191210-F	SW315-20191210	SW315-20191210-F	SW316-20191210	SW316-20191210-F
SAMPLE DATE	20191211	20191211	20191211	20191211	20191211	20191210	20191210	20191210	20191210	20191210	20191210
DUPLICATE	SW311-20191211		SW311-20191211-F								
SAMPLE CODE	DUP	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
HEPTACHLOR	0.05 U	--	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
HEPTACHLOR EPOXIDE	0.05 U	--	--	0.05 U	--	0.05 U	--	0.05 U	--	0.05 U	--
METHOXYCHLOR	0.5 U	--	--	0.5 U	--	0.5 U	--	0.5 U	--	0.5 U	--
TOXAPHENE	5 U	--	--	5 U	--	5 U	--	5 U	--	5 U	--
PCBS (UG/L)											
AROCLOR-1016	1 U	--	--	1 U	--	1 U	--	1 U	--	1 U	--
AROCLOR-1221	1 U	--	--	1 U	--	1 U	--	1 U	--	1 U	--
AROCLOR-1232	1 U	--	--	1 U	--	1 U	--	1 U	--	1 U	--
AROCLOR-1242	1 U	--	--	1 U	--	1 U	--	1 U	--	1 U	--
AROCLOR-1248	1 U	--	--	1 U	--	1 U	--	1 U	--	1 U	--
AROCLOR-1254	1 U	--	--	1 U	--	1 U	--	1 U	--	1 U	--
AROCLOR-1260	1 U	--	--	1 U	--	0.1 J	--	1 U	--	1 U	--
AROCLOR-1262	1 U	--	--	1 U	--	1 U	--	1 U	--	1 U	--
AROCLOR-1268	1 U	--	--	1 U	--	1 U	--	1 U	--	1 U	--
TOTAL AROCLOR	0 U	--	--	0 U	--	0.1	--	0 U	--	0 U	--
TOTAL AROCLOR HALFND	4.5	--	--	4.5	--	4.1	--	4.5	--	4.5	--
PCB CONGENERS (UG/L)											
DICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEPTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
HEXACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
MONOCHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
NONACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
OCTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
PCB-1	--	--	--	--	--	--	--	--	--	--	--
PCB-10	--	--	--	--	--	--	--	--	--	--	--
PCB-103	--	--	--	--	--	--	--	--	--	--	--
PCB-104	--	--	--	--	--	--	--	--	--	--	--
PCB-105	0.00057	--	--	0.000012 J	--	0.000408	--	0.0000956 J	--	0.0000516 J	--
PCB-106	--	--	--	--	--	--	--	--	--	--	--
PCB-107	--	--	--	--	--	--	--	--	--	--	--
PCB-108/124	--	--	--	--	--	--	--	--	--	--	--
PCB-11	--	--	--	--	--	--	--	--	--	--	--
PCB-110/115	--	--	--	--	--	--	--	--	--	--	--
PCB-111	--	--	--	--	--	--	--	--	--	--	--
PCB-112	--	--	--	--	--	--	--	--	--	--	--
PCB-114	0.0000273 J	--	--	0.0000982 U	--	0.000101 U	--	0.000102 U	--	0.0000996 U	--
PCB-118	0.00208	--	--	0.0000426 J	--	0.00158	--	0.000295	--	0.000229	--
PCB-12/13	--	--	--	--	--	--	--	--	--	--	--
PCB-120	--	--	--	--	--	--	--	--	--	--	--
PCB-121	--	--	--	--	--	--	--	--	--	--	--
PCB-122	--	--	--	--	--	--	--	--	--	--	--
PCB-123	0.0000179 J	--	--	0.0000982 U	--	0.000101 U	--	0.000102 U	--	0.0000996 U	--
PCB-126	0.0001 U	--	--	0.0000982 U	--	0.000101 U	--	0.000102 U	--	0.0000996 U	--
PCB-127	--	--	--	--	--	--	--	--	--	--	--
PCB-128/166	0.00104	--	--	0.0000181 J	--	0.000825	--	0.000138 J	--	0.000149 J	--
PCB-129/138/163	0.0199	--	--	0.000382	--	0.016	--	0.00288	--	0.00227	--
PCB-130	--	--	--	--	--	--	--	--	--	--	--
PCB-131	--	--	--	--	--	--	--	--	--	--	--
PCB-132	--	--	--	--	--	--	--	--	--	--	--
PCB-133	--	--	--	--	--	--	--	--	--	--	--
PCB-134	--	--	--	--	--	--	--	--	--	--	--
PCB-135/151	--	--	--	--	--	--	--	--	--	--	--
PCB-136	--	--	--	--	--	--	--	--	--	--	--
PCB-137	--	--	--	--	--	--	--	--	--	--	--
PCB-139/140	--	--	--	--	--	--	--	--	--	--	--
PCB-14	--	--	--	--	--	--	--	--	--	--	--
PCB-141	--	--	--	--	--	--	--	--	--	--	--
PCB-142	--	--	--	--	--	--	--	--	--	--	--
PCB-143	--	--	--	--	--	--	--	--	--	--	--
PCB-144	--	--	--	--	--	--	--	--	--	--	--
PCB-145	--	--	--	--	--	--	--	--	--	--	--
PCB-146	--	--	--	--	--	--	--	--	--	--	--
PCB-147/149	--	--	--	--	--	--	--	--	--	--	--
PCB-148	--	--	--	--	--	--	--	--	--	--	--
PCB-15	--	--	--	--	--	--	--	--	--	--	--
PCB-150	--	--	--	--	--	--	--	--	--	--	--
PCB-152	--	--	--	--	--	--	--	--	--	--	--
PCB-153/168	0.0199	--	--	0.000407	--	0.0163	--	0.00306	--	0.00291	--
PCB-154	--	--	--	--	--	--	--	--	--	--	--
PCB-155	--	--	--	--	--	--	--	--	--	--	--
PCB-156	0.00112	--	--	0.0000214 J	--	0.00097	--	0.000158 J	--	0.000104 J	--
PCB-156/157	--	--	--	--	--	--	--	--	--	--	--
PCB-158	--	--	--	--	--	--	--	--	--	--	--
PCB-159	--	--	--	--	--	--	--	--	--	--	--
PCB-16	--	--	--	--	--	--	--	--	--	--	--
PCB-160	--	--	--	--	--	--	--	--	--	--	--
PCB-161	--	--	--	--	--	--	--	--	--	--	--
PCB-162	--	--	--	--	--	--	--	--	--	--	--
PCB-164	--	--	--	--	--	--	--	--	--	--	--
PCB-165	--	--	--	--	--	--	--	--	--	--	--
PCB-167	0.000452	--	--	0.00000934 J	--	0.000398	--	0.0000648 J	--	0.0000638 J	--
PCB-169	0.0001 U	--	--	0.0000982 U	--	0.000101 U	--	0.00000656 J	--	0.0000996 U	--
PCB-17	--	--	--	--	--	--	--	--	--	--	--
PCB-170	0.00829	--	--	0.000153	--	0.00715	--	0.00118	--	0.000726	--

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MINDEN, WEST VIRGINIA

LOCATION	SW/SD311	SW/SD311	SW/SD311	SW/SD312	SW/SD312	SW/SD314	SW/SD314	SW/SD315	SW/SD315	SW/SD316	SW/SD316
SAMPLE ID	SW311-20191211-D	SW311-20191211-F	SW311-20191211-F-D	SW312-20191211	SW312-20191211-F	SW314-20191210	SW314-20191210-F	SW315-20191210	SW315-20191210-F	SW316-20191210	SW316-20191210-F
SAMPLE DATE	20191211	20191211	20191211	20191211	20191211	20191210	20191210	20191210	20191210	20191210	20191210
DUPLICATE	SW311-20191211		SW311-20191211-F								
SAMPLE CODE	DUP	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
PCB-171/173	--	--	--	--	--	--	--	--	--	--	--
PCB-172	--	--	--	--	--	--	--	--	--	--	--
PCB-174	--	--	--	--	--	--	--	--	--	--	--
PCB-175	--	--	--	--	--	--	--	--	--	--	--
PCB-176	--	--	--	--	--	--	--	--	--	--	--
PCB-177	--	--	--	--	--	--	--	--	--	--	--
PCB-178	--	--	--	--	--	--	--	--	--	--	--
PCB-179	--	--	--	--	--	--	--	--	--	--	--
PCB-18/30	0.000137 J	--	--	0.00000611 J	--	0.000031 J	--	0.0000159 J	--	0.0000052 J	--
PCB-180/193	0.0185	--	--	0.000355	--	0.0165	--	0.00292	--	0.0022	--
PCB-181	--	--	--	--	--	--	--	--	--	--	--
PCB-182	--	--	--	--	--	--	--	--	--	--	--
PCB-183/185	--	--	--	--	--	--	--	--	--	--	--
PCB-184	--	--	--	--	--	--	--	--	--	--	--
PCB-186	--	--	--	--	--	--	--	--	--	--	--
PCB-187	0.0118	--	--	0.00022	--	0.00937	--	0.00171	--	0.000999	--
PCB-188	--	--	--	--	--	--	--	--	--	--	--
PCB-189	0.000294	--	--	0.00000673 J	--	0.000253	--	0.0000438 J	--	0.0000439 J	--
PCB-19	--	--	--	--	--	--	--	--	--	--	--
PCB-190	--	--	--	--	--	--	--	--	--	--	--
PCB-191	--	--	--	--	--	--	--	--	--	--	--
PCB-192	--	--	--	--	--	--	--	--	--	--	--
PCB-194	--	--	--	--	--	--	--	--	--	--	--
PCB-195	0.00187	--	--	0.000035 J	--	0.00155	--	0.000249	--	0.000142	--
PCB-196	--	--	--	--	--	--	--	--	--	--	--
PCB-197/200	--	--	--	--	--	--	--	--	--	--	--
PCB-198/199	--	--	--	--	--	--	--	--	--	--	--
PCB-2	--	--	--	--	--	--	--	--	--	--	--
PCB-20/28	0.000801	--	--	0.000196 U	--	0.000201 J	--	0.0000646 J	--	0.000199 U	--
PCB-201	--	--	--	--	--	--	--	--	--	--	--
PCB-202	--	--	--	--	--	--	--	--	--	--	--
PCB-203	--	--	--	--	--	--	--	--	--	--	--
PCB-204	--	--	--	--	--	--	--	--	--	--	--
PCB-205	--	--	--	--	--	--	--	--	--	--	--
PCB-206	0.00107	--	--	0.0000176 J	--	0.000773	--	0.000157	--	0.0000846 J	--
PCB-207	--	--	--	--	--	--	--	--	--	--	--
PCB-208	--	--	--	--	--	--	--	--	--	--	--
PCB-209	0.000416	--	--	0.00000587 J	--	0.00024	--	0.0000754 J	--	0.0000282 J	--
PCB-21/33	--	--	--	--	--	--	--	--	--	--	--
PCB-22	--	--	--	--	--	--	--	--	--	--	--
PCB-23	--	--	--	--	--	--	--	--	--	--	--
PCB-24	--	--	--	--	--	--	--	--	--	--	--
PCB-25	--	--	--	--	--	--	--	--	--	--	--
PCB-26/29	--	--	--	--	--	--	--	--	--	--	--
PCB-27	--	--	--	--	--	--	--	--	--	--	--
PCB-3	--	--	--	--	--	--	--	--	--	--	--
PCB-31	--	--	--	--	--	--	--	--	--	--	--
PCB-32	--	--	--	--	--	--	--	--	--	--	--
PCB-34	--	--	--	--	--	--	--	--	--	--	--
PCB-35	--	--	--	--	--	--	--	--	--	--	--
PCB-36	--	--	--	--	--	--	--	--	--	--	--
PCB-37	--	--	--	--	--	--	--	--	--	--	--
PCB-38	--	--	--	--	--	--	--	--	--	--	--
PCB-39	--	--	--	--	--	--	--	--	--	--	--
PCB-4	--	--	--	--	--	--	--	--	--	--	--
PCB-40/71	--	--	--	--	--	--	--	--	--	--	--
PCB-41	--	--	--	--	--	--	--	--	--	--	--
PCB-42	--	--	--	--	--	--	--	--	--	--	--
PCB-43	--	--	--	--	--	--	--	--	--	--	--
PCB-44/47/65	0.000563	--	--	0.000294 U	--	0.000169 J	--	0.000305 U	--	0.000299 U	--
PCB-45/51	--	--	--	--	--	--	--	--	--	--	--
PCB-46	--	--	--	--	--	--	--	--	--	--	--
PCB-48	--	--	--	--	--	--	--	--	--	--	--
PCB-49/69	--	--	--	--	--	--	--	--	--	--	--
PCB-5	--	--	--	--	--	--	--	--	--	--	--
PCB-50/53	--	--	--	--	--	--	--	--	--	--	--
PCB-52	0.000844	--	--	0.000196 U	--	0.000296	--	0.0000953 J	--	0.000199 U	--
PCB-54	--	--	--	--	--	--	--	--	--	--	--
PCB-55	--	--	--	--	--	--	--	--	--	--	--
PCB-56	--	--	--	--	--	--	--	--	--	--	--
PCB-57	--	--	--	--	--	--	--	--	--	--	--
PCB-58	--	--	--	--	--	--	--	--	--	--	--
PCB-59/62/75	--	--	--	--	--	--	--	--	--	--	--
PCB-6	--	--	--	--	--	--	--	--	--	--	--
PCB-60	--	--	--	--	--	--	--	--	--	--	--
PCB-61/70/74/76	--	--	--	--	--	--	--	--	--	--	--
PCB-63	--	--	--	--	--	--	--	--	--	--	--
PCB-64	--	--	--	--	--	--	--	--	--	--	--
PCB-66	0.00062	--	--	0.0000146 J	--	0.000244	--	0.0000602 J	--	0.0000244 J	--
PCB-67	--	--	--	--	--	--	--	--	--	--	--
PCB-68	--	--	--	--	--	--	--	--	--	--	--
PCB-7	--	--	--	--	--	--	--	--	--	--	--
PCB-72	--	--	--	--	--	--	--	--	--	--	--
PCB-73	--	--	--	--	--	--	--	--	--	--	--

TABLE 23

SURFACE WATER ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD311	SW/SD311	SW/SD311	SW/SD312	SW/SD312	SW/SD314	SW/SD314	SW/SD315	SW/SD315	SW/SD316	SW/SD316
SAMPLE ID	SW311-20191211-D	SW311-20191211-F	SW311-20191211-F-D	SW312-20191211	SW312-20191211-F	SW314-20191210	SW314-20191210-F	SW315-20191210	SW315-20191210-F	SW316-20191210	SW316-20191210-F
SAMPLE DATE	20191211	20191211	20191211	20191211	20191211	20191210	20191210	20191210	20191210	20191210	20191210
DUPLICATE	SW311-20191211		SW311-20191211-F								
SAMPLE CODE	DUP	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
PCB-77	0.0000764 J	--	--	0.00000277 J	--	0.0000472 J	--	0.0000114 Z	--	0.00000388 J	--
PCB-78	--	--	--	--	--	--	--	--	--	--	--
PCB-79	--	--	--	--	--	--	--	--	--	--	--
PCB-8	0.000198	--	--	0.0000133 Z	--	0.0000487 J	--	0.000102 U	--	0.0000996 U	--
PCB-80	--	--	--	--	--	--	--	--	--	--	--
PCB-81	0.0001 U	--	--	0.0000982 U	--	0.000101 U	--	0.000102 U	--	0.0000996 U	--
PCB-82	--	--	--	--	--	--	--	--	--	--	--
PCB-83	--	--	--	--	--	--	--	--	--	--	--
PCB-84	--	--	--	--	--	--	--	--	--	--	--
PCB-85/116/117	--	--	--	--	--	--	--	--	--	--	--
PCB-86/87/97/109/119/125	--	--	--	--	--	--	--	--	--	--	--
PCB-88/91	--	--	--	--	--	--	--	--	--	--	--
PCB-89	--	--	--	--	--	--	--	--	--	--	--
PCB-9	--	--	--	--	--	--	--	--	--	--	--
PCB-90/101/113	0.00579	--	--	0.000121 J	--	0.00397	--	0.000798	--	0.00048	--
PCB-92	--	--	--	--	--	--	--	--	--	--	--
PCB-93/100	--	--	--	--	--	--	--	--	--	--	--
PCB-94	--	--	--	--	--	--	--	--	--	--	--
PCB-95	--	--	--	--	--	--	--	--	--	--	--
PCB-96	--	--	--	--	--	--	--	--	--	--	--
PCB-98/102	--	--	--	--	--	--	--	--	--	--	--
PCB-99	--	--	--	--	--	--	--	--	--	--	--
PENTACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TEQ DIOXIN-LIKE PCBs (BIRD)	4.0202E-06	--	--	1.4243E-07	--	2.5201E-06	--	6.0596E-07	--	2.1293E-07	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.407E-05	--	--	1.0017E-05	--	1.2676E-05	--	1.0812E-05	--	1.0228E-05	--
TEQ DIOXIN-LIKE PCBs (FISH)	3.0445E-08	--	--	7.36E-10	--	2.2765E-08	--	4.754E-09	--	2.849E-09	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	3.0795E-07	--	--	2.7373E-07	--	3.0354E-07	--	2.8576E-07	--	2.7974E-07	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	1.4448E-07	--	--	3.038E-09	--	1.1299E-07	--	2.1766E-07	--	1.5157E-08	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	6.6595E-06	--	--	6.4037E-06	--	6.6962E-06	--	5.336E-06	--	6.5071E-06	--
TETRACHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0046376	--	--	0.00009484	--	0.0036562	--	0.00067516	--	0.00049618	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.091739	--	--	0.00174858	--	0.0736677	--	0.0134034	--	0.0100184	--
TOTAL PCB CONGENERS ZEROND	0.0963766	--	--	0.00184342	--	0.0773239	--	0.01407856	--	0.01051458	--
TOTAL PCB CONGENERS-NOAA	0.094389	--	--	0.00180318	--	0.0756557	--	0.013794	--	0.010299	--
TOTAL PCB CONGENERS-NOAA HALFND	0.0965266	--	--	0.00243192	--	0.0775764	--	0.01448606	--	0.01116188	--
TOTAL PCB CONGENERS-NOAA X2	0.188778	--	--	0.00360636	--	0.1513114	--	0.027588	--	0.020598	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.188778	--	--	0.00429236	--	0.1513114	--	0.027995	--	0.0213946	--
TRICHLOROBIPHENYLS	--	--	--	--	--	--	--	--	--	--	--
DIOXINS/FURANS (PG/L)											
1,2,3,4,6,7,8,9-OCDD	508	--	--	100 U	--	548	--	98.7 U	--	101 U	--
1,2,3,4,6,7,8,9-OCDF	47.4 J	--	--	5.29 J	--	102	--	98.7 U	--	101 U	--
1,2,3,4,6,7,8-HPCDD	43.5 J	--	--	50.1 U	--	66.9	--	4.74 JZ	--	4.17 J	--
1,2,3,4,6,7,8-HPCDF	20.4 J	--	--	50.1 U	--	85.1	--	49.4 U	--	1.59 JZ	--
1,2,3,4,7,8,9-HPCDF	49.1 U	--	--	50.1 U	--	49.8 U	--	49.4 U	--	50.3 U	--
1,2,3,4,7,8-HXCDD	49.1 U	--	--	50.1 U	--	49.8 U	--	49.4 U	--	50.3 U	--
1,2,3,4,7,8-HXCDF	49.1 U	--	--	50.1 U	--	7.8 J	--	49.4 U	--	50.3 U	--
1,2,3,6,7,8-HXCDD	49.1 U	--	--	50.1 U	--	3.86 JZ	--	49.4 U	--	50.3 U	--
1,2,3,6,7,8-HXCDF	49.1 U	--	--	50.1 U	--	2.77 JZ	--	49.4 U	--	50.3 U	--
1,2,3,7,8,9-HXCDD	49.1 U	--	--	50.1 U	--	3.62 J	--	49.4 U	--	50.3 U	--
1,2,3,7,8,9-HXCDF	49.1 U	--	--	50.1 U	--	49.8 U	--	49.4 U	--	50.3 U	--
1,2,3,7,8-PECDD	49.1 U	--	--	50.1 U	--	49.8 U	--	49.4 U	--	50.3 U	--
1,2,3,7,8-PECDF	49.1 U	--	--	50.1 U	--	16.4 J	--	49.4 U	--	1.15 JZ	--
2,3,4,6,7,8-HXCDF	49.1 U	--	--	50.1 U	--	2.69 JZ	--	49.4 U	--	50.3 U	--
2,3,4,7,8-PECDF	49.1 U	--	--	50.1 U	--	49.8 U	--	49.4 U	--	50.3 U	--
2,3,7,8-TCDD	9.81 U	--	--	10 U	--	9.95 U	--	9.87 U	--	10.1 U	--
2,3,7,8-TCDF	9.81 U	--	--	10 U	--	9.95 U	--	9.87 U	--	10.1 U	--
TEQ DIOXINS (BIRD)	0.30304	--	--	0.000529	--	4.3495	--	0.00474	--	0.13507	--
TEQ DIOXINS (BIRD) HALFND	75.66154	--	--	77.164579	--	68.0835	--	76.08061	--	74.88067	--
TEQ DIOXINS (FISH)	0.30304	--	--	0.000529	--	3.2037	--	0.00474	--	0.07757	--
TEQ DIOXINS (FISH) HALFND	66.33729	--	--	67.655079	--	60.96645	--	66.69936	--	66.50467	--
TEQ DIOXINS (HUMANS/MAMMALS)	0.80562	--	--	0.001587	--	4.281	--	0.0474	--	0.0921	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	56.28312	--	--	57.119587	--	47.3525	--	56.14051	--	56.2289	--
TOTAL HPCDD	85.7 J	--	--	50.1 UJ	--	130 J	--	49.4 UJ	--	4.17 J	--
TOTAL HPCDF	45 J	--	--	2.67 J	--	159 J	--	49.4 UJ	--	50.3 UJ	--
TOTAL HXCDD	10.7 J	--	--	50.1 UJ	--	20.1 J	--	49.4 UJ	--	50.3 UJ	--
TOTAL HXCDF	14.6 J	--	--	50.1 UJ	--	55.2 J	--	49.4 UJ	--	0.966 J	--
TOTAL PECDD	49.1 UJ	--	--	50.1 UJ	--	2.33 J	--	49.4 UJ	--	50.3 UJ	--
TOTAL PECDF	14 J	--	--	50.1 UJ	--	34.4 J	--	0.77 J	--	50.3 UJ	--
TOTAL TCDD	9.81 UJ	--	--	10 UJ	--	9.95 UJ	--	9.87 UJ	--	10.1 UJ	--
TOTAL TCDF	9.81 UJ	--	--	10 UJ	--	2.91 J	--	9.87 UJ	--	10.1 UJ	--
METALS (UG/L)											
ALUMINUM	953	28.9	29.7	597	534	70.9	20 U	314	20 U	45.9	20 U
ANTIMONY	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
ARSENIC	4.4	0.13 J	0.11 J	0.27 J	1 U	0.47 J	0.39 J	1.2	0.55 J	0.65 J	0.46 J
BARIUM	68	39.5	39.1	26.7	25.5	18.5	11.7	45.9	33.5	45.2	37.1
BERYLLIUM	1.1	0.19 J	1 U	5.1	5.1	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	1 UJ	1 UJ	1 UJ	1.9	1.8	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM	46500	48500	48900	50000	50300	19200	14700	37400	37600	24100	20800
CHROMIUM	1.1 J	2 U	2 U	0.3 J	2 U	0.39 J	0.28 J	0.92 J	0.37 J	0.08 J	2 U
COBALT	80.6	57.7	60.1	169	168	0.29 J	0.12 J	1.5	0.19 J	0.31 J	0.11 J
COPPER	20.1	0.9 J	2 U	8.8 J	3.7	6.4	3.4	5.9	2.4	10.1	7.1
CYANIDE	10 U	--	--	10 U	--	10 U	--	10 U	--	10 U	--
IRON	102000	200 U	367	200 U	200 U	231	200 U	869	200 U	212	200 U
LEAD	25.6	1 UJ	1 UJ	3.7 J-	0.37 J	1.4	1 U	8	1 U	1.4	1 U

TABLE 23

SURFACE WATER ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD311	SW/SD311	SW/SD311	SW/SD312	SW/SD312	SW/SD314	SW/SD314	SW/SD315	SW/SD315	SW/SD316	SW/SD316
SAMPLE ID	SW311-20191211-D	SW311-20191211-F	SW311-20191211-F-D	SW312-20191211	SW312-20191211-F	SW314-20191210	SW314-20191210-F	SW315-20191210	SW315-20191210-F	SW316-20191210	SW316-20191210-F
SAMPLE DATE	20191211	20191211	20191211	20191211	20191211	20191210	20191210	20191210	20191210	20191210	20191210
DUPLICATE	SW311-20191211		SW311-20191211-F								
SAMPLE CODE	DUP	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
MAGNESIUM	17800	17200	16700	20200	20300	2250	1680	4030	3550	2770	2370
MANGANESE	1800	1330	1380	1590	1660	74.3	5.8	195	38.9	59.5	3
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	129	86.7	90.2	493	517	1.7	0.86 J	2.3	0.73 J	1.5	0.86 J
POTASSIUM	5320	4710	4630	5040	4520	5200	3310	6350	5700	4130	3900
SELENIUM	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SILVER	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.04 J	1 U	1 U
SODIUM	4180	3780	3650	5010	4580	6350	4520	15300	14300	13500	12400
THALLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VANADIUM	5 U	5 U	5 U	5 U	5 U	0.34 J	0.15 J	0.77 J	0.13 J	0.19 J	0.09 J
ZINC	701	482	488	1700	1710	73.3	15.6	83.7	22.8	55.6	15.4

LOCATION	SW/SD317	SW/SD317	SW/SD332	SW/SD332	SW/SD355	SW/SD355
SAMPLE ID	SW317-20191210	SW317-20191210-F	SW332-20191210	SW332-20191210-F	SW355-20191204	SW355-20191204-F
SAMPLE DATE	20191210	20191210	20191210	20191210	20191204	20191204
DUPLICATE						
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
VOLATILES (UG/L)						
1,1,1-TRICHLOROETHANE	5 U	--	5 U	--	5 U	--
1,1,2,2-TETRACHLOROETHANE	5 U	--	5 U	--	5 U	--
1,1,2-TRICHLOROETHANE	5 U	--	5 U	--	5 U	--
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	--	5 U	--	5 U	--
1,1-DICHLOROETHANE	5 U	--	5 U	--	5 U	--
1,1-DICHLOROETHENE	5 U	--	5 U	--	5 U	--
1,2,3-TRICHLOROBENZENE	5 U	--	5 U	--	5 U	--
1,2,4-TRICHLOROBENZENE	5 U	--	5 U	--	5 U	--
1,2-DIBROMO-3-CHLOROPROPANE	5 U	--	5 U	--	5 U	--
1,2-DIBROMOETHANE	5 U	--	5 U	--	5 U	--
1,2-DICHLOROBENZENE	5 U	--	5 U	--	5 U	--
1,2-DICHLOROETHANE	5 U	--	5 U	--	5 U	--
1,2-DICHLOROPROPANE	5 U	--	5 U	--	5 U	--
1,3-DICHLOROBENZENE	5 U	--	5 U	--	5 U	--
1,4-DICHLOROBENZENE	5 U	--	5 U	--	5 U	--
2-BUTANONE	10 U	--	10 U	--	10 U	--
2-HEXANONE	10 U	--	10 U	--	10 U	--
4-METHYL-2-PENTANONE	10 U	--	10 U	--	10 U	--
ACETONE	10 U	--	10 U	--	10 U	--
BENZENE	5 U	--	5 U	--	5 U	--
BROMOCHLOROMETHANE	5 U	--	5 U	--	5 U	--
BROMODICHLOROMETHANE	5 U	--	5 U	--	5 U	--
BROMOFORM	5 U	--	5 U	--	5 U	--
BROMOMETHANE	5 U	--	5 U	--	5 U	--
CARBON DISULFIDE	5 U	--	5 UJ	--	5 U	--
CARBON TETRACHLORIDE	5 U	--	5 U	--	5 U	--
CHLOROBENZENE	5 U	--	5 U	--	5 U	--
CHLORODIBROMOMETHANE	5 U	--	5 U	--	5 U	--
CHLOROETHANE	5 U	--	5 U	--	5 U	--
CHLOROFORM	5 U	--	5 U	--	5 U	--
CHLOROMETHANE	5 U	--	5 U	--	5 U	--
CIS-1,2-DICHLOROETHENE	5 U	--	5 U	--	5 U	--
CIS-1,3-DICHLOROPROPENE	5 U	--	5 U	--	5 U	--
CYCLOHEXANE	5 U	--	5 U	--	5 U	--
DICHLORODIFLUOROMETHANE	5 U	--	5 U	--	5 U	--
ETHYLBENZENE	5 U	--	5 U	--	5 U	--
ISOPROPYLBENZENE	5 U	--	5 U	--	5 U	--
M+P-XYLENES	5 U	--	5 U	--	5 U	--
METHYL ACETATE	5 U	--	5 U	--	5 U	--
METHYL CYCLOHEXANE	5 U	--	5 U	--	5 U	--
METHYL TERT-BUTYL ETHER	5 U	--	5 U	--	5 U	--
METHYLENE CHLORIDE	5 U	--	5 U	--	5 U	--
O-XYLENE	5 U	--	5 U	--	5 U	--
STYRENE	5 U	--	5 U	--	5 U	--
TETRACHLOROETHENE	5 U	--	5 U	--	5 U	--
TOLUENE	5 U	--	5 U	--	5 U	--
TRANS-1,2-DICHLOROETHENE	5 U	--	5 U	--	5 U	--
TRANS-1,3-DICHLOROPROPENE	5 U	--	5 U	--	5 U	--
TRICHLOROETHENE	5 U	--	5 U	--	5 U	--
TRICHLOROFLUOROMETHANE	5 U	--	5 U	--	5 U	--
VINYL CHLORIDE	5 U	--	5 U	--	5 U	--
SEMIVOLATILES (UG/L)						
1,1-BIPHENYL	5 U	--	5 U	--	5 U	--
1,2,4,5-TETRACHLOROBENZENE	5 U	--	5 U	--	5 U	--
1,4-DIOXANE	2 U	--	2 U	--	2 U	--
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	--	10 U	--	10 U	--
2,3,4,6-TETRACHLOROPHENOL	5 U	--	5 U	--	5 U	--
2,4,5-TRICHLOROPHENOL	5 U	--	5 U	--	5 U	--
2,4,6-TRICHLOROPHENOL	5 U	--	5 U	--	5 U	--
2,4-DICHLOROPHENOL	5 U	--	5 U	--	5 U	--
2,4-DIMETHYLPHENOL	5 U	--	5 U	--	5 U	--
2,4-DINITROPHENOL	10 U	--	10 U	--	10 U	--
2,4-DINITROTOLUENE	5 U	--	5 U	--	5 U	--
2,6-DINITROTOLUENE	5 U	--	5 U	--	5 U	--
2-CHLORONAPHTHALENE	5 U	--	5 U	--	5 U	--
2-CHLOROPHENOL	5 U	--	5 U	--	5 U	--
2-METHYLNAPHTHALENE	5 U	--	5 U	--	5 U	--
2-METHYLPHENOL	10 U	--	10 U	--	10 U	--
2-NITROANILINE	5 U	--	5 U	--	5 U	--
2-NITROPHENOL	5 U	--	5 U	--	5 U	--
3&4-METHYLPHENOL	10 U	--	10 U	--	10 U	--
3,3'-DICHLOROBENZIDINE	10 U	--	10 U	--	10 U	--
3-NITROANILINE	10 U	--	10 U	--	10 U	--
4,6-DINITRO-2-METHYLPHENOL	10 U	--	10 U	--	10 U	--
4-BROMOPHENYL PHENYL ETHER	5 U	--	5 U	--	5 U	--
4-CHLORO-3-METHYLPHENOL	5 U	--	5 U	--	5 U	--
4-CHLOROANILINE	10 U	--	10 U	--	10 U	--
4-CHLOROPHENYL PHENYL ETHER	5 U	--	5 U	--	5 U	--
4-NITROANILINE	10 U	--	10 U	--	10 U	--
4-NITROPHENOL	10 U	--	10 U	--	10 U	--
ACENAPHTHENE	5 U	--	5 U	--	5 U	--
ACENAPHTHYLENE	5 U	--	5 U	--	5 U	--
ACETOPHENONE	10 U	--	10 U	--	10 U	--

TABLE 23

SURFACE WATER ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD317	SW/SD317	SW/SD332	SW/SD332	SW/SD355	SW/SD355
SAMPLE ID	SW317-20191210	SW317-20191210-F	SW332-20191210	SW332-20191210-F	SW355-20191204	SW355-20191204-F
SAMPLE DATE	20191210	20191210	20191210	20191210	20191204	20191204
DUPLICATE						
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
ANTHRACENE	5 U	--	5 U	--	5 U	--
ATRAZINE	10 U	--	10 U	--	10 U	--
BAP EQUIVALENT-HALFND	5 U	--	5 U	--	5 U	--
BAP EQUIVALENT-POS	5 U	--	5 U	--	5 U	--
BENZALDEHYDE	10 U	--	10 U	--	10 U	--
BENZO(A)ANTHRACENE	5 U	--	5 U	--	5 U	--
BENZO(A)PYRENE	5 U	--	5 U	--	5 U	--
BENZO(B)FLUORANTHENE	5 U	--	5 U	--	5 U	--
BENZO(G,H,I)PERYLENE	5 U	--	5 U	--	5 U	--
BENZO(K)FLUORANTHENE	5 U	--	5 U	--	5 U	--
BIS(2-CHLOROETHOXY)METHANE	5 U	--	5 U	--	5 U	--
BIS(2-CHLOROETHYL)ETHER	10 U	--	10 U	--	10 U	--
BIS(2-ETHYLHEXYL)PHTHALATE	5 U	--	5 U	--	5 U	--
BUTYL BENZYL PHTHALATE	5 U	--	5 U	--	5 U	--
CAPROLACTAM	10 U	--	10 U	--	10 U	--
CARBAZOLE	10 U	--	10 U	--	10 U	--
CHRYSENE	5 U	--	5 U	--	5 U	--
DIBENZO(A,H)ANTHRACENE	5 U	--	5 U	--	5 U	--
DIBENZOFURAN	5 U	--	5 U	--	5 U	--
DIETHYL PHTHALATE	5 U	--	5 U	--	5 U	--
DIMETHYL PHTHALATE	1.1 J	--	2.8 J	--	5 U	--
DI-N-BUTYL PHTHALATE	5 U	--	5 U	--	5 U	--
DI-N-OCTYL PHTHALATE	10 U	--	10 U	--	10 U	--
FLUORANTHENE	10 U	--	10 U	--	10 U	--
FLUORENE	5 U	--	5 U	--	5 U	--
HEXACHLOROBENZENE	5 U	--	5 U	--	5 U	--
HEXACHLOROBUTADIENE	5 U	--	5 U	--	5 U	--
HEXACHLOROCYCLOPENTADIENE	10 U	--	10 U	--	10 U	--
HEXACHLOROETHANE	5 U	--	5 U	--	5 U	--
HIGH MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0 U	--
INDENO(1,2,3-CD)PYRENE	5 U	--	5 U	--	5 U	--
ISOPHORONE	5 U	--	5 U	--	5 U	--
LOW MOLECULAR WEIGHT PAHS	0 U	--	0 U	--	0 U	--
NAPHTHALENE	5 U	--	5 U	--	5 U	--
NITROBENZENE	5 U	--	5 U	--	5 U	--
N-NITROSO-DI-N-PROPYLAMINE	5 U	--	5 U	--	5 U	--
N-NITROSODIPHENYLAMINE	5 U	--	5 U	--	5 U	--
PENTACHLOROPHENOL	10 U	--	10 U	--	10 U	--
PHENANTHRENE	5 U	--	5 U	--	5 U	--
PHENOL	1 J	--	1.1 J	--	10 U	--
PYRENE	5 U	--	5 U	--	5 U	--
TOTAL PAHS	0 U	--	0 U	--	0 U	--
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L						
2-METHYLNAPHTHALENE	0.1 U	--	0.1 U	--	0.1 U	--
ACENAPHTHENE	0.1 U	--	0.1 U	--	0.1 U	--
ACENAPHTHYLENE	0.1 U	--	0.1 U	--	0.1 U	--
ANTHRACENE	0.1 U	--	0.1 U	--	0.1 U	--
BAP EQUIVALENT-HALFND	0.07923	--	0.12947	--	0.1 U	--
BAP EQUIVALENT-POS	0.02923	--	0.07947	--	0.1 U	--
BENZO(A)ANTHRACENE	0.02 J	--	0.05 J	--	0.1 U	--
BENZO(A)PYRENE	0.02 J	--	0.06 J	--	0.1 U	--
BENZO(B)FLUORANTHENE	0.05 J	--	0.09 J	--	0.1 U	--
BENZO(G,H,I)PERYLENE	0.03 J	--	0.06 J	--	0.1 U	--
BENZO(K)FLUORANTHENE	0.02 J	--	0.04 J	--	0.1 U	--
CHRYSENE	0.03 J	--	0.07 J	--	0.1 U	--
DIBENZO(A,H)ANTHRACENE	0.1 U	--	0.1 U	--	0.1 U	--
FLUORANTHENE	0.03 J	--	0.09 J	--	0.1 U	--
FLUORENE	0.1 U	--	0.1 U	--	0.1 U	--
HIGH MOLECULAR WEIGHT PAHS	0.22	--	0.55	--	0 U	--
INDENO(1,2,3-CD)PYRENE	0.02 J	--	0.05 J	--	0.1 U	--
LOW MOLECULAR WEIGHT PAHS	0.03	--	0.13	--	0 U	--
NAPHTHALENE	0.1 U	--	0.1 U	--	0.1 U	--
PENTACHLOROPHENOL	0.2 U	--	0.04 J	--	0.2 U	--
PHENANTHRENE	0.1 U	--	0.04 J	--	0.1 U	--
PYRENE	0.03 J	--	0.13	--	0.1 U	--
TOTAL PAHS	0.03	--	0.07	--	0.1	--
PESTICIDES (UG/L)						
4,4'-DDD	0.1 U	--	0.1 U	--	0.1 U	--
4,4'-DDE	0.1 U	--	0.1 U	--	0.1 U	--
4,4'-DDT	0.1 U	--	0.1 U	--	0.1 U	--
ALDRIN	0.05 U	--	0.05 U	--	0.05 U	--
ALPHA-BHC	0.05 U	--	0.05 U	--	0.05 U	--
ALPHA-CHLORDANE	0.05 U	--	0.05 U	--	0.05 U	--
BETA-BHC	0.05 U	--	0.05 U	--	0.05 U	--
DELTA-BHC	0.05 U	--	0.05 U	--	0.05 U	--
DIELDRIN	0.1 U	--	0.1 U	--	0.1 U	--
ENDOSULFAN I	0.05 U	--	0.05 U	--	0.05 U	--
ENDOSULFAN II	0.1 U	--	0.1 U	--	0.1 U	--
ENDOSULFAN SULFATE	0.1 U	--	0.1 U	--	0.1 U	--
ENDRIN	0.1 U	--	0.1 U	--	0.1 U	--
ENDRIN ALDEHYDE	0.1 U	--	0.1 U	--	0.1 U	--
ENDRIN KETONE	0.1 U	--	0.1 U	--	0.1 U	--
GAMMA-BHC (LINDANE)	0.05 U	--	0.05 U	--	0.05 U	--
GAMMA-CHLORDANE	0.05 U	--	0.05 U	--	0.05 U	--

TABLE 23

SURFACE WATER ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD317	SW/SD317	SW/SD332	SW/SD332	SW/SD355	SW/SD355
SAMPLE ID	SW317-20191210	SW317-20191210-F	SW332-20191210	SW332-20191210-F	SW355-20191204	SW355-20191204-F
SAMPLE DATE	20191210	20191210	20191210	20191210	20191204	20191204
DUPLICATE						
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
HEPTACHLOR	0.05 U	--	0.05 U	--	0.05 U	--
HEPTACHLOR EPOXIDE	0.05 U	--	0.05 U	--	0.05 U	--
METHOXYCHLOR	0.5 U	--	0.5 U	--	0.5 U	--
TOXAPHENE	5 U	--	5 U	--	5 U	--
PCBS (UG/L)						
AROCLOR-1016	1 U	--	1 U	--	1 U	--
AROCLOR-1221	1 U	--	1 U	--	1 U	--
AROCLOR-1232	1 U	--	1 U	--	1 U	--
AROCLOR-1242	1 U	--	1 U	--	1 U	--
AROCLOR-1248	1 U	--	1 U	--	1 U	--
AROCLOR-1254	1 U	--	1 U	--	1 U	--
AROCLOR-1260	1 U	--	1 U	--	1 U	--
AROCLOR-1262	1 U	--	1 U	--	1 U	--
AROCLOR-1268	1 U	--	1 U	--	1 U	--
TOTAL AROCLOR	0 U	--	0 U	--	0 U	--
TOTAL AROCLOR HALFND	4.5	--	4.5	--	4.5	--
PCB CONGENERS (UG/L)						
DICHLOROBIPHENYLS	--	--	--	--	0 UJ	--
HEPTACHLOROBIPHENYLS	--	--	--	--	0.00086 J	--
HEXACHLOROBIPHENYLS	--	--	--	--	0.0014 J	--
MONOCHLOROBIPHENYLS	--	--	--	--	0 UJ	--
NONACHLOROBIPHENYLS	--	--	--	--	0.000014 J	--
OCTACHLOROBIPHENYLS	--	--	--	--	0.00017 J	--
PCB-1	--	--	--	--	0.000021 U	--
PCB-10	--	--	--	--	0.000021 U	--
PCB-103	--	--	--	--	0.000004 J	--
PCB-104	--	--	--	--	0.000021 U	--
PCB-105	0.000224	--	0.000316	--	0.000034	--
PCB-106	--	--	--	--	0.000021 U	--
PCB-107	--	--	--	--	0.0000053 J	--
PCB-108/124	--	--	--	--	0.0000048 J	--
PCB-11	--	--	--	--	0.000021 U	--
PCB-110/115	--	--	--	--	0.00011	--
PCB-111	--	--	--	--	0.000021 U	--
PCB-112	--	--	--	--	0.000021 U	--
PCB-114	0.000101 U	--	0.0000163 Z	--	0.000004 U	--
PCB-118	0.000937	--	0.000822	--	0.000081	--
PCB-12/13	--	--	--	--	0.000042 U	--
PCB-120	--	--	--	--	0.000021 U	--
PCB-121	--	--	--	--	0.000021 U	--
PCB-122	--	--	--	--	0.000021 U	--
PCB-123	0.000101 U	--	0.00000944 Z	--	0.0000038 U	--
PCB-126	0.000101 U	--	0.0001 U	--	0.0000049 U	--
PCB-127	--	--	--	--	0.000021 U	--
PCB-128/166	0.000504	--	0.000297	--	0.000042 U	--
PCB-129/138/163	0.00995	--	0.0044	--	0.0003	--
PCB-130	--	--	--	--	0.000013 J	--
PCB-131	--	--	--	--	0.000021 U	--
PCB-132	--	--	--	--	0.000081	--
PCB-133	--	--	--	--	0.000021 U	--
PCB-134	--	--	--	--	0.000014 J	--
PCB-135/151	--	--	--	--	0.00013	--
PCB-136	--	--	--	--	0.000043	--
PCB-137	--	--	--	--	0.000021 U	--
PCB-139/140	--	--	--	--	0.000042 U	--
PCB-14	--	--	--	--	0.000021 U	--
PCB-141	--	--	--	--	0.000065	--
PCB-142	--	--	--	--	0.000021 U	--
PCB-143	--	--	--	--	0.000021 U	--
PCB-144	--	--	--	--	0.000017 J	--
PCB-145	--	--	--	--	0.000021 U	--
PCB-146	--	--	--	--	0.000041	--
PCB-147/149	--	--	--	--	0.00027	--
PCB-148	--	--	--	--	0.000021 U	--
PCB-15	--	--	--	--	0.000021 U	--
PCB-150	--	--	--	--	0.000021 U	--
PCB-152	--	--	--	--	0.000021 U	--
PCB-153/168	0.0103	--	0.00424	--	0.00029	--
PCB-154	--	--	--	--	0.000021 U	--
PCB-155	--	--	--	--	0.000021 U	--
PCB-156	0.000565	--	0.000302	--	--	--
PCB-156/157	--	--	--	--	0.000026 J	--
PCB-158	--	--	--	--	0.000023	--
PCB-159	--	--	--	--	0.000021 U	--
PCB-16	--	--	--	--	0.0000056 J	--
PCB-160	--	--	--	--	0.000021 U	--
PCB-161	--	--	--	--	0.000021 U	--
PCB-162	--	--	--	--	0.000021 U	--
PCB-164	--	--	--	--	0.000021	--
PCB-165	--	--	--	--	0.000021 U	--
PCB-167	0.000229	--	0.000112	--	0.0000095 J	--
PCB-169	0.000101 U	--	0.00000677 J	--	0.0000033 U	--
PCB-17	--	--	--	--	0.000021 U	--
PCB-170	0.00429	--	0.00165	--	0.000097	--

LOCATION	SW/SD317	SW/SD317	SW/SD332	SW/SD332	SW/SD355	SW/SD355
SAMPLE ID	SW317-20191210	SW317-20191210-F	SW332-20191210	SW332-20191210-F	SW355-20191204	SW355-20191204-F
SAMPLE DATE	20191210	20191210	20191210	20191210	20191204	20191204
DUPLICATE						
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
PCB-171/173	--	--	--	--	0.000042 U	--
PCB-172	--	--	--	--	0.000018 J	--
PCB-174	--	--	--	--	0.00011	--
PCB-175	--	--	--	--	0.0000045 J	--
PCB-176	--	--	--	--	0.000014 J	--
PCB-177	--	--	--	--	0.000062	--
PCB-178	--	--	--	--	0.000025	--
PCB-179	--	--	--	--	0.000052	--
PCB-18/30	0.0000203 J	--	0.000064 J	--	0.000011 J	--
PCB-180/193	0.0103	--	0.00373	--	0.00022	--
PCB-181	--	--	--	--	0.000021 U	--
PCB-182	--	--	--	--	0.000021 U	--
PCB-183/185	--	--	--	--	0.000071	--
PCB-184	--	--	--	--	0.000021 U	--
PCB-186	--	--	--	--	0.000021 U	--
PCB-187	0.00556	--	0.00221	--	0.00013	--
PCB-188	--	--	--	--	0.000021 U	--
PCB-189	0.000149	--	0.0000582 J	--	0.0000046 J	--
PCB-19	--	--	--	--	0.0000053 J	--
PCB-190	--	--	--	--	0.000021	--
PCB-191	--	--	--	--	0.000021 U	--
PCB-192	--	--	--	--	0.000021 U	--
PCB-194	--	--	--	--	0.000043	--
PCB-195	0.000865	--	0.000311	--	0.000021 U	--
PCB-196	--	--	--	--	0.000023	--
PCB-197/200	--	--	--	--	0.0000087 J	--
PCB-198/199	--	--	--	--	0.00005	--
PCB-2	--	--	--	--	0.000021 U	--
PCB-20/28	0.00013 J	--	0.000176 J	--	0.000016 J	--
PCB-201	--	--	--	--	0.000021 U	--
PCB-202	--	--	--	--	0.000021 U	--
PCB-203	--	--	--	--	0.000029	--
PCB-204	--	--	--	--	0.000021 U	--
PCB-205	--	--	--	--	0.0000031 J	--
PCB-206	0.000462	--	0.000179	--	0.000021 U	--
PCB-207	--	--	--	--	0.000002 J	--
PCB-208	--	--	--	--	0.000021 U	--
PCB-209	0.000159	--	0.0000659 J	--	0.0000057 J	--
PCB-21/33	--	--	--	--	0.000042 U	--
PCB-22	--	--	--	--	0.0000049 J	--
PCB-23	--	--	--	--	0.000021 U	--
PCB-24	--	--	--	--	0.000021 U	--
PCB-25	--	--	--	--	0.000021 U	--
PCB-26/29	--	--	--	--	0.0000032 J	--
PCB-27	--	--	--	--	0.000021 U	--
PCB-3	--	--	--	--	0.000021 U	--
PCB-31	--	--	--	--	0.000013 J	--
PCB-32	--	--	--	--	0.000004 J	--
PCB-34	--	--	--	--	0.000021 U	--
PCB-35	--	--	--	--	0.000021 U	--
PCB-36	--	--	--	--	0.000021 U	--
PCB-37	--	--	--	--	0.0000058 J	--
PCB-38	--	--	--	--	0.000021 U	--
PCB-39	--	--	--	--	0.000021 U	--
PCB-4	--	--	--	--	0.000021 U	--
PCB-40/71	--	--	--	--	0.0000077 J	--
PCB-41	--	--	--	--	0.000021 U	--
PCB-42	--	--	--	--	0.000021 U	--
PCB-43	--	--	--	--	0.000021 U	--
PCB-44/47/65	0.000102 J	--	0.000408	--	0.000063 U	--
PCB-45/51	--	--	--	--	0.000013 J	--
PCB-46	--	--	--	--	0.000021 U	--
PCB-48	--	--	--	--	0.000021 U	--
PCB-49/69	--	--	--	--	0.000026 J	--
PCB-5	--	--	--	--	0.000021 U	--
PCB-50/53	--	--	--	--	0.000014 J	--
PCB-52	0.000207	--	0.000609	--	0.000059	--
PCB-54	--	--	--	--	0.000003 J	--
PCB-55	--	--	--	--	0.000021 U	--
PCB-56	--	--	--	--	0.000021 U	--
PCB-57	--	--	--	--	0.000021 U	--
PCB-58	--	--	--	--	0.000021 U	--
PCB-59/62/75	--	--	--	--	0.000063 U	--
PCB-6	--	--	--	--	0.000021 U	--
PCB-60	--	--	--	--	0.0000039 J	--
PCB-61/70/74/76	--	--	--	--	0.000085 U	--
PCB-63	--	--	--	--	0.000021 U	--
PCB-64	--	--	--	--	0.0000068 J	--
PCB-66	0.00014 J	--	0.00018 J	--	0.000021 U	--
PCB-67	--	--	--	--	0.000021 U	--
PCB-68	--	--	--	--	0.000021 U	--
PCB-7	--	--	--	--	0.000021 U	--
PCB-72	--	--	--	--	0.000021 U	--
PCB-73	--	--	--	--	0.000021 U	--

TABLE 23

SURFACE WATER ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD317	SW/SD317	SW/SD332	SW/SD332	SW/SD355	SW/SD355
SAMPLE ID	SW317-20191210	SW317-20191210-F	SW332-20191210	SW332-20191210-F	SW355-20191204	SW355-20191204-F
SAMPLE DATE	20191210	20191210	20191210	20191210	20191204	20191204
DUPLICATE						
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
PCB-77	0.0000284 J	--	0.0000224 J	--	0.0000027 U	--
PCB-78	--	--	--	--	0.000021 U	--
PCB-79	--	--	--	--	0.000021 U	--
PCB-8	0.0000343 Z	--	0.0000247 J	--	0.000021 U	--
PCB-80	--	--	--	--	0.000021 U	--
PCB-81	0.000101 U	--	0.0001 U	--	0.0000025 U	--
PCB-82	--	--	--	--	0.000021 U	--
PCB-83	--	--	--	--	0.000021 U	--
PCB-84	--	--	--	--	0.000015 J	--
PCB-85/116/117	--	--	--	--	0.000011 J	--
PCB-86/87/97/109/119/125	--	--	--	--	0.00013 U	--
PCB-88/91	--	--	--	--	0.000014 J	--
PCB-89	--	--	--	--	0.000021 U	--
PCB-9	--	--	--	--	0.000021 U	--
PCB-90/101/113	0.00254	--	0.00179	--	0.00013	--
PCB-92	--	--	--	--	0.000023	--
PCB-93/100	--	--	--	--	0.000042 U	--
PCB-94	--	--	--	--	0.000021 U	--
PCB-95	--	--	--	--	0.00011	--
PCB-96	--	--	--	--	0.0000019 J	--
PCB-98/102	--	--	--	--	0.000042 U	--
PCB-99	--	--	--	--	0.000034	--
PENTACHLOROBIPHENYLS	--	--	--	--	0.00063 J	--
TEQ DIOXIN-LIKE PCBs (BIRD)	1.5121E-06	--	1.2002E-06	--	6.951E-09	--
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	1.1668E-05	--	1.12E-05	--	4.4632E-07	--
TEQ DIOXIN-LIKE PCBs (FISH)	1.336E-08	--	1.0757E-08	--	7.75E-10	--
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	2.9414E-07	--	2.8576E-07	--	1.3886E-08	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	6.596E-08	--	2.5442E-07	--	4.653E-09	--
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	6.6491E-06	--	5.2694E-06	--	2.9978E-07	--
TETRACHLOROBIPHENYLS	--	--	--	--	0.00024 J	--
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0021324	--	0.00166511	--	0.0001551	--
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.0455636	--	0.0203346	--	0.0029622	--
TOTAL PCB CONGENERS ZEROND	0.047696	--	0.02199971	--	0.0031173	--
TOTAL PCB CONGENERS-NOAA	0.0467246	--	0.0214726	--	0.0013737	--
TOTAL PCB CONGENERS-NOAA HALFND	0.0479485	--	0.02209971	--	0.0043064	--
TOTAL PCB CONGENERS-NOAA X2	0.0934492	--	0.0429452	--	0.0027474	--
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0934492	--	0.0429452	--	0.0029364	--
TRICHLOROBIPHENYLS	--	--	--	--	0.000074 J	--
DIOXINS/FURANS (PG/L)						
1,2,3,4,6,7,8,9-OCDD	100 U	--	118	--	8.8 JZ	--
1,2,3,4,6,7,8,9-OCDF	100 U	--	98.6 U	--	5.6 U	--
1,2,3,4,6,7,8-HPCDD	7.66 JZ	--	13.9 JZ	--	3.8 U	--
1,2,3,4,6,7,8-HPCDF	6.19 J	--	11.1 J	--	2.6 U	--
1,2,3,4,7,8,9-HPCDF	50.1 U	--	49.3 U	--	4.1 U	--
1,2,3,4,7,8-HXCDD	50.1 U	--	49.3 U	--	1.6 U	--
1,2,3,4,7,8-HXCDF	50.1 U	--	1.01 JZ	--	2.1 U	--
1,2,3,6,7,8-HXCDD	50.1 U	--	49.3 U	--	2 U	--
1,2,3,6,7,8-HXCDF	50.1 U	--	49.3 U	--	1.7 U	--
1,2,3,7,8,9-HXCDD	50.1 U	--	49.3 U	--	2.1 U	--
1,2,3,7,8,9-HXCDF	50.1 U	--	49.3 U	--	3.9 U	--
1,2,3,7,8-PECDD	50.1 U	--	49.3 U	--	2.3 U	--
1,2,3,7,8-PECDF	1.34 JZ	--	49.3 U	--	2.4 U	--
2,3,4,6,7,8-HXCDF	50.1 U	--	49.3 U	--	2 U	--
2,3,4,7,8-PECDF	50.1 U	--	49.3 U	--	2.6 U	--
2,3,7,8-TCDD	10 U	--	9.86 U	--	2 U	--
2,3,7,8-TCDF	10 U	--	9.86 U	--	1.9 U	--
TEQ DIOXINS (BIRD)	0.20356	--	0.2377	--	0.00088	--
TEQ DIOXINS (BIRD) HALFND	74.59206	--	73.45313	--	5.19656	--
TEQ DIOXINS (FISH)	0.13656	--	0.2377	--	0.00088	--
TEQ DIOXINS (FISH) HALFND	66.26806	--	64.08613	--	3.84956	--
TEQ DIOXINS (HUMANS/MAMMALS)	0.1787	--	0.3864	--	0.00264	--
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	56.0592	--	53.64519	--	3.49698	--
TOTAL HPCDD	4.19 J	--	13.1 J	--	3.8 UJ	--
TOTAL HPCDF	6.19 J	--	11.1 J	--	1.7 UJ	--
TOTAL HXCDD	50.1 UJ	--	49.3 UJ	--	1.5 UJ	--
TOTAL HXCDF	50.1 UJ	--	4.83 J	--	1.7 UJ	--
TOTAL PECDD	50.1 UJ	--	49.3 UJ	--	2.3 UJ	--
TOTAL PECDF	50.1 UJ	--	4.6 J	--	0.93 UJ	--
TOTAL TCDD	10 UJ	--	9.86 UJ	--	2 UJ	--
TOTAL TCDF	10 UJ	--	9.86 UJ	--	1.9 UJ	--
METALS (UG/L)						
ALUMINUM	58.9	20 U	391	20 U	56.3	20 U
ANTIMONY	2 U	2 U	2 U	2 U	2 U	2 U
ARSENIC	1	0.87 J	1.1	0.33 J	0.45 J	0.37 J
BARIUM	62.8	58.7	65	22.9	29.6	26.8
BERYLLIUM	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	1 U	0.08 J	1 U	1 U	1 U	1 U
CALCIUM	47900	44900	24100	22000	25100	23800
CHROMIUM	2 U	2 U	0.85 J	0.08 J	0.17 J	2 U
COBALT	0.42 J	0.52 J	2.5	0.28 J	0.38 J	0.26 J
COPPER	2.5	2 U	13.9	2 U	2.4	2 U
CYANIDE	10 U	--	1.5 J	--	10 U	--
IRON	262	200 U	2040	200 U	351	200 U
LEAD	1.7	1 U	5.6	1 U	1 U	1 U

TABLE 23

SURFACE WATER ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD317	SW/SD317	SW/SD332	SW/SD332	SW/SD355	SW/SD355
SAMPLE ID	SW317-20191210	SW317-20191210-F	SW332-20191210	SW332-20191210-F	SW355-20191204	SW355-20191204-F
SAMPLE DATE	20191210	20191210	20191210	20191210	20191204	20191204
DUPLICATE						
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SW	SW	SW	SW	SW	SW
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
MAGNESIUM	7010	6910	4240	3910	4900	4530
MANGANESE	102	148	346	29.2	45	29
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	1.3	1.1	4	1.2	1.6	1.4
POTASSIUM	7210	5820	3100	2830	3710	3460
SELENIUM	5 U	5 U	5 U	5 U	5 U	5 U
SILVER	1 U	1 U	1 U	1 U	1 U	1 U
SODIUM	14100	14900	17900	17800	20900	19500
THALLIUM	1 U	1 U	1 U	1 U	1 U	1 U
VANADIUM	0.22 J	0.12 J	0.84 J	0.13 J	0.22 J	0.11 J
ZINC	46	13.7	109	15.8	33.6	23.2

APPENDIX G.10

NEW RIVER ANALYTICAL DATA

TABLE 24

SEDIMENT ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-67	SEC-SD-68	SEC-SD-69	SEC-SD-70	SW/SD306	SW/SD306	SW/SD307	SW/SD307	SW/SD308
SAMPLE ID	SEC-SD-67	SEC-SD-68	SEC-SD-69	SEC-SD-70	SD306-20191212-0006	SD306-20191212-0624	SD307-20191211-0006	SD307-20191211-0624	SD308-20191211
SAMPLE DATE	20180516	20180516	20180516	20180516	20191212	20191212	20191211	20191211	20191211
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0.5	0	0.5	0
BOTTOM DEPTH	6	6	6	6	0.5	2	0.5	2	0.5
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
1,1,2-TRICHLOROETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
1,1-DICHLOROETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
1,1-DICHLOROETHENE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
1,2,3-TRICHLOROBENZENE	--	--	--	--	0.0063 UJ	0.0056 U	0.0056 UJ	0.0069 UJ	0.005 UJ
1,2,4-TRICHLOROBENZENE	--	--	--	--	0.0063 UJ	0.0056 U	0.0056 UJ	0.0069 UJ	0.005 UJ
1,2-DIBROMO-3-CHLOROPROPANE	--	--	--	--	0.0063 UJ	0.0056 U	0.0056 UJ	0.0069 UJ	0.005 UJ
1,2-DIBROMOETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
1,2-DICHLOROBENZENE	--	--	--	--	0.0063 UJ	0.0056 U	0.0056 UJ	0.0069 UJ	0.005 UJ
1,2-DICHLOROETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
1,2-DICHLOROPROPANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
1,3-DICHLOROBENZENE	--	--	--	--	0.0063 UJ	0.0056 U	0.0056 UJ	0.0069 UJ	0.005 UJ
1,4-DICHLOROBENZENE	--	--	--	--	0.0063 UJ	0.0056 U	0.0056 UJ	0.0069 UJ	0.005 UJ
2-BUTANONE	--	--	--	--	0.013 U	0.011 U	0.011 U	0.014 U	0.022 J+
2-HEXANONE	--	--	--	--	0.013 U	0.011 U	0.011 U	0.014 U	0.022 UJ
4-METHYL-2-PENTANONE	--	--	--	--	0.013 U	0.011 U	0.011 U	0.014 U	0.022 UJ
ACETONE	--	--	--	--	0.013 U	0.011 U	0.011 U	0.014 U	0.13 J+
BENZENE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
BROMOCHLOROMETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
BROMODICHLOROMETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
BROMOFORM	--	--	--	--	0.0063 UJ	0.0056 U	0.0056 UJ	0.0069 UJ	0.005 UJ
BROMOMETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
CARBON DISULFIDE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
CARBON TETRACHLORIDE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
CHLOROBENZENE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
CHLORODIBROMOMETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
CHLOROETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
CHLOROFORM	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
CHLOROMETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
CIS-1,2-DICHLOROETHENE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
CIS-1,3-DICHLOROPROPENE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
CYCLOHEXANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
DICHLORODIFLUOROMETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
ETHYLBENZENE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
ISOPROPYLBENZENE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
M+P-XYLENES	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
METHYL ACETATE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
METHYL CYCLOHEXANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
METHYL TERT-BUTYL ETHER	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
METHYLENE CHLORIDE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
O-XYLENE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
STYRENE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
TETRACHLOROETHENE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
TOLUENE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
TRANS-1,2-DICHLOROETHENE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
TRANS-1,3-DICHLOROPROPENE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
TRICHLOROETHENE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
TRICHLOROFLUOROMETHANE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
VINYL CHLORIDE	--	--	--	--	0.0063 U	0.0056 U	0.0056 U	0.0069 U	0.011 UJ
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
1,2,4,5-TETRACHLOROBENZENE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
1,4-DIOXANE	--	--	--	--	0.089 U	0.083 U	0.085 U	0.08 U	0.12 U
2,2'-OXYBIS(1-CHLOROPROPANE)	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
2,3,4,6-TETRACHLOROPHENOL	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
2,4,5-TRICHLOROPHENOL	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
2,4,6-TRICHLOROPHENOL	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
2,4-DICHLOROPHENOL	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
2,4-DIMETHYLPHENOL	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
2,4-DINITROPHENOL	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
2,4-DINITROTOLUENE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
2,6-DINITROTOLUENE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
2-CHLORONAPHTHALENE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
2-CHLOROPHENOL	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
2-METHYLNAPHTHALENE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
2-METHYLPHENOL	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
2-NITROANILINE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
2-NITROPHENOL	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
3&4-METHYLPHENOL	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
3,3'-DICHLOROBENZIDINE	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
3-NITROANILINE	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
4,6-DINITRO-2-METHYLPHENOL	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
4-BROMOPHENYL PHENYL ETHER	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
4-CHLORO-3-METHYLPHENOL	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
4-CHLOROANILINE	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
4-CHLOROPHENYL PHENYL ETHER	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
4-NITROANILINE	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
4-NITROPHENOL	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U

TABLE 24

SEDIMENT ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-67	SEC-SD-68	SEC-SD-69	SEC-SD-70	SW/SD306	SW/SD306	SW/SD307	SW/SD307	SW/SD308
SAMPLE ID	SEC-SD-67	SEC-SD-68	SEC-SD-69	SEC-SD-70	SD306-20191212-0006	SD306-20191212-0624	SD307-20191211-0006	SD307-20191211-0624	SD308-20191211
SAMPLE DATE	20180516	20180516	20180516	20180516	20191212	20191212	20191211	20191211	20191211
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0.5	0	0.5	0
BOTTOM DEPTH	6	6	6	6	0.5	2	0.5	2	0.5
ACENAPHTHENE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
ACENAPHTHYLENE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
ACETOPHENONE	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
ANTHRACENE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
ATRAZINE	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
BAP EQUIVALENT-HALFND	--	--	--	--	0.26635	0.21 U	0.22 U	0.2 U	0.3 U
BAP EQUIVALENT-POS	--	--	--	--	0.15635	0.21 U	0.22 U	0.2 U	0.3 U
BENZALDEHYDE	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
BENZO(A)ANTHRACENE	--	--	--	--	0.11 J	0.21 U	0.22 U	0.2 U	0.3 U
BENZO(A)PYRENE	--	--	--	--	0.12 J	0.21 U	0.22 U	0.2 U	0.3 U
BENZO(B)FLUORANTHENE	--	--	--	--	0.17 J	0.21 U	0.22 U	0.2 U	0.3 U
BENZO(G,H,I)PERYLENE	--	--	--	--	0.095 J	0.21 U	0.22 U	0.2 U	0.3 U
BENZO(K)FLUORANTHENE	--	--	--	--	0.062 J	0.21 U	0.22 U	0.2 U	0.3 U
BIS(2-CHLOROETHOXY)METHANE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
BIS(2-CHLOROETHYL)ETHER	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
BUTYL BENZYL PHTHALATE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
CAPROLACTAM	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
CARBAZOLE	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
CHRYSENE	--	--	--	--	0.13 J	0.21 U	0.22 U	0.2 U	0.3 U
DIBENZO(A,H)ANTHRACENE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
DIBENZOFURAN	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
DIETHYL PHTHALATE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
DIMETHYL PHTHALATE	--	--	--	--	0.15 J	0.21 U	0.064 J	0.08 J	0.13 J
DI-N-BUTYL PHTHALATE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
DI-N-OCTYL PHTHALATE	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
FLUORANTHENE	--	--	--	--	0.26 J	0.41 U	0.42 U	0.4 U	0.58 U
FLUORENE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
HEXACHLOROBENZENE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
HEXACHLOROBUTADIENE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
HEXACHLOROCYCLOPENTADIENE	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
HEXACHLOROETHANE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	0.973	0 U	0 U	0 U	0 U
INDENO(1,2,3-CD)PYRENE	--	--	--	--	0.076 J	0.21 U	0.22 U	0.2 U	0.3 U
ISOPHORONE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	0.36	0 U	0 U	0 U	0 U
NAPHTHALENE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
NITROBENZENE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
N-NITROSO-DI-N-PROPYLAMINE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
N-NITROSODIPHENYLAMINE	--	--	--	--	0.22 U	0.21 U	0.22 U	0.2 U	0.3 U
PENTACHLOROPHENOL	--	--	--	--	0.44 U	0.41 U	0.42 U	0.4 U	0.58 U
PHENANTHRENE	--	--	--	--	0.1 J	0.21 U	0.22 U	0.2 U	0.3 U
PHENOL	--	--	--	--	0.095 J	0.41 U	0.42 U	0.4 U	0.071 J
PYRENE	--	--	--	--	0.21 J	0.21 U	0.22 U	0.2 U	0.3 U
TOTAL PAHS	--	--	--	--	1.333	0 U	0 U	0 U	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
2-METHYLNAPHTHALENE	--	--	--	--	0.0081	0.0029 J	0.0025 J	0.00084 J	0.0051 J
ACENAPHTHENE	--	--	--	--	0.0034 J	0.0041 U	0.0042 U	0.004 U	0.0081
ACENAPHTHYLENE	--	--	--	--	0.01	0.0049	0.002 J	0.004 U	0.0049 J
ANTHRACENE	--	--	--	--	0.016	0.0045	0.0033 J	0.0016 J	0.0054 J
BAP EQUIVALENT-HALFND	--	--	--	--	0.14175	0.031424	0.027715	0.011394	0.030531
BAP EQUIVALENT-POS	--	--	--	--	0.14175	0.031424	0.027715	0.011394	0.030531
BENZO(A)ANTHRACENE	--	--	--	--	0.089	0.022	0.018	0.0082	0.02
BENZO(A)PYRENE	--	--	--	--	0.094	0.02	0.017	0.0072	0.02
BENZO(B)FLUORANTHENE	--	--	--	--	0.14	0.031	0.029	0.011	0.028
BENZO(G,H,I)PERYLENE	--	--	--	--	0.079	0.013	0.012	0.0054	0.016
BENZO(K)FLUORANTHENE	--	--	--	--	0.044	0.0099	0.0092	0.0044	0.011
CHRYSENE	--	--	--	--	0.11	0.025	0.023	0.01	0.021
DIBENZO(A,H)ANTHRACENE	--	--	--	--	0.018	0.0046	0.0046	0.0017 J	0.0042 J
FLUORANTHENE	--	--	--	--	0.21	0.045	0.041	0.021	0.039
FLUORENE	--	--	--	--	0.0048	0.0011 J	0.0011 J	0.004 U	0.0046 J
HIGH MOLECULAR WEIGHT PAHS	--	--	--	--	0.807	0.1745	0.1568	0.0701	0.1672
INDENO(1,2,3-CD)PYRENE	--	--	--	--	0.063	0.014	0.013	0.0052	0.014
LOW MOLECULAR WEIGHT PAHS	--	--	--	--	0.3374	0.0764	0.0666	0.0332	0.0895
NAPHTHALENE	--	--	--	--	0.0082	0.0029 J	0.0022 J	0.0008 J	0.0085
PENTACHLOROPHENOL	--	--	--	--	0.0089 U	0.0083 U	0.0013 J	0.008 U	0.012 U
PHENANTHRENE	--	--	--	--	0.085	0.018	0.017	0.0098	0.019
PYRENE	--	--	--	--	0.17	0.035	0.031	0.017	0.033
TOTAL PAHS	--	--	--	--	0.11	0.025	0.023	0.01	0.021
PESTICIDES (MG/KG)									
4,4'-DDD	--	--	--	--	0.0044 UJ	0.0041 UJ	0.0011 J	0.004 U	0.0058 U
4,4'-DDE	--	--	--	--	0.0044 UJ	0.0041 UJ	0.0042 UJ	0.004 U	0.0058 U
4,4'-DDT	--	--	--	--	0.0044 UJ	0.0041 UJ	0.0042 UJ	0.004 U	0.0058 U
ALDRIN	--	--	--	--	0.0022 UJ	0.0021 UJ	0.0022 UJ	0.002 U	0.003 U
ALPHA-BHC	--	--	--	--	0.0022 UJ	0.0021 UJ	0.0022 UJ	0.002 U	0.003 U
ALPHA-CHLORDANE	--	--	--	--	0.0022 UJ	0.0021 UJ	0.0022 UJ	0.002 U	0.003 U
BETA-BHC	--	--	--	--	0.0022 UJ	0.0021 UJ	0.0022 UJ	0.002 U	0.003 U
DELTA-BHC	--	--	--	--	0.0022 UJ	0.0021 UJ	0.0022 UJ	0.002 U	0.003 U
DIELDRIN	--	--	--	--	0.0044 UJ	0.0041 UJ	0.0042 UJ	0.004 U	0.0058 U
ENDOSULFAN I	--	--	--	--	0.0022 UJ	0.0021 UJ	0.0022 UJ	0.002 U	0.003 U
ENDOSULFAN II	--	--	--	--	0.0044 UJ	0.0041 UJ	0.0042 UJ	0.004 U	0.0058 U

TABLE 24

SEDIMENT ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-67	SEC-SD-68	SEC-SD-69	SEC-SD-70	SW/SD306	SW/SD306	SW/SD307	SW/SD307	SW/SD308
SAMPLE ID	SEC-SD-67	SEC-SD-68	SEC-SD-69	SEC-SD-70	SD306-20191212-0006	SD306-20191212-0624	SD307-20191211-0006	SD307-20191211-0624	SD308-20191211
SAMPLE DATE	20180516	20180516	20180516	20180516	20191212	20191212	20191211	20191211	20191211
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0.5	0	0.5	0
BOTTOM DEPTH	6	6	6	6	0.5	2	0.5	2	0.5
ENDOSULFAN SULFATE	--	--	--	--	0.0044 UJ	0.0041 UJ	0.0042 UJ	0.004 U	0.0058 U
ENDRIN	--	--	--	--	0.0044 UJ	0.0041 UJ	0.0042 UJ	0.004 U	0.0058 U
ENDRIN ALDEHYDE	--	--	--	--	0.0044 UJ	0.0041 UJ	0.0042 UJ	0.004 U	0.0058 U
ENDRIN KETONE	--	--	--	--	0.0044 UJ	0.0041 UJ	0.0042 UJ	0.004 U	0.0058 U
GAMMA-BHC (LINDANE)	--	--	--	--	0.00066 J	0.00042 J	0.00047 J	0.002 U	0.003 U
GAMMA-CHLORDANE	--	--	--	--	0.0022 UJ	0.0021 UJ	0.0022 UJ	0.002 U	0.003 U
HEPTACHLOR	--	--	--	--	0.0022 UJ	0.0021 UJ	0.0022 UJ	0.002 U	0.003 U
HEPTACHLOR EPOXIDE	--	--	--	--	0.0022 UJ	0.0021 UJ	0.0022 UJ	0.002 U	0.003 U
METHOXYCHLOR	--	--	--	--	0.023 UJ	0.021 UJ	0.022 UJ	0.02 U	0.03 U
TOXAPHENE	--	--	--	--	0.22 UJ	0.21 UJ	0.22 UJ	0.2 U	0.3 U
PCBS (MG/KG)									
AROCLOR-1016	0.099 U	0.07 UJ	0.069 U	0.2 UJ	0.044 U	0.041 U	0.042 U	0.039 U	0.058 U
AROCLOR-1221	0.099 U	0.07 UJ	0.069 U	0.2 UJ	0.044 U	0.041 U	0.042 U	0.039 U	0.058 U
AROCLOR-1232	0.099 U	0.07 UJ	0.069 U	0.2 UJ	0.044 U	0.041 U	0.042 U	0.039 U	0.058 U
AROCLOR-1242	0.099 U	0.07 UJ	0.069 U	0.2 UJ	0.044 U	0.041 U	0.042 U	0.039 U	0.058 U
AROCLOR-1248	0.099 U	0.07 UJ	0.069 U	0.2 UJ	0.044 U	0.041 U	0.042 U	0.039 U	0.058 U
AROCLOR-1254	0.099 U	0.07 UJ	0.069 U	0.2 UJ	0.044 U	0.041 U	0.042 U	0.039 U	0.058 U
AROCLOR-1260	0.099 U	0.015 J	0.078	0.2 UJ	0.1	0.15	0.015 J	0.011 J	0.06
AROCLOR-1262	0.099 U	0.07 UJ	0.069 U	0.2 UJ	0.044 U	0.041 U	0.042 U	0.039 U	0.058 U
AROCLOR-1268	0.099 U	0.07 UJ	0.069 U	0.2 UJ	0.044 U	0.041 U	0.042 U	0.039 U	0.058 U
TOTAL AROCLOR	0 U	0.015	0.078	0 U	0.1	0.15	0.015	0.011	0.06
TOTAL AROCLOR HALFND	0.4455	0.295	0.354	0.9	0.276	0.314	0.183	0.167	0.292
PCB CONGENERS (MG/KG)									
PCB-105	--	--	--	--	0.00157	0.0016	0.000408	0.000325	0.00683
PCB-114	--	--	--	--	0.000501 U	0.0000859 J	0.0000945 U	0.0000173 Z	0.000264
PCB-118	--	--	--	--	0.0105	0.0059	0.0015	0.00115	0.029
PCB-123	--	--	--	--	0.0000654 J	0.0000444 J	0.0000132 Z	0.0000081 J	0.000267
PCB-126	--	--	--	--	0.000501 U	0.0000935 U	0.0000945 U	0.0000385 J	0.000231
PCB-128/166	--	--	--	--	0.00885	0.00477	0.000733	0.000713	0.0159
PCB-129/138/163	--	--	--	--	0.222	0.0946	0.015	0.0134	0.289 J
PCB-153/168	--	--	--	--	0.267	0.0996 J	0.0159	0.0135	0.292 J
PCB-156	--	--	--	--	0.0137	0.00648	0.000983	0.000887	0.018
PCB-156/157	--	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	0.00582	0.00254	0.000372	0.000317	0.00814
PCB-169	--	--	--	--	0.0000539 J	0.0000935 U	0.0000945 U	0.0000901 U	0.000119 U
PCB-170	--	--	--	--	0.115	0.0562 J	0.00685	0.0066	0.146 J
PCB-18/30	--	--	--	--	0.0000673 J	0.000116 J	0.0000263 J	0.0000214 J	0.00141
PCB-180/193	--	--	--	--	0.342	0.133 J	0.0163	0.0152	0.326 J
PCB-187	--	--	--	--	0.187	0.063 J	0.0095	0.00821	0.177 J
PCB-189	--	--	--	--	0.00473	0.00215	0.000246	0.000219	0.00563
PCB-195	--	--	--	--	0.0279	0.0123	0.0014	0.00136	0.0348
PCB-20/28	--	--	--	--	0.000253 J	0.000472	0.000132 J	0.000135 J	0.0081
PCB-206	--	--	--	--	0.0122	0.00595	0.000705	0.000528	0.0182
PCB-209	--	--	--	--	0.00118	0.000954	0.000284	0.0000846 J	0.00291
PCB-44/47/65	--	--	--	--	0.000319 J	0.000524	0.000248 J	0.000149 J	0.0788
PCB-52	--	--	--	--	0.000549	0.00134	0.000301	0.000265	0.0105
PCB-66	--	--	--	--	0.000356 J	0.000618	0.000186 J	0.000139 J	0.007
PCB-77	--	--	--	--	0.0000699 J	0.000109	0.0000337 J	0.0000221 J	0.000977
PCB-8	--	--	--	--	0.0000606 J	0.00014	0.000043 J	0.0000338 J	0.00178 J
PCB-81	--	--	--	--	0.000501 U	0.00000524 J	0.0000945 U	0.0000901 U	0.000035 J
PCB-90/101/113	--	--	--	--	0.0287	0.0185	0.0039	0.00334	0.0964
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	--	--	5.28705E-06	6.89693E-06	1.84541E-06	5.09487E-06	7.83898E-05
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	--	--	5.54121E-05	1.16187E-05	1.13474E-05	9.64492E-06	7.84493E-05
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	--	--	1.91612E-07	1.07521E-07	2.0981E-08	2.09326E-07	1.61086E-06
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	--	--	1.57061E-06	3.43608E-07	2.83454E-07	2.34103E-07	1.61383E-06
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	--	--	2.71555E-06	5.76481E-07	1.09036E-07	3.93991E-06	2.52521E-05
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	--	--	2.78482E-05	6.65398E-06	6.26713E-06	5.30493E-06	2.70371E-05
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	0.0365092	0.01891454	0.0035559	0.002984	0.069374
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	--	--	1.2134349	0.492084	0.0715083	0.0636788	1.5058
TOTAL PCB CONGENERS ZEROND	--	--	--	--	1.2499441	0.51099854	0.0750642	0.0666628	1.575174
TOTAL PCB CONGENERS-NOAA	--	--	--	--	1.2255049	0.499584	0.0734163	0.0651538	1.54163
TOTAL PCB CONGENERS-NOAA HALFND	--	--	--	--	1.2506956	0.51109204	0.0752532	0.0667529	1.5752335
TOTAL PCB CONGENERS-NOAA X2	--	--	--	--	2.4510098	0.999168	0.1468326	0.1303076	3.08326
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	--	--	2.4510098	0.999168	0.1468326	0.1303076	3.08326
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	--	--	--	--	2500	6190 J	453	175	1540
1,2,3,4,6,7,8,9-OCDF	--	--	--	--	29.2	68.8	34.8	7.81 J	183
1,2,3,4,6,7,8-HPCDD	--	--	--	--	52.2	145	36.9	11.7	129
1,2,3,4,6,7,8-HPCDF	--	--	--	--	16.3	20.6	38.9	3.75 J	38
1,2,3,4,7,8,9-HPCDF	--	--	--	--	4.88 U	4.82 U	4.62 U	4.68 U	4.01 J
1,2,3,4,7,8-HXCDD	--	--	--	--	4.88 U	4.82 U	4.62 U	4.68 U	4.87 U
1,2,3,4,7,8-HXCDF	--	--	--	--	1.79 J	1.99 J	4.62 U	4.68 U	6.71
1,2,3,6,7,8-HXCDD	--	--	--	--	1.98 J	1.98 J	1.47 J	0.511 Z	4.71 J
1,2,3,6,7,8-HXCDF	--	--	--	--	4.88 U	4.82 U	4.62 U	4.68 U	2.73 J
1,2,3,7,8,9-HXCDD	--	--	--	--	1.78 J	2.74 J	4.62 U	4.68 U	6.56 Z
1,2,3,7,8,9-HXCDF	--	--	--	--	4.88 U	4.82 U	4.62 U	4.68 U	4.87 UJ
1,2,3,7,8-PECDD	--	--	--	--	4.88 U	4.82 U	4.62 U	4.68 U	4.87 U
1,2,3,7,8-PECDF	--	--	--	--	0.652 J	0.719 J	0.345 Z	0.191 J	4.87 U
2,3,4,6,7,8-HXCDF	--	--	--	--	4.88 U	4.82 U	4.62 U	4.68 U	3.08 J
2,3,4,7,8-PECDF	--	--	--	--	1.39 Z	1.54 J	4.62 U	4.68 U	5.76
2,3,7,8-TCDD	--	--	--	--	0.328 J	0.199 Z	0.272 Z	0.131 Z	0.724 Z

TABLE 24

SEDIMENT ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SEC-SD-67	SEC-SD-68	SEC-SD-69	SEC-SD-70	SW/SD306	SW/SD306	SW/SD307	SW/SD307	SW/SD308
SAMPLE ID	SEC-SD-67	SEC-SD-68	SEC-SD-69	SEC-SD-70	SD306-20191212-0006	SD306-20191212-0624	SD307-20191211-0006	SD307-20191211-0624	SD308-20191211
SAMPLE DATE	20180516	20180516	20180516	20180516	20191212	20191212	20191211	20191211	20191211
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2018	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0.5	0	0.5	0
BOTTOM DEPTH	6	6	6	6	0.5	2	0.5	2	0.5
2,3,7,8-TCDF	--	--	--	--	1.77	1.62	0.975	0.691 J	3.99
TEQ DIOXINS (BIRD)	--	--	--	--	4.39812	4.90058	1.77088	0.913691	13.1505
TEQ DIOXINS (BIRD) HALFND	--	--	--	--	7.71652	8.17818	7.68448	6.904091	16.19425
TEQ DIOXINS (FISH)	--	--	--	--	1.82882	2.30903	0.82738	0.247691	5.8896
TEQ DIOXINS (FISH) HALFND	--	--	--	--	6.24522	6.67113	6.41758	5.910491	9.90735
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	--	--	2.94032	5.04921	1.43119	0.466273	7.457
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	--	--	6.38072	8.44731	5.84329	4.935673	10.45205
TOTAL HPCDD	--	--	--	--	110	284	69.4	23.7	225
TOTAL HPCDF	--	--	--	--	38.3 J	45.9 J	73.5 J	8.2 J	114 J
TOTAL HXCDD	--	--	--	--	20.5 J	20.4 J	16 J	6.07 J	39.4 J
TOTAL HXCDF	--	--	--	--	24.2 J	21.7 J	28.3 J	4.37 J	68.3 J
TOTAL PECDD	--	--	--	--	7.32 J	6.01 J	5.37 J	2.23 J	10.5 J
TOTAL PECDF	--	--	--	--	47.8 J	56 J	19.3 J	7.15 J	80.5 J
TOTAL TCDD	--	--	--	--	4.34 J	2.69 J	2.35 J	1.04 J	9.28 J
TOTAL TCDF	--	--	--	--	29.1 J	28.6 J	9.11 J	4.6 J	62.1 J
METALS (MG/KG)									
ALUMINUM	--	--	--	--	3840	3470	3520	3220	4290
ANTIMONY	--	--	--	--	0.91 U	0.91 U	0.91 U	0.9 U	1.3 U
ARSENIC	--	--	--	--	2.9	3.6	3.9	3.6	9
BARIUM	--	--	--	--	40.5	40.1	41.1	28.3	66.9
BERYLLIUM	--	--	--	--	0.45 U	0.45 U	0.46 U	0.45 U	0.77
CADMIUM	--	--	--	--	0.45 UJ	0.45 UJ	0.46 UJ	0.45 UJ	0.63 UJ
CALCIUM	--	--	--	--	1520	982	42700	38900	6900
CHROMIUM	--	--	--	--	5.4	5.3	5.3	4.9	10.5
COBALT	--	--	--	--	5	4.6	5.1	3.8	12.5
COPPER	--	--	--	--	13	13.1	14.4	8.5	39.4
CYANIDE	--	--	--	--	0.64 U	0.62 U	0.63 U	0.59 U	0.85 U
IRON	--	--	--	--	13500	12100	12900	10400	16200
LEAD	--	--	--	--	28.9	26.4	30.5	25.3	83.3
MAGNESIUM	--	--	--	--	470	395 J	3650	2670	1750
MANGANESE	--	--	--	--	264	201	275	188	363
MERCURY	--	--	--	--	0.12 U	0.11 U	0.11 U	0.11 U	0.16 U
NICKEL	--	--	--	--	5.6	5.7	8.5	8.2	24.3
POTASSIUM	--	--	--	--	355 J	313 J	385 J	333 J	367 J
SELENIUM	--	--	--	--	2.3 U	2.3 U	0.3 J	2.3 U	0.6 J
SILVER	--	--	--	--	0.45 U	0.45 U	0.46 U	0.45 U	0.63 U
SODIUM	--	--	--	--	471 UJ	437 UJ	40.6 J	430 UJ	660 UJ
THALLIUM	--	--	--	--	0.45 U	0.45 U	0.46 U	0.45 U	0.63 U
VANADIUM	--	--	--	--	6.6	6.9	5	4.6	7.9
ZINC	--	--	--	--	44.9	31.5	71.4	33.5	128
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	84	--	--	--
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	22200	--	--	--

TABLE 24

SEDIMENT ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD309	SW/SD309	SW/SD309	SW/SD310	SW/SD310	SW/SD311	SW/SD311	SW/SD312	SW/SD312
SAMPLE ID	SD309-20191211-0006	SD309-20191211-0624	SD309-20191211-0624-D	SD310-20191211-0006	SD310-20191211-0624	SD311-20191211-0006	SD311-20191211-0624	SD312-20191211-0006	SD312-20191211-0624
SAMPLE DATE	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211
DUPLICATE			SD309-20191211-0624						
SAMPLE CODE	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0.5	0.5	0	0.5	0	0.5	0	0.5
BOTTOM DEPTH	0.5	2	2	0.5	2	0.5	2	0.5	2
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
1,1,2,2-TETRACHLOROETHANE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
1,1,2-TRICHLOROETHANE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
1,1-DICHLOROETHANE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
1,1-DICHLOROETHENE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
1,2,3-TRICHLOROBENZENE	0.015 UJ	0.005 UJ	0.0092 UJ	0.011 UJ	0.0073 UJ	0.012 UJ	0.014 UJ	0.019 UJ	0.011 UJ
1,2,4-TRICHLOROBENZENE	0.015 UJ	0.005 UJ	0.0092 UJ	0.011 UJ	0.0073 UJ	0.012 UJ	0.014 UJ	0.019 UJ	0.011 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.015 UJ	0.005 UJ	0.0092 UJ	0.011 UJ	0.0073 UJ	0.012 UJ	0.014 UJ	0.019 UJ	0.011 UJ
1,2-DIBROMOETHANE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
1,2-DICHLOROBENZENE	0.015 UJ	0.005 UJ	0.0092 UJ	0.011 UJ	0.0073 UJ	0.012 UJ	0.014 UJ	0.019 UJ	0.011 UJ
1,2-DICHLOROETHANE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
1,2-DICHLOROPROPANE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
1,3-DICHLOROBENZENE	0.015 UJ	0.005 UJ	0.0092 UJ	0.011 UJ	0.0073 UJ	0.012 UJ	0.014 UJ	0.019 UJ	0.011 UJ
1,4-DICHLOROBENZENE	0.015 UJ	0.005 UJ	0.0092 UJ	0.011 UJ	0.0073 UJ	0.012 UJ	0.014 UJ	0.019 UJ	0.011 UJ
2-BUTANONE	0.029 U	0.025	0.018 U	0.022 U	0.015 U	0.03	0.027	0.038 U	0.025
2-HEXANONE	0.029 U	0.02 UJ	0.018 U	0.022 U	0.015 U	0.025 U	0.027 U	0.038 U	0.023 U
4-METHYL-2-PENTANONE	0.029 U	0.02 UJ	0.018 U	0.022 U	0.015 U	0.025 U	0.027 U	0.038 U	0.023 U
ACETONE	0.029 U	0.094	0.028	0.022 U	0.015 U	0.13	0.1	0.038 U	0.15
BENZENE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
BROMOCHLOROMETHANE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
BROMODICHLOROMETHANE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
BROMOFORM	0.015 UJ	0.005 UJ	0.0092 UJ	0.011 UJ	0.0073 UJ	0.012 UJ	0.014 UJ	0.019 UJ	0.011 UJ
BROMOMETHANE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
CARBON DISULFIDE	0.015 U	0.0014 J	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
CARBON TETRACHLORIDE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
CHLOROBENZENE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
CHLORODIBROMOMETHANE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
CHLOROETHANE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
CHLOROFORM	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
CHLOROMETHANE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
CIS-1,2-DICHLOROETHENE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
CIS-1,3-DICHLOROPROPENE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
CYCLOHEXANE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
DICHLORODIFLUOROMETHANE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
ETHYLBENZENE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
ISOPROPYLBENZENE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
M+P-XYLENES	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
METHYL ACETATE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
METHYL CYCLOHEXANE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
METHYL TERT-BUTYL ETHER	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
METHYLENE CHLORIDE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
O-XYLENE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
STYRENE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
TETRACHLOROETHENE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
TOLUENE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
TRANS-1,2-DICHLOROETHENE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
TRANS-1,3-DICHLOROPROPENE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
TRICHLOROETHENE	0.015 U	0.0098 UJ	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
TRICHLOROFLUOROMETHANE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
VINYL CHLORIDE	0.015 U	0.0098 U	0.0092 U	0.011 U	0.0073 U	0.012 U	0.014 U	0.019 U	0.011 U
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
1,2,4,5-TETRACHLOROBENZENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
1,4-DIOXANE	0.15 U	0.11 U	0.11 U	0.12 U	0.1 U	0.12 U	0.14 U	0.18 U	0.1 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
2,3,4,6-TETRACHLOROPHENOL	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
2,4,5-TRICHLOROPHENOL	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
2,4,6-TRICHLOROPHENOL	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
2,4-DICHLOROPHENOL	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
2,4-DIMETHYLPHENOL	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
2,4-DINITROPHENOL	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
2,4-DINITROTOLUENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
2,6-DINITROTOLUENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
2-CHLORONAPHTHALENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
2-CHLOROPHENOL	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
2-METHYLNAPHTHALENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
2-METHYLPHENOL	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
2-NITROANILINE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
2-NITROPHENOL	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
3&4-METHYLPHENOL	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
3,3'-DICHLOROBENZIDINE	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
3-NITROANILINE	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
4,6-DINITRO-2-METHYLPHENOL	0.76 U	0.52 U	0.52 R	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
4-BROMOPHENYL PHENYL ETHER	0.39 U	0.27 U	0.27 UJ	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
4-CHLORO-3-METHYLPHENOL	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
4-CHLOROANILINE	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
4-CHLOROPHENYL PHENYL ETHER	0.39 U	0.27 U	0.27 UJ	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
4-NITROANILINE	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
4-NITROPHENOL	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U

TABLE 24

SEDIMENT ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD309	SW/SD309	SW/SD309	SW/SD310	SW/SD310	SW/SD311	SW/SD311	SW/SD312	SW/SD312
SAMPLE ID	SD309-20191211-0006	SD309-20191211-0624	SD309-20191211-0624-D	SD310-20191211-0006	SD310-20191211-0624	SD311-20191211-0006	SD311-20191211-0624	SD312-20191211-0006	SD312-20191211-0624
SAMPLE DATE	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211
DUPLICATE			SD309-20191211-0624						
SAMPLE CODE	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0.5	0.5	0	0.5	0	0.5	0	0.5
BOTTOM DEPTH	0.5	2	2	0.5	2	0.5	2	0.5	2
ACENAPHTHENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
ACENAPHTHYLENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
ACETOPHENONE	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
ANTHRACENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
ATRAZINE	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
BAP EQUIVALENT-HALFND	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.28582	0.37 U	0.45 U	0.26 U
BAP EQUIVALENT-POS	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.13432	0.37 U	0.45 U	0.26 U
BENZALDEHYDE	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
BENZO(A)ANTHRACENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.13 J	0.37 U	0.45 U	0.26 U
BENZO(A)PYRENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.1 J	0.37 U	0.45 U	0.26 U
BENZO(B)FLUORANTHENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.15 J	0.37 U	0.45 U	0.26 U
BENZO(G,H,I)PERYLENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.073 J	0.37 U	0.45 U	0.26 U
BENZO(K)FLUORANTHENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
BIS(2-CHLOROETHOXY)METHANE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
BIS(2-CHLOROETHYL)ETHER	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
BUTYL BENZYL PHTHALATE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
CAPROLACTAM	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
CARBAZOLE	0.76 U	0.52 U	0.52 UJ	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
CHRYSENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.12 J	0.37 U	0.45 U	0.26 U
DIBENZO(A,H)ANTHRACENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
DIBENZOFURAN	0.39 U	0.27 U	0.27 UJ	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
DIETHYL PHTHALATE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
DIMETHYL PHTHALATE	0.15 J	0.24 J	0.12 J	0.14 J	0.088 J	0.24 J	0.24 J	0.23 J	0.18 J
DI-N-BUTYL PHTHALATE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
DI-N-OCTYL PHTHALATE	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
FLUORANTHENE	0.76 U	0.055 J	0.52 U	0.58 U	0.49 U	0.24 J	0.11 J	0.87 U	0.51 U
FLUORENE	0.39 U	0.27 U	0.27 UJ	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
HEXACHLOROBENZENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
HEXACHLOROBUTADIENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
HEXACHLOROCYCLOPENTADIENE	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
HEXACHLOROETHANE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
HIGH MOLECULAR WEIGHT PAHS	0 U	0 U	0 U	0 U	0 U	0.835	0.09	0 U	0 U
INDENO(1,2,3-CD)PYRENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.062 J	0.37 U	0.45 U	0.26 U
ISOPHORONE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
LOW MOLECULAR WEIGHT PAHS	0 U	0.055	0 U	0 U	0 U	0.339	0.11	0 U	0 U
NAPHTHALENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
NITROBENZENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
N-NITROSO-DI-N-PROPYLAMINE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
N-NITROSODIPHENYLAMINE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.3 U	0.37 U	0.45 U	0.26 U
PENTACHLOROPHENOL	0.76 U	0.52 U	0.52 U	0.58 U	0.49 U	0.58 U	0.71 U	0.87 U	0.51 U
PHENANTHRENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.099 J	0.37 U	0.45 U	0.26 U
PHENOL	0.11 J	0.11 J	0.064 J	0.088 J	0.063 J	0.15 J	0.1 J	0.21 J	0.067 J
PYRENE	0.39 U	0.27 U	0.27 U	0.3 U	0.25 U	0.2 J	0.09 J	0.45 U	0.26 U
TOTAL PAHS	0 U	0.055	0 U	0 U	0 U	1.174	0.2	0 U	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
2-METHYLNAPHTHALENE	0.0017 J	0.0066	0.0035 J	0.0012 J	0.0037 J	0.053	0.0086	0.0098	0.0071
ACENAPHTHENE	0.0076 U	0.0052 U	0.0052 U	0.0058 U	0.0049 U	0.0091	0.0024 J	0.0021 J	0.0017 J
ACENAPHTHYLENE	0.0018 J	0.0083	0.0039 J	0.0014 J	0.0029 J	0.045	0.012	0.0055 J	0.0031 J
ANTHRACENE	0.0038 J	0.0082	0.0026 J	0.0017 J	0.0038 J	0.051	0.013	0.0049 J	0.0029 J
BAP EQUIVALENT-HALFND	0.014564	0.037037	0.015434	0.017607	0.022377	0.23032	0.049095	0.036224	0.023992
BAP EQUIVALENT-POS	0.014564	0.037037	0.015434	0.017607	0.022377	0.23032	0.049095	0.036224	0.023992
BENZO(A)ANTHRACENE	0.01	0.028	0.01	0.012	0.017	0.18	0.037	0.02	0.014
BENZO(A)PYRENE	0.009	0.023	0.0097	0.011	0.014	0.15	0.032	0.022	0.015
BENZO(B)FLUORANTHENE	0.014	0.033	0.015	0.018	0.022	0.2	0.043	0.032	0.022
BENZO(G,H,I)PERYLENE	0.0066 J	0.015	0.0067	0.0084	0.0094	0.11	0.025	0.026	0.014
BENZO(K)FLUORANTHENE	0.0058 J	0.011	0.0053	0.0063	0.0079	0.074	0.016	0.0098	0.0074
CHRYSENE	0.016	0.027	0.011	0.014	0.018	0.18	0.035	0.026	0.018
DIBENZO(A,H)ANTHRACENE	0.0024 J	0.0063	0.0025 J	0.0027 J	0.0034 J	0.032	0.0068 J	0.0071 J	0.0042 J
FLUORANTHENE	0.018	0.05	0.014	0.025	0.032	0.33	0.074	0.038	0.027
FLUORENE	0.0076 U	0.0021 J	0.0052 U	0.0058 U	0.0011 J	0.014	0.005 J	0.0019 J	0.0014 J
HIGH MOLECULAR WEIGHT PAHS	0.0857	0.1983	0.0789	0.1007	0.1265	1.3	0.2748	0.1939	0.1296
INDENO(1,2,3-CD)PYRENE	0.0069 J	0.015	0.0067	0.0083	0.0098	0.094	0.021	0.018	0.011
LOW MOLECULAR WEIGHT PAHS	0.0332	0.1004	0.0313	0.0386	0.0586	0.6361	0.1604	0.0914	0.0637
NAPHTHALENE	0.0027 J	0.0088	0.0045 J	0.0014 J	0.0038 J	0.037	0.012	0.013	0.0076
PENTACHLOROPHENOL	0.015 U	0.011 U	0.011 U	0.012 U	0.01 U	0.012 U	0.014 U	0.018 U	0.01 U
PHENANTHRENE	0.0069 J	0.023	0.0063	0.0091	0.015	0.15	0.042	0.026	0.02
PYRENE	0.015	0.04	0.012	0.02	0.025	0.28	0.059	0.033	0.024
TOTAL PAHS	0.016	0.027	0.011	0.014	0.018	0.18	0.035	0.026	0.018
PESTICIDES (MG/KG)									
4,4'-DDD	0.0076 UJ	0.0052 UJ	0.0052 UJ	0.0058 U	0.0049 U	0.0015 R	0.0071 U	0.0088 U	0.00062 J
4,4'-DDE	0.0076 UJ	0.0052 UJ	0.0052 UJ	0.0058 U	0.0049 U	0.0058 UJ	0.0071 U	0.0088 U	0.0051 UJ
4,4'-DDT	0.0076 UJ	0.0052 UJ	0.0052 UJ	0.0058 U	0.0049 U	0.0058 UJ	0.0071 U	0.0088 U	0.0051 UJ
ALDRIN	0.0039 UJ	0.0027 UJ	0.0027 UJ	0.003 U	0.0025 U	0.003 UJ	0.0037 U	0.0045 U	0.0026 UJ
ALPHA-BHC	0.0039 UJ	0.0027 UJ	0.0027 UJ	0.003 U	0.0025 U	0.003 UJ	0.0037 U	0.0045 U	0.0026 UJ
ALPHA-CHLORDANE	0.0039 UJ	0.0027 UJ	0.0027 UJ	0.003 U	0.0025 U	0.003 UJ	0.0037 U	0.0045 U	0.0026 UJ
BETA-BHC	0.0039 UJ	0.0027 UJ	0.0027 UJ	0.003 U	0.0025 U	0.003 UJ	0.0037 U	0.0045 U	0.0026 UJ
DELTA-BHC	0.0039 UJ	0.0027 UJ	0.0027 UJ	0.003 U	0.0025 U	0.003 UJ	0.0037 U	0.0045 U	0.0026 UJ
DIELDRIN	0.0076 UJ	0.0052 UJ	0.0052 UJ	0.0058 U	0.0049 U	0.0035 J	0.0071 U	0.0088 U	0.0051 UJ
ENDOSULFAN I	0.0039 UJ	0.0027 UJ	0.0027 UJ	0.003 U	0.0025 U	0.003 UJ	0.0037 U	0.0045 U	0.0026 UJ
ENDOSULFAN II	0.0076 UJ	0.0052 UJ	0.0052 UJ	0.0058 U	0.0049 U	0.0019 J	0.0071 U	0.0088 U	0.0051 UJ

TABLE 24

SEDIMENT ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD309	SW/SD309	SW/SD309	SW/SD310	SW/SD310	SW/SD311	SW/SD311	SW/SD312	SW/SD312
SAMPLE ID	SD309-20191211-0006	SD309-20191211-0624	SD309-20191211-0624-D	SD310-20191211-0006	SD310-20191211-0624	SD311-20191211-0006	SD311-20191211-0624	SD312-20191211-0006	SD312-20191211-0624
SAMPLE DATE	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211
DUPLICATE			SD309-20191211-0624						
SAMPLE CODE	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0.5	0.5	0	0.5	0	0.5	0	0.5
BOTTOM DEPTH	0.5	2	2	0.5	2	0.5	2	0.5	2
ENDOSULFAN SULFATE	0.0076 UJ	0.0052 UJ	0.0052 UJ	0.0058 U	0.0049 U	0.0058 UJ	0.0071 U	0.0088 U	0.0051 UJ
ENDRIN	0.0076 UJ	0.0052 UJ	0.00048 J	0.0058 U	0.0049 U	0.0011 J	0.0071 U	0.0088 U	0.0051 UJ
ENDRIN ALDEHYDE	0.0076 UJ	0.0052 UJ	0.0052 UJ	0.0058 U	0.0049 U	0.0058 UJ	0.0071 U	0.0088 U	0.0051 UJ
ENDRIN KETONE	0.0076 UJ	0.0052 UJ	0.0052 UJ	0.0058 U	0.0049 U	0.0058 UJ	0.0071 U	0.0088 U	0.0051 UJ
GAMMA-BHC (LINDANE)	0.0039 UJ	0.0027 UJ	0.00029 R	0.003 U	0.00037 J	0.0015 J	0.0037 U	0.0045 U	0.00068 J
GAMMA-CHLORDANE	0.0039 UJ	0.0027 UJ	0.0027 UJ	0.003 U	0.0025 U	0.003 UJ	0.0037 U	0.0045 U	0.00027 R
HEPTACHLOR	0.0039 UJ	0.0027 UJ	0.0027 UJ	0.003 U	0.0025 U	0.003 UJ	0.0037 U	0.0045 U	0.0026 UJ
HEPTACHLOR EPOXIDE	0.0039 UJ	0.0027 UJ	0.0027 UJ	0.003 U	0.0025 U	0.003 UJ	0.0037 U	0.0045 U	0.0026 UJ
METHOXYCHLOR	0.039 UJ	0.027 UJ	0.027 UJ	0.03 U	0.025 U	0.03 UJ	0.037 U	0.045 U	0.026 UJ
TOXAPHENE	0.39 UJ	0.27 UJ	0.27 UJ	0.3 U	0.25 U	0.3 UJ	0.37 U	0.45 U	0.26 UJ
PCBS (MG/KG)									
AROCLOR-1016	0.076 U	0.053 U	0.052 U	0.058 U	0.049 U	0.058 U	0.071 U	0.087 U	0.051 U
AROCLOR-1221	0.076 U	0.053 U	0.052 U	0.058 U	0.049 U	0.058 U	0.071 U	0.087 U	0.051 U
AROCLOR-1232	0.076 U	0.053 U	0.052 U	0.058 U	0.049 U	0.058 U	0.071 U	0.087 U	0.051 U
AROCLOR-1242	0.076 U	0.053 U	0.052 U	0.058 U	0.049 U	0.058 U	0.071 U	0.087 U	0.051 U
AROCLOR-1248	0.076 U	0.053 U	0.052 U	0.058 U	0.049 U	0.058 U	0.071 U	0.087 U	0.051 U
AROCLOR-1254	0.076 U	0.073	0.052 U	0.058 U	0.049 U	0.058 U	0.071 U	0.087 U	0.051 U
AROCLOR-1260	0.011 J	0.053 U	0.024 J	0.031 J	0.076	0.21	1.3	0.058 J	0.012 J
AROCLOR-1262	0.076 U	0.053 U	0.052 U	0.058 U	0.049 U	0.058 U	0.071 U	0.087 U	0.051 U
AROCLOR-1268	0.076 U	0.053 U	0.052 U	0.058 U	0.049 U	0.058 U	0.071 U	0.087 U	0.051 U
TOTAL AROCLOR	0.011	0.073	0.024	0.031	0.076	0.21	1.3	0.058	0.012
TOTAL AROCLOR HALFND	0.315	0.285	0.232	0.263	0.272	0.442	1.584	0.406	0.216
PCB CONGENERS (MG/KG)									
PCB-105	0.000347	0.00161	0.00191	0.00206	0.00658	0.00689	0.00358	0.00488	0.000575
PCB-114	0.0000132 J	0.0000667 J	0.0000699 J	0.0000694 J	0.000239	0.000263	0.000122 U	0.000165 J	0.000021 Z
PCB-118	0.0011	0.00846	0.00803	0.00967	0.0415 J	0.0301	0.0137	0.0186	0.00211
PCB-123	0.0000119 J	0.0000575 J	0.0000685 J	0.0000673 J	0.000288	0.00027	0.000122 U	0.000135 J	0.0000226 Z
PCB-126	0.0000074 J	0.0000387 Z	0.0000714 Z	0.0000394 J	0.000143	0.000116 J	0.000122 U	0.000108 J	0.0000214 J
PCB-128/166	0.000559	0.00507	0.00428	0.005	0.0185	0.0151	0.00708	0.0088	0.00098
PCB-129/138/163	0.00986	0.109	0.0863	0.101	0.412 J	0.289 J	0.134	0.178	0.0186
PCB-153/168	0.00956	0.114 J	0.0869 J	0.102 J	0.459 J	0.288 J	0.133 J	0.191	0.0194
PCB-156	0.000687	0.00757	0.00551	0.00724	0.0301	0.016	0.00707	0.0106	0.00107
PCB-156/157	--	--	--	--	--	--	--	--	--
PCB-167	0.00027	0.00291	0.00235	0.00271	0.0118	0.00646	0.00288	0.0046	0.000469
PCB-169	0.0000146 U	0.000101 U	0.000103 U	0.000103 U	0.0000961 U	0.000116 U	0.000122 U	0.000252 U	0.000113 U
PCB-170	0.00432	0.061 J	0.0429 J	0.0508 J	0.232 J	0.134 J	0.0532 J	0.0694	0.00857
PCB-18/30	0.0000221 J	0.000135 J	0.000427	0.0000716 J	0.00158	0.000608	0.000365	0.000481 J	0.0000455 J
PCB-180/193	0.00943	0.14 J	0.0976 J	0.118 J	0.545 J	0.371 J	0.129 J	0.178	0.0205
PCB-187	0.00546	0.073 J	0.0517 J	0.0602 J	0.33 J	0.211 J	0.0758 J	0.101 J	0.0115
PCB-189	0.000166	0.00212	0.00159	0.00195	0.00946	0.0049	0.00195	0.00301	0.000273
PCB-195	0.00104	0.0129	0.00964	0.0101	0.0517 J	0.0235	0.0111	0.0167	0.0018
PCB-20/28	0.000165	0.00081	0.00197	0.000509	0.00858	0.00288	0.00169	0.00343	0.000312
PCB-206	0.000528	0.005	0.00413	0.00397	0.0212	0.0191	0.00613	0.00818	0.00143
PCB-209	0.000152	0.000321	0.000529	0.000481	0.00149	0.00418	0.00225	0.00193	0.000758
PCB-44/47/65	0.00014	0.0101	0.0155	0.000666	0.192 J	0.00451	0.00411	0.00261	0.00026 J
PCB-52	0.000192	0.00127	0.0024	0.00174	0.0162	0.00997	0.00526	0.00438	0.000509
PCB-66	0.000191	0.00127	0.00204	0.000856	0.0128	0.00448	0.00237	0.00405	0.00044
PCB-77	0.0000299	0.000121	0.000289	0.000111	0.000462	0.000517	0.000275	0.00063	0.0000816 J
PCB-8	0.0000441	0.000222	0.000503	0.000103 J	0.00188 J	0.000694 J	0.000441 J	0.000774	0.0000719 J
PCB-81	0.00000107 J	0.000101 U	0.0000107 J	0.00000643 J	0.0000961 U	0.000116 U	0.000122 U	0.0000215 J	0.000113 U
PCB-90/101/113	0.00208	0.0296	0.0267	0.0272	0.185 J	0.0902	0.0376	0.0408	0.00478
TEQ DIOXIN-LIKE PCBs (BIRD)	2.4622E-06	1.09801E-05	2.35294E-05	1.12139E-05	4.17224E-05	4.01826E-05	1.50003E-05	4.6278E-05	6.41535E-06
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	2.4695E-06	1.60806E-05	2.35809E-05	1.12654E-05	4.65754E-05	4.60406E-05	2.7268E-05	4.6404E-05	1.21218E-05
TEQ DIOXIN-LIKE PCBs (FISH)	5.35E-08	3.1957E-07	4.88891E-07	3.30148E-07	1.26104E-06	9.56115E-07	1.734E-07	8.237E-07	1.37863E-07
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	5.3865E-08	3.47345E-07	4.91466E-07	3.32723E-07	1.28746E-06	9.88015E-07	5.1256E-07	0.00000083	1.68938E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	8.21164E-07	4.56593E-06	7.75796E-06	4.66603E-06	1.73452E-05	1.35982E-05	9.029E-07	1.21292E-05	2.28438E-06
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	1.04016E-06	6.09608E-06	9.30296E-06	6.21103E-06	1.88011E-05	1.53556E-05	8.85486E-06	1.59092E-05	3.99633E-06
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.00263347	0.0229539	0.0198995	0.02392353	0.100572	0.065516	0.029455	0.0427495	0.0046436
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.0437432	0.563698	0.433519	0.4826966	2.48893	1.468222	0.603396	0.809535	0.0899564
TOTAL PCB CONGENERS ZEROND	0.04637667	0.5866519	0.4534185	0.50662013	2.589502	1.533738	0.632851	0.8522845	0.0946
TOTAL PCB CONGENERS-NOAA	0.0451902	0.573768	0.443459	0.4944266	2.53701	1.505212	0.620676	0.833015	0.0926414
TOTAL PCB CONGENERS-NOAA HALFND	0.04638397	0.5867529	0.45347	0.50667163	2.5895981	1.533854	0.633156	0.8524105	0.094713
TOTAL PCB CONGENERS-NOAA X2	0.0903804	1.147536	0.886918	0.9888532	5.07402	3.010424	1.241352	1.66603	0.1852828
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0903804	1.147536	0.886918	0.9888532	5.07402	3.010424	1.241352	1.66603	0.1852828
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	13.4	1620	173	333	1170	383	43.1	269	1200
1,2,3,4,6,7,8,9-OCDF	9.94 U	105	12.2	18.4	119	40.7	3.74 J	16.7	102
1,2,3,4,6,7,8-HPCDD	1.23 J	145	14.7	29.4	87.9	30.1	3.62 J	18.6	73.9
1,2,3,4,6,7,8-HPCDF	4.97 U	34.6	4.11 J	9.68	25.9	10.3	4.74 U	6.49 J	12.5
1,2,3,4,7,8,9-HPCDF	4.97 U	3.03 J	0.334 JZ	4.76 U	3.04 J	4.9 U	4.74 U	7.44 U	4.88 U
1,2,3,4,7,8-HXCDD	4.97 U	1.84 JZ	4.88 U	4.76 U	4.81 U	4.9 U	4.74 U	7.44 U	4.88 U
1,2,3,4,7,8-HXCDF	4.97 U	4.77 JZ	4.88 U	1.54 Z	4.19 J	1.71 J	4.74 U	7.44 U	4.88 U
1,2,3,6,7,8-HXCDD	4.97 U	6.02	0.584 J	1.4 J	2.78 J	1.02 Z	4.74 U	0.883 J	1.28 J
1,2,3,6,7,8-HXCDF	4.97 U	2.52 JZ	4.88 U	4.76 U	2.02 J	4.9 U	4.74 U	7.44 U	4.88 U
1,2,3,7,8,9-HXCDD	4.97 U	3.2 J	4.88 U	4.76 U	1.98 J	4.9 U	4.74 U	7.44 U	4.88 U
1,2,3,7,8,9-HXCDF	4.97 U	0.905 J	4.88 U	4.76 U	4.81 U	4.9 UJ	4.74 U	7.44 U	4.88 UJ
1,2,3,7,8-PECDD	4.97 U	0.953 J	4.88 U	4.76 U	4.81 U	4.9 U	4.74 U	7.44 U	4.88 U
1,2,3,7,8-PECDF	4.97 U	3.78 J	4.88 U	0.409 J	1.17 J	0.782 J	0.206 J	0.375 Z	0.291 J
2,3,4,6,7,8-HXCDF	4.97 U	3.22 J	0.509 JZ	4.76 U	2.16 J	4.9 U	4.74 U	7.44 U	4.88 U
2,3,4,7,8-PECDF	4.97 U	5.04 Z	0.824 J	4.76 U	2.95 J	2.08 J	4.74 U	1.32 Z	4.88 U
2,3,7,8-TCDD	0.994 U	0.351 J	0.137 JZ	0.263 J	0.429 Z	0.204 Z	0.947 U	0.265 Z	0.976 U

TABLE 24

SEDIMENT ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD309	SW/SD309	SW/SD309	SW/SD310	SW/SD310	SW/SD311	SW/SD311	SW/SD312	SW/SD312
SAMPLE ID	SD309-20191211-0006	SD309-20191211-0624	SD309-20191211-0624-D	SD310-20191211-0006	SD310-20191211-0624	SD311-20191211-0006	SD311-20191211-0624	SD312-20191211-0006	SD312-20191211-0624
SAMPLE DATE	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211	20191211
DUPLICATE			SD309-20191211-0624						
SAMPLE CODE	NORMAL	ORIG	DUP	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0.5	0.5	0	0.5	0	0.5	0	0.5
BOTTOM DEPTH	0.5	2	2	0.5	2	0.5	2	0.5	2
2,3,7,8-TCDF	0.994 U	2.78 Z	0.976 U	1.22	2.87	1.78	0.578 J	1.28 J	0.797 J
TEQ DIOXINS (BIRD)	0.00257	11.8095	1.0954	1.85324	7.935	4.49887	0.606904	3.0234	1.168
TEQ DIOXINS (BIRD) HALFND	7.656867	11.8095	5.3654	7.70804	10.70075	8.07587	7.195004	8.8266	7.9024
TEQ DIOXINS (FISH)	0.00257	6.9995	0.6834	0.67379	3.4968	1.72877	0.047504	1.12865	0.3963
TEQ DIOXINS (FISH) HALFND	6.712567	6.9995	5.2462	6.19539	7.3448	6.18777	6.303804	8.27105	6.7891
TEQ DIOXINS (HUMANS/MAMMALS)	0.01632	7.7987	0.7405	1.18749	4.5042	1.83357	0.114232	1.22516	1.47103
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	5.658761	7.7987	4.5225	5.49529	7.3902	5.53307	5.375132	7.21436	6.61943
TOTAL HPCDD	2.62 J	246 J	26.5 J	57.6	156	54.9	7.18 J	35.7	135
TOTAL HPCDF	0.587 J	106 J	11.7 J	22.2 J	79.5 J	32 J	3.35 J	16.7 J	57.7 J
TOTAL HXCDD	4.97 UJ	51 J	4.98 J	18.1 J	31.5 J	8.68 J	1.05 J	7.14 J	6.33 J
TOTAL HXCDF	0.953 J	64.3 J	5.53 J	14.4 J	40.6 J	17.9 J	1.72 J	9.94 J	10.4 J
TOTAL PECDD	4.97 UJ	12.4 J	1.55 J	5.22 J	12.4 J	3.98 J	0.621 J	1.49 J	0.783 J
TOTAL PECDF	2.18 J	135 J	17.8 J	32.5 J	41.3 J	23.1 J	2.72 J	25.3 J	12 J
TOTAL TCDD	0.994 UJ	16.7 J	1.94 J	4.08 J	7.57 J	3.18 J	0.508 J	1.49 UJ	0.976 UJ
TOTAL TCDF	0.821 J	69.8 J	9.26 J	19.8 J	28.5 J	19.3 J	2.74 J	13.4 J	9.13 J
METALS (MG/KG)									
ALUMINUM	3670	4710	3850	2630	2560	4220	3020	6820	3270
ANTIMONY	1.4 U	1.2 U	1.2 U	1.3 U	1.1 U	1.4 U	1.4	2.3 U	1.2
ARSENIC	5.5	12.2	7.6	5.1	5.4	18.3	14.8	9.7	8.5
BARIUM	47.6	76.2	57.8	41.2	38.7	73.1	69.7	87.6	45.4
BERYLLIUM	1	2.3	1.4	0.63 U	0.53 U	1.4	1.2	4.8	1.7
CADMIUM	0.7 UJ	0.74	0.59 UJ	0.63 UJ	0.53 UJ	0.7 UJ	0.67 UJ	1.1 UJ	0.56 UJ
CALCIUM	7400	19100	15300	3380	2450	1490	1460	2110	1350
CHROMIUM	7.7	6.1 J	5.3	6.2	5.7	7.5	6.7	9.8	4.3
COBALT	17.9	57.2	23.5	5.9	6.7	11.8	8.7	100	25.2
COPPER	24.2	43.4	28.4	18.9	17.5	50.4	48.1	59.2	39.7
CYANIDE	0.96 U	0.76 U	0.75 U	0.83 U	0.66 U	0.91 U	0.91 U	1.6 U	0.78 U
IRON	11700	14100	12400	8810	8730	47300	51500	16600	9050
LEAD	47.2	70.9	51.1	35.2	41.7	142	149	68.7	79.6
MAGNESIUM	1300	1360	1630	995	641	675 J	505 J	853 J	497 J
MANGANESE	419	1490	510	398	297	478	475	2020	178
MERCURY	0.18 U	0.14 U	0.14 U	0.15 U	0.12 U	0.18 U	0.17 U	0.29 U	0.16 U
NICKEL	27.7	113	43.2	11	11.1	26	24.8	185	45.6
POTASSIUM	495 J	518 J	430 J	312 J	312 J	195 J	665 UJ	1200 UJ	49.2 J
SELENIUM	0.5 J	1.1 J	0.66 J	0.43 J	0.33 J	0.99 J	1.1 J	1.8 J	1.5 J
SILVER	0.7 U	0.58 U	0.59 U	0.63 U	0.53 U	0.7 U	0.67 U	1.1 U	0.56 U
SODIUM	51.3 J	573 UJ	57.2 J	66.9 J	47.2 J	685 UJ	665 UJ	1200 UJ	67.1 J
THALLIUM	0.7 U	0.58 U	0.59 U	0.63 U	0.53 U	0.7 U	0.67 U	1.1 U	0.56 U
VANADIUM	6.7	7.3	5.5	5.2	4.6	7	5.7	9.6	5.7
ZINC	108	272	134	57.5	60.9	154	125	446	147
MISCELLANEOUS (%)									
TOTAL SOLIDS	--	--	--	--	--	--	--	--	52
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	--	--	--	--	--	--	--	--	235000

TABLE 24

SEDIMENT ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD313	SW/SD314	SW/SD315	SW/SD316	SW/SD317	SW/SD331	SW/SD332
SAMPLE ID	SD313-20191211	SD314-20191210	SD315-20191210	SD316-20191210	SD317-20191210	SD331-20191210	SD332-20191210
SAMPLE DATE	20191211	20191210	20191210	20191210	20191210	20191210	20191210
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5
VOLATILES (MG/KG)							
1,1,1-TRICHLOROETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
1,1,2,2-TETRACHLOROETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
1,1,2-TRICHLOROETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
1,1-DICHLOROETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
1,1-DICHLOROETHENE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
1,2,3-TRICHLOROBENZENE	0.0078 UJ	0.0096 UJ	0.01 UJ	0.01 U	0.0087 UJ	0.0073 UJ	0.0065 UJ
1,2,4-TRICHLOROBENZENE	0.0078 UJ	0.0096 UJ	0.01 UJ	0.01 U	0.0087 UJ	0.0073 UJ	0.0065 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.0078 UJ	0.0096 UJ	0.01 UJ	0.01 U	0.0087 UJ	0.0073 UJ	0.0065 UJ
1,2-DIBROMOETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
1,2-DICHLOROBENZENE	0.0078 UJ	0.0096 UJ	0.01 UJ	0.01 U	0.0087 UJ	0.0073 UJ	0.0065 UJ
1,2-DICHLOROETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
1,2-DICHLOROPROPANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
1,3-DICHLOROBENZENE	0.0078 UJ	0.0096 UJ	0.01 UJ	0.01 U	0.0087 UJ	0.0073 UJ	0.0065 UJ
1,4-DICHLOROBENZENE	0.0078 UJ	0.0096 UJ	0.01 UJ	0.01 U	0.0087 UJ	0.0073 UJ	0.0065 UJ
2-BUTANONE	0.016 U	0.019 U	0.021 U	0.02 U	0.017 U	0.015 U	0.013 UJ
2-HEXANONE	0.016 U	0.019 U	0.021 U	0.02 U	0.017 U	0.015 U	0.013 UJ
4-METHYL-2-PENTANONE	0.016 U	0.019 U	0.021 U	0.02 U	0.017 U	0.015 U	0.013 UJ
ACETONE	0.016 U	0.019 U	0.021 U	0.02 U	0.017 U	0.015 U	0.016 UJ
BENZENE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
BROMOCHLOROMETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
BROMODICHLOROMETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
BROMOFORM	0.0078 UJ	0.0096 UJ	0.01 UJ	0.01 U	0.0087 UJ	0.0073 UJ	0.0065 UJ
BROMOMETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
CARBON DISULFIDE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
CARBON TETRACHLORIDE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
CHLOROBENZENE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
CHLORODIBROMOMETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
CHLOROETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
CHLOROFORM	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
CHLOROMETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
CIS-1,2-DICHLOROETHENE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
CIS-1,3-DICHLOROPROPENE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
CYCLOHEXANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
DICHLORODIFLUOROMETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
ETHYLBENZENE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
ISOPROPYLBENZENE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
M+P-XYLENES	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
METHYL ACETATE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
METHYL CYCLOHEXANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
METHYL TERT-BUTYL ETHER	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
METHYLENE CHLORIDE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
O-XYLENE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
STYRENE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
TETRACHLOROETHENE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
TOLUENE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
TRANS-1,2-DICHLOROETHENE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
TRANS-1,3-DICHLOROPROPENE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
TRICHLOROETHENE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
TRICHLOROFLUOROMETHANE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
VINYL CHLORIDE	0.0078 U	0.0096 U	0.01 U	0.01 U	0.0087 U	0.0073 U	0.0063 UJ
SEMIVOLATILES (MG/KG)							
1,1-BIPHENYL	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
1,2,4,5-TETRACHLOROBENZENE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
1,4-DIOXANE	0.1 U	0.11 U	0.12 U	0.12 U	0.1 U	0.098 U	0.096 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
2,3,4,6-TETRACHLOROPHENOL	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
2,4,5-TRICHLOROPHENOL	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
2,4,6-TRICHLOROPHENOL	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
2,4-DICHLOROPHENOL	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
2,4-DIMETHYLPHENOL	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
2,4-DINITROPHENOL	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
2,4-DINITROTOLUENE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
2,6-DINITROTOLUENE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
2-CHLORONAPHTHALENE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
2-CHLOROPHENOL	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
2-METHYLNAPHTHALENE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.12 J	0.24 U
2-METHYLPHENOL	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
2-NITROANILINE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
2-NITROPHENOL	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
3&4-METHYLPHENOL	0.51 U	0.54 U	0.059 J	0.59 U	0.5 U	0.48 U	0.47 U
3,3'-DICHLOROBENZIDINE	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
3-NITROANILINE	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
4,6-DINITRO-2-METHYLPHENOL	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
4-BROMOPHENYL PHENYL ETHER	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
4-CHLORO-3-METHYLPHENOL	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
4-CHLOROANILINE	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
4-CHLOROPHENYL PHENYL ETHER	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
4-NITROANILINE	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
4-NITROPHENOL	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U

TABLE 24

SEDIMENT ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD313	SW/SD314	SW/SD315	SW/SD316	SW/SD317	SW/SD331	SW/SD332
SAMPLE ID	SD313-20191211	SD314-20191210	SD315-20191210	SD316-20191210	SD317-20191210	SD331-20191210	SD332-20191210
SAMPLE DATE	20191211	20191210	20191210	20191210	20191210	20191210	20191210
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ACENAPHTHENE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.17 J	0.24 U
ACENAPHTHYLENE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	2	0.24 U
ACETOPHENONE	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.059 J	0.47 U
ANTHRACENE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	2.5	0.24 U
ATRAZINE	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
BAP EQUIVALENT-HALFND	0.26582	0.3671	0.240769	0.280844	0.219766	9.2443	0.27925
BAP EQUIVALENT-POS	0.13452	0.2271	0.074269	0.108794	0.075466	9.2443	0.15925
BENZALDEHYDE	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
BENZO(A)ANTHRACENE	0.11 J	0.2 J	0.062 J	0.077 J	0.053 J	8.3	0.16 J
BENZO(A)PYRENE	0.1 J	0.17 J	0.06 J	0.089 J	0.061 J	6	0.12 J
BENZO(B)FLUORANTHENE	0.17 J	0.25 J	0.08 J	0.12 J	0.091 J	8.7	0.17 J
BENZO(G,H,I)PERYLENE	0.066 J	0.097 J	0.3 U	0.071 J	0.053 J	3	0.058 J
BENZO(K)FLUORANTHENE	0.26 U	0.091 J	0.3 U	0.31 U	0.26 U	2.7	0.063 J
BIS(2-CHLOROETHOXY)METHANE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
BIS(2-CHLOROETHYL)ETHER	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.09 J	0.28 U	0.17 J	0.2 J	0.26 U	0.25 U	0.24 U
BUTYL BENZYL PHTHALATE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
CAPROLACTAM	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
CARBAZOLE	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.24 J	0.47 U
CHRYSENE	0.12 J	0.19 J	0.069 J	0.094 J	0.066 J	7.3	0.12 J
DIBENZO(A,H)ANTHRACENE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	1.2	0.24 U
DIBENZOFURAN	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.35	0.24 U
DIETHYL PHTHALATE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
DIMETHYL PHTHALATE	0.09 J	0.14 J	0.33	0.13 J	0.091 J	0.3	0.22 J
DI-N-BUTYL PHTHALATE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
DI-N-OCTYL PHTHALATE	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
FLUORANTHENE	0.23 J	0.38 J	0.13 J	0.17 J	0.11 J	17	0.26 J
FLUORENE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.85	0.24 U
HEXACHLOROBENZENE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
HEXACHLOROBUTADIENE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
HEXACHLOROCYCLOPENTADIENE	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
HEXACHLOROETHANE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
HIGH MOLECULAR WEIGHT PAHS	0.81	1.418	0.381	0.601	0.417	53.3	0.986
INDENO(1,2,3-CD)PYRENE	0.064 J	0.11 J	0.3 U	0.31 U	0.26 U	3.1	0.055 J
ISOPHORONE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
LOW MOLECULAR WEIGHT PAHS	0.33	0.54	0.189	0.247	0.164	31.63	0.347
NAPHTHALENE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.21 J	0.24 U
NITROBENZENE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
N-NITROSO-DI-N-PROPYLAMINE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
N-NITROSODIPHENYLAMINE	0.26 U	0.28 U	0.3 U	0.31 U	0.26 U	0.25 U	0.24 U
PENTACHLOROPHENOL	0.51 U	0.54 U	0.58 U	0.59 U	0.5 U	0.48 U	0.47 U
PHENANTHRENE	0.1 J	0.16 J	0.059 J	0.077 J	0.054 J	8.9	0.087 J
PHENOL	0.078 J	0.11 J	0.17 J	0.11 J	0.093 J	0.19 J	0.12 J
PYRENE	0.18 J	0.31	0.11 J	0.15 J	0.093 J	13	0.24
TOTAL PAHS	1.14	1.958	0.57	0.848	0.581	84.93	1.333
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K							
2-METHYLNAPHTHALENE	0.03	0.014	0.0084	0.018	0.028	--	0.0033 J
ACENAPHTHENE	0.0026 J	0.004 J	0.0058 U	0.0021 J	0.0026 J	--	0.0026 J
ACENAPHTHYLENE	0.019	0.028	0.0063	0.011	0.017	--	0.024
ANTHRACENE	0.025	0.031	0.012	0.014	0.016	--	0.03
BAP EQUIVALENT-HALFND	0.15941	0.17507	0.069171	0.099503	0.122751	--	0.138107
BAP EQUIVALENT-POS	0.15941	0.17507	0.069171	0.099503	0.122751	--	0.138107
BENZO(A)ANTHRACENE	0.11	0.13	0.046	0.062	0.069	--	0.13
BENZO(A)PYRENE	0.1	0.11	0.046	0.067	0.079	--	0.093
BENZO(B)FLUORANTHENE	0.15	0.16	0.063	0.083	0.12	--	0.13
BENZO(G,H,I)PERYLENE	0.07	0.075	0.036	0.054	0.075	--	0.045
BENZO(K)FLUORANTHENE	0.058	0.063	0.022	0.033	0.036	--	0.051
CHRYSENE	0.13	0.14	0.051	0.073	0.091	--	0.097
DIBENZO(A,H)ANTHRACENE	0.025	0.027	0.0089	0.013	0.018	--	0.014
FLUORANTHENE	0.22	0.25	0.087	0.12	0.14	--	0.18
FLUORENE	0.0054	0.0089	0.0023 J	0.0034 J	0.0034 J	--	0.0077
HIGH MOLECULAR WEIGHT PAHS	0.9	0.998	0.3829	0.541	0.672	--	0.795
INDENO(1,2,3-CD)PYRENE	0.077	0.083	0.031	0.046	0.064	--	0.045
LOW MOLECULAR WEIGHT PAHS	0.418	0.4489	0.1632	0.2335	0.291	--	0.3168
NAPHTHALENE	0.036	0.017	0.0096	0.021	0.035	--	0.0055
PENTACHLOROPHENOL	0.0013 J	0.011 U	0.012 U	0.012 U	0.01 U	--	0.0096 U
PHENANTHRENE	0.11	0.11	0.046	0.062	0.077	--	0.067
PYRENE	0.18	0.21	0.079	0.11	0.12	--	0.19
TOTAL PAHS	0.13	0.14	0.051	0.073	0.091	--	0.097
PESTICIDES (MG/KG)							
4,4'-DDD	0.0015 R	0.0054 UJ	0.0058 UJ	0.0059 U	0.0025 J	0.016 J	0.00044 R
4,4'-DDE	0.00075 J	0.0054 UJ	0.0058 UJ	0.0059 U	0.005 U	0.0048 U	0.0047 U
4,4'-DDT	0.0051 U	0.0054 UJ	0.0058 UJ	0.0059 U	0.005 U	0.0034 J	0.0047 U
ALDRIN	0.0026 U	0.0028 UJ	0.003 UJ	0.0031 U	0.0026 U	0.0013 J	0.0024 U
ALPHA-BHC	0.0026 U	0.0028 UJ	0.003 UJ	0.0031 U	0.0026 U	0.0025 U	0.0024 U
ALPHA-CHLORDANE	0.0015 J	0.0028 UJ	0.003 UJ	0.0031 U	0.00079 J	0.0025 U	0.0024 U
BETA-BHC	0.0026 U	0.0028 UJ	0.003 UJ	0.0031 U	0.0026 U	0.0025 U	0.0024 U
DELTA-BHC	0.0026 U	0.0028 UJ	0.003 UJ	0.0031 U	0.0026 U	0.0025 J	0.0024 U
DIELDRIN	0.0051 U	0.0054 UJ	0.0058 UJ	0.0059 U	0.005 U	0.0048 U	0.0047 U
ENDOSULFAN I	0.0026 U	0.0028 UJ	0.003 UJ	0.0031 U	0.0026 U	0.0025 U	0.0024 U
ENDOSULFAN II	0.0051 U	0.0054 UJ	0.0058 UJ	0.0059 U	0.005 U	0.0038 R	0.0047 U

TABLE 24

SEDIMENT ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD313	SW/SD314	SW/SD315	SW/SD316	SW/SD317	SW/SD331	SW/SD332
SAMPLE ID	SD313-20191211	SD314-20191210	SD315-20191210	SD316-20191210	SD317-20191210	SD331-20191210	SD332-20191210
SAMPLE DATE	20191211	20191210	20191210	20191210	20191210	20191210	20191210
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ENDOSULFAN SULFATE	0.0051 U	0.0054 UJ	0.0058 UJ	0.0059 U	0.005 U	0.0048 U	0.0047 U
ENDRIN	0.00071 J	0.0054 UJ	0.0058 UJ	0.0059 U	0.005 U	0.0091 J	0.0047 U
ENDRIN ALDEHYDE	0.0051 U	0.0054 UJ	0.0058 UJ	0.0059 U	0.005 U	0.0048 U	0.00031 J
ENDRIN KETONE	0.0051 U	0.0054 UJ	0.0058 UJ	0.0059 U	0.005 U	0.0048 U	0.0047 U
GAMMA-BHC (LINDANE)	0.0022 J	0.001 J	0.00068 J	0.00047 J	0.0028	0.017 J	0.00054 J
GAMMA-CHLORDANE	0.0007 R	0.0028 UJ	0.003 UJ	0.0031 U	0.0026 U	0.0025 U	0.0024 U
HEPTACHLOR	0.0026 U	0.0028 UJ	0.003 UJ	0.0031 U	0.0026 U	0.0025 U	0.0024 U
HEPTACHLOR EPOXIDE	0.0026 U	0.0028 UJ	0.003 UJ	0.0031 U	0.0026 U	0.0025 U	0.0024 U
METHOXYCHLOR	0.026 U	0.028 UJ	0.03 UJ	0.031 U	0.026 U	0.025 U	0.024 U
TOXAPHENE	0.26 U	0.28 UJ	0.3 UJ	0.31 U	0.26 U	0.25 U	0.24 U
PCBS (MG/KG)							
AROCLOR-1016	0.051 U	0.053 U	0.058 U	0.06 UJ	0.05 U	0.048 U	0.047 U
AROCLOR-1221	0.051 U	0.053 U	0.058 U	0.06 UJ	0.05 U	0.048 U	0.047 U
AROCLOR-1232	0.051 U	0.053 U	0.058 U	0.06 UJ	0.05 U	0.048 U	0.047 U
AROCLOR-1242	0.051 U	0.053 U	0.058 U	0.06 UJ	0.05 U	0.048 U	0.047 U
AROCLOR-1248	0.051 U	0.053 U	0.058 U	0.06 UJ	0.05 U	0.048 U	0.047 U
AROCLOR-1254	0.051 U	0.053 U	0.058 U	0.06 UJ	0.05 U	0.028 J	0.047 U
AROCLOR-1260	0.075	0.1	0.066	0.053 J	0.044 J	0.048 U	0.038 J
AROCLOR-1262	0.051 U	0.053 U	0.058 U	0.06 UJ	0.05 U	0.048 U	0.047 U
AROCLOR-1268	0.051 U	0.053 U	0.058 U	0.06 UJ	0.05 U	0.048 U	0.047 U
TOTAL AROCLOR	0.075	0.1	0.066	0.053	0.044	0.028	0.038
TOTAL AROCLOR HALFND	0.279	0.312	0.298	0.293	0.244	0.22	0.226
PCB CONGENERS (MG/KG)							
PCB-105	0.00235	0.00489	0.00179	0.00161	0.00184	0.000196	0.00166
PCB-114	0.0000927 J	0.000193	0.0000573 J	0.0000492 J	0.0000836 Z	0.0000996 U	0.000103 U
PCB-118	0.00823	0.0177	0.00749	0.00596	0.0056	0.000526	0.00554
PCB-123	0.0000562 J	0.00019	0.0000693 J	0.0000584 J	0.000053 J	0.0000996 U	0.000103 U
PCB-126	0.000074 J	0.0000885 J	0.0000505 J	0.0000643 J	0.000103 U	0.0000996 U	0.000103 U
PCB-128/166	0.0041	0.00982	0.00452	0.00334	0.00327	0.000236	0.00341
PCB-129/138/163	0.0748	0.185 J	0.0893	0.0652	0.0565	0.00413	0.078
PCB-153/168	0.0764	0.187 J	0.0902	0.0649	0.0591	0.00417	0.087 J
PCB-156	--	0.0109	0.00552	0.00402	0.00324	0.000262	0.00539
PCB-156/157	0.00526	--	--	--	--	--	--
PCB-167	0.00217	0.00447	0.0023	0.00163	0.0013	0.000103	0.00187
PCB-169	0.000102 U	0.00011 U	0.000117 U	0.000118 U	0.000103 U	0.0000996 U	0.000103 U
PCB-170	0.0378	0.0846 J	0.0446	0.0308	0.0242	0.00164	0.0513 J
PCB-18/30	0.000167 J	0.00023	0.0000828 J	0.0000986 J	0.000106 J	0.0000258 J	0.000196 J
PCB-180/193	0.0894 J	0.195 J	0.101 J	0.0702	0.0597	0.00382	0.122 J
PCB-187	0.0476 J	0.114 J	0.052 J	0.0376	0.0361	0.00209	0.0592 J
PCB-189	0.00148	0.00305	0.00157	0.00113	0.000863	0.0000704 J	0.00182
PCB-195	0.00759	0.0192	0.0103	0.00719	0.00515	0.000335	0.0121
PCB-20/28	0.00101	0.00144	0.000524	0.00087	0.000682	0.0000944 J	0.000509
PCB-206	0.00367	0.0103	0.00601	0.00374	0.00418	0.000321	0.00554
PCB-209	0.0012	0.00239 J	0.00374	0.00102	0.00421	0.00062	0.000359
PCB-44/47/65	0.000969	0.00158	0.000585	0.000633	0.000525	0.000067 J	0.000401
PCB-52	0.00187	0.00313	0.00129	0.00116	0.00113	0.000128	0.000778
PCB-66	0.00147	0.00226	0.000808	0.000955	0.000812	0.00012 J	0.000697
PCB-77	0.000265	0.000368	0.000146	0.000186	0.000171	0.0000326 J	0.0000987 J
PCB-8	0.000247 J	0.000261 J	0.00017	0.000196	0.000182	0.000051 J	0.000251
PCB-81	0.0000126 J	0.00011 U	0.000117 U	0.0000101 J	0.00000754 Z	0.0000996 U	0.000103 U
PCB-90/101/113	0.0183	0.0442	0.0205	0.014	0.0127	0.00112	0.0158
TEQ DIOXIN-LIKE PCBs (BIRD)	2.27996E-05	2.91024E-05	1.3201E-05	1.73957E-05	9.89852E-06	1.68279E-06	5.7323E-06
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	2.28506E-05	3.46574E-05	1.91095E-05	1.74547E-05	1.51E-05	1.16981E-05	1.60895E-05
TEQ DIOXIN-LIKE PCBs (FISH)	5.00994E-07	6.86265E-07	3.61082E-07	4.17438E-07	8.5768E-08	9.047E-09	9.127E-08
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	5.03544E-07	7.16515E-07	3.93257E-07	4.20388E-07	3.45843E-07	2.85935E-07	3.77609E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	8.01945E-06	1.01286E-05	5.6285E-06	6.88536E-06	4.0875E-07	3.7982E-08	4.9827E-07
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	9.54945E-06	1.17951E-05	7.40105E-06	8.65536E-06	7.10375E-06	6.52991E-06	7.21181E-06
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.0199905	0.0418495	0.0189931	0.014718	0.01315814	0.00119	0.0163787
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.366593	0.860411	0.4256298	0.3019026	0.268547	0.0189682	0.437541
TOTAL PCB CONGENERS ZEROND	0.3865835	0.9022605	0.4446229	0.3166206	0.28170514	0.0201582	0.4539197
TOTAL PCB CONGENERS-NOAA	0.377173	0.883001	0.4349098	0.3094726	0.275987	0.0196902	0.444741
TOTAL PCB CONGENERS-NOAA HALFND	0.3866345	0.9023705	0.4447399	0.3166796	0.28180814	0.0204072	0.4541772
TOTAL PCB CONGENERS-NOAA X2	0.754346	1.766002	0.8698196	0.6189452	0.551974	0.0393804	0.889482
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.754346	1.766002	0.8698196	0.6189452	0.551974	0.0393804	0.889482
DIOXINS/FURANS (NG/KG)							
1,2,3,4,6,7,8,9-OCDD	3600	617	90.5	662	240	12800	453
1,2,3,4,6,7,8,9-OCDF	260	49.8	5.92 J	114	12.1	1080	24.1
1,2,3,4,6,7,8-HPCDD	310	51.8	7.11	82.3	17.5	784	23.6
1,2,3,4,6,7,8-HPCDF	79.3	18.4	4.91 U	160	6.99	173	5.82
1,2,3,4,7,8,9-HPCDF	6	1.23 J	4.91 U	11	0.597 J	12 JZ	0.439 JZ
1,2,3,4,7,8-HXCDD	3.11 J	0.798 J	4.91 U	3.6 J	0.469 J	8.64 J	5.08 U
1,2,3,4,7,8-HXCDF	8.8	4.9 U	4.51 J	27.9	4.91 U	4.73 J	5.08 U
1,2,3,6,7,8-HXCDD	11.3	2.01 J	0.426 JZ	6.8	1.15 J	21.8 J	0.888 J
1,2,3,6,7,8-HXCDF	4.87 J	4.9 U	4.91 U	20.9	4.91 U	5.8 JZ	5.08 U
1,2,3,7,8,9-HXCDD	8.34	1.39 JZ	4.91 U	4.85 J	0.839 J	11.9 J	5.08 U
1,2,3,7,8,9-HXCDF	4.98 U	4.9 UJ	4.91 U	5.46 J	4.91 U	48.7 UJ	5.08 U
1,2,3,7,8-PECDD	2.49 J	0.819 J	0.271 JZ	3.89 JZ	0.691 JZ	5.39 JZ	5.08 U
1,2,3,7,8-PECDF	2.35 J	4.9 UJ	4.91 U	9.42 J	1.55 J	48.7 U	5.08 U
2,3,4,6,7,8-HXCDF	5.04	1.22 J	0.259 JZ	29.1	0.819 J	7.08 J	0.485 J
2,3,4,7,8-PECDF	5.2	4.9 U	4.91 U	19.4	1.45 J	4.91 J	5.08 U
2,3,7,8-TCDD	1.22	0.304 JZ	0.108 JZ	0.944 J	0.208 JZ	3.74 J	0.532 J

TABLE 24

SEDIMENT ANALYTICAL DATA - WETLANDS
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD313	SW/SD314	SW/SD315	SW/SD316	SW/SD317	SW/SD331	SW/SD332
SAMPLE ID	SD313-20191211	SD314-20191210	SD315-20191210	SD316-20191210	SD317-20191210	SD331-20191210	SD332-20191210
SAMPLE DATE	20191211	20191210	20191210	20191210	20191210	20191210	20191210
DUPLICATE							
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands	Arbuckle Creek Wetlands
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0
BOTTOM DEPTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5
2,3,7,8-TCDF	3.74	3.48	0.982 U	9.33	2.16 Z	9.75 U	1.02 U
TEQ DIOXINS (BIRD)	17.4075	5.23878	0.876912	45.4449	4.98333	21.663	0.72328
TEQ DIOXINS (BIRD) HALFND	17.6565	8.66878	4.976762	45.4449	5.71983	31.408	7.71028
TEQ DIOXINS (FISH)	11.7859	2.16678	0.876912	27.5939	2.26437	22.025	0.72328
TEQ DIOXINS (FISH) HALFND	12.0349	4.24928	4.043862	27.5939	3.00087	25.92125	6.74318
TEQ DIOXINS (HUMANS/MAMMALS)	14.9715	2.92714	0.998526	24.4964	2.2507	30.452	1.11102
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	15.2205	4.47064	2.888876	24.4964	2.9872	34.105	5.81022
TOTAL HPCDD	520	137 J	14.1 J	156 J	32.2 J	1480 J	43.5 J
TOTAL HPCDF	234 J	54.7 J	2.65 J	188 J	7.59 J	691 J	19.9 J
TOTAL HXCDD	89.2 J	18 J	3.14 J	75.9 J	11.8 J	141 J	6.42 J
TOTAL HXCDF	110 J	43.8 J	7.51 J	277 J	14.9 J	152 J	8.57 J
TOTAL PECDD	38.1 J	4.44 J	1.32 J	30 J	5 J	9.46 J	1.2 J
TOTAL PECDF	123 J	93.1 J	33.3 J	344 J	45.4 J	47.4 J	1.36 J
TOTAL TCDD	25.1 J	6.49 J	1.05 J	33.4 J	6.44 J	3.74 J	3.11 J
TOTAL TCDF	76.3	40.3 J	9.36 J	244 J	28.3 J	7.51 J	4.35 J
METALS (MG/KG)							
ALUMINUM	4540	5470	5070	6060	5670	2590	3990
ANTIMONY	1.1 U	1.1 U	1.2 U	2.9	1.1 U	1.1 U	1.2
ARSENIC	13.4	11.8	12.3	12	15.1	5.9	6.2
BARIUM	107	106	126	154	137	75.5	63.1
BERYLLIUM	0.78	0.94	1	1	0.92	1.1	0.68
CADMIUM	0.56 UJ	0.61	0.61 UJ	1.3	0.84	0.54 UJ	0.55 UJ
CALCIUM	4950	3360	6130	4800	6280	2580	1640
CHROMIUM	44	14.2	11.6	14.1	11.5	6.2	10
COBALT	13.3	14.1	11.9	13.2	10.6	9	11
COPPER	42	43.6	49.2	240	48.3	24.1	39.1
CYANIDE	0.2 J	0.8 U	0.85 U	0.89 U	0.74 U	0.7 U	0.71 U
IRON	14400	16200	15700	17500	18300	17700	28900
LEAD	105	175	172	194	477	25.7	71.8
MAGNESIUM	1160	851	874	1010	1490	600	716
MANGANESE	658	535	603	709	482	168	480
MERCURY	0.19	0.21	0.18	0.21	0.28	0.13 U	0.13 U
NICKEL	20.5	22.5	20.1	22.4	18.3	31.5	23
POTASSIUM	638	680	601 J	658	797	358 J	583
SELENIUM	0.71 J	0.74 J	0.76 J	0.77 J	0.76 J	1.5 J	0.38 J
SILVER	0.56 U	0.58	0.78	0.64	0.55 U	0.54 U	0.55 U
SODIUM	80 J	84.4 J	108 J	70.8 J	117 J	36.8 J	42.8 J
THALLIUM	0.56 U	0.57 U	0.61 U	0.64 U	0.55 U	0.54 U	0.55 U
VANADIUM	11.2	11.7	11.4	12.3	11.5	8	9.2
ZINC	176	188	184	373	263	103	167
MISCELLANEOUS (%)							
TOTAL SOLIDS	--	60	--	--	--	--	--
MISCELLANEOUS (MG/KG)							
TOTAL ORGANIC CARBON	--	104000	--	--	--	--	--

TABLE 25

SEDIMENT ANALYTICAL DATA - NEW RIVER
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD348	SW/SD348	SW/SD349	SW/SD349	SW/SD351	SW/SD351	SW/SD352	SW/SD352	SW/SD353
SAMPLE ID	SD348-20200225-0006	SD348-20200225-0612	SD349-20200225-0006	SD349-20200225-0612	SD351-20200224-0006	SD351-20200224-0612	SD352-20200224-0006	SD352-20200224-0612	SD353-20200224-0006
SAMPLE DATE	20200225	20200225	20200225	20200225	20200224	20200224	20200224	20200224	20200224
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	New River (Upstream)	New River (Upstream)	New River (Upstream)	New River (Upstream)	New River	New River	New River	New River	New River
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0.5	0	0.5	0	0.5	0	0.5	0
BOTTOM DEPTH	0.5	1	0.5	1	0.5	1	0.5	1	0.5
VOLATILES (MG/KG)									
1,1,1-TRICHLOROETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
1,1,2,2-TETRACHLOROETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
1,1,2-TRICHLOROETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
1,1-DICHLOROETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
1,1-DICHLOROETHENE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
1,2,3-TRICHLOROBENZENE	0.0069 U	0.0069 R	0.0075 U	0.008 R	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
1,2,4-TRICHLOROBENZENE	0.0069 U	0.0069 R	0.0075 U	0.008 R	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
1,2-DIBROMO-3-CHLOROPROPANE	0.0069 U	0.0069 R	0.0075 U	0.008 R	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
1,2-DIBROMOETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
1,2-DICHLOROBENZENE	0.0069 U	0.0069 R	0.0075 U	0.008 R	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
1,2-DICHLOROETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
1,2-DICHLOROPROPANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
1,3-DICHLOROBENZENE	0.0069 U	0.0069 R	0.0075 U	0.008 R	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
1,4-DICHLOROBENZENE	0.0069 U	0.0069 R	0.0075 U	0.008 R	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
2-BUTANONE	0.014 U	0.014 UJ	0.015 U	0.016 UJ	0.014 R	0.014 U	0.015 U	0.013 J	0.02 U
2-HEXANONE	0.014 U	0.014 UJ	0.015 U	0.016 UJ	0.014 R	0.014 U	0.015 U	0.016 U	0.02 U
4-METHYL-2-PENTANONE	0.014 U	0.014 UJ	0.015 U	0.016 UJ	0.014 R	0.014 U	0.015 U	0.016 U	0.02 U
ACETONE	0.014 U	0.014 UJ	0.015 U	0.016 UJ	0.014 R	0.014 U	0.015 U	0.048	0.02 U
BENZENE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
BROMOCHLOROMETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
BROMODICHLOROMETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
BROMOFORM	0.0069 U	0.0069 R	0.0075 U	0.008 R	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
BROMOMETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
CARBON DISULFIDE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
CARBON TETRACHLORIDE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
CHLOROBENZENE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
CHLORODIBROMOMETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
CHLOROETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
CHLOROFORM	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
CHLOROMETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
CIS-1,2-DICHLOROETHENE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
CIS-1,3-DICHLOROPROPENE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
CYCLOHEXANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
DICHLORODIFLUOROMETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
ETHYLBENZENE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
ISOPROPYLBENZENE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
M+P-XYLENES	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
METHYL ACETATE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
METHYL CYCLOHEXANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
METHYL TERT-BUTYL ETHER	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
METHYLENE CHLORIDE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
O-XYLENE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
STYRENE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
TETRACHLOROETHENE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
TOLUENE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
TRANS-1,2-DICHLOROETHENE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
TRANS-1,3-DICHLOROPROPENE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
TRICHLOROETHENE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
TRICHLOROFLUOROMETHANE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
VINYL CHLORIDE	0.0069 U	0.0069 UJ	0.0075 U	0.008 UJ	0.0069 R	0.0068 U	0.0076 U	0.0078 U	0.01 U
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
1,2,4,5-TETRACHLOROBENZENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
1,4-DIOXANE	0.098 U	0.094 U	0.097 U	0.11 U	0.1 U	0.1 U	0.11 U	0.095 U	0.11 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.52 U	0.47 U	0.55 U
2,3,4,6-TETRACHLOROPHENOL	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
2,4,5-TRICHLOROPHENOL	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
2,4,6-TRICHLOROPHENOL	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
2,4-DICHLOROPHENOL	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
2,4-DIMETHYLPHENOL	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
2,4-DINITROPHENOL	0.48 U	0.46 U	0.48 U	0.52 U	0.5 R	0.49 R	0.52 U	0.47 R	0.55 R
2,4-DINITROTOLUENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
2,6-DINITROTOLUENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
2-CHLORONAPHTHALENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
2-CHLOROPHENOL	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
2-METHYLNAPHTHALENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
2-METHYLPHENOL	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.52 U	0.47 U	0.55 U
2-NITROANILINE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 R	0.25 R	0.27 U	0.24 R	0.29 R
2-NITROPHENOL	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
3&4-METHYLPHENOL	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.18 J	0.47 U	0.55 U
3,3'-DICHLOROBENZIDINE	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.52 U	0.47 U	0.55 U
3-NITROANILINE	0.48 U	0.46 U	0.48 U	0.52 U	0.5 R	0.49 R	0.52 U	0.47 R	0.55 R
4,6-DINITRO-2-METHYLPHENOL	0.48 U	0.46 U	0.48 U	0.52 U	0.5 R	0.49 U	0.52 U	0.47 R	0.55 R
4-BROMOPHENYL PHENYL ETHER	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 UJ
4-CHLORO-3-METHYLPHENOL	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
4-CHLOROANILINE	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.52 U	0.47 U	0.55 U
4-CHLOROPHENYL PHENYL ETHER	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 UJ
4-NITROANILINE	0.48 U	0.46 U	0.48 U	0.52 U	0.5 R	0.49 R	0.52 U	0.47 R	0.55 R
4-NITROPHENOL	0.48 U	0.46 U	0.48 U	0.52 U	0.5 R	0.49 R	0.52 U	0.47 R	0.55 UJ

TABLE 25

SEDIMENT ANALYTICAL DATA - NEW RIVER
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD348	SW/SD348	SW/SD349	SW/SD349	SW/SD351	SW/SD351	SW/SD352	SW/SD352	SW/SD353
SAMPLE ID	SD348-20200225-0006	SD348-20200225-0612	SD349-20200225-0006	SD349-20200225-0612	SD351-20200224-0006	SD351-20200224-0612	SD352-20200224-0006	SD352-20200224-0612	SD353-20200224-0006
SAMPLE DATE	20200225	20200225	20200225	20200225	20200224	20200224	20200224	20200224	20200224
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	New River (Upstream)	New River (Upstream)	New River (Upstream)	New River (Upstream)	New River	New River	New River	New River	New River
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0.5	0	0.5	0	0.5	0	0.5	0
BOTTOM DEPTH	0.5	1	0.5	1	0.5	1	0.5	1	0.5
ACENAPHTHENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
ACENAPHTHYLENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
ACETOPHENONE	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.52 U	0.47 U	0.55 U
ANTHRACENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
ATRAZINE	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.52 U	0.47 U	0.55 U
BAP EQUIVALENT-HALFND	0.25 U	0.27072	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
BAP EQUIVALENT-POS	0.25 U	0.0054	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
BENZALDEHYDE	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.52 U	0.47 U	0.55 U
BENZO(A)ANTHRACENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
BENZO(A)PYRENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
BENZO(B)FLUORANTHENE	0.25 U	0.054 J	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
BENZO(G,H,I)PERYLENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
BENZO(K)FLUORANTHENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
BIS(2-CHLOROETHOXY)METHANE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
BIS(2-CHLOROETHYL)ETHER	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.52 U	0.47 U	0.55 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
BUTYL BENZYL PHTHALATE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
CAPROLACTAM	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.52 U	0.47 U	0.55 U
CARBAZOLE	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.52 U	0.47 U	0.55 UJ
CHRYSENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
DIBENZO(A,H)ANTHRACENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
DIBENZOFURAN	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 UJ
DIETHYL PHTHALATE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
DIMETHYL PHTHALATE	0.18 J	0.49	0.35	0.54	0.22 J	0.2 J	0.18 J	0.15 J	0.13 J
DI-N-BUTYL PHTHALATE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
DI-N-OCTYL PHTHALATE	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.52 U	0.47 U	0.55 U
FLUORANTHENE	0.48 U	0.078 J	0.48 U	0.52 U	0.5 U	0.08 J	0.094 J	0.15 J	0.081 J
FLUORENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 UJ
HEXACHLOROBENZENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
HEXACHLOROBUTADIENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
HEXACHLOROCYCLOPENTADIENE	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.52 U	0.47 U	0.55 U
HEXACHLOROETHANE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
HIGH MOLECULAR WEIGHT PAHS	0 U	0.12	0 U	0 U	0 U	0.067	0.074	0.1	0.07
INDENO(1,2,3-CD)PYRENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
ISOPHORONE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
LOW MOLECULAR WEIGHT PAHS	0 U	0.078	0 U	0 U	0 U	0.08	0.094	0.15	0.081
NAPHTHALENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
NITROBENZENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
N-NITROSO-DI-N-PROPYLAMINE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
N-NITROSODIPHENYLAMINE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
PENTACHLOROPHENOL	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.52 U	0.47 U	0.55 U
PHENANTHRENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 U	0.29 U
PHENOL	0.48 U	0.46 U	0.48 U	0.52 U	0.5 U	0.49 U	0.52 U	0.47 U	0.15 J
PYRENE	0.25 U	0.066 J	0.25 U	0.27 U	0.26 U	0.067 J	0.074 J	0.1 J	0.07 J
TOTAL PAHS	0 U	0.198	0 U	0 U	0 U	0.147	0.168	0.25	0.151
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
2-METHYLNAPHTHALENE	0.0024 J	0.003 J	0.0048 U	0.0015 J	0.0027 J	0.0034 J	0.0028 J	0.0056	0.004 J
ACENAPHTHENE	0.0048 U	0.0046 U	0.0048 U	0.0052 U	0.005 U	0.0027 J	0.0019 J	0.016	0.0022 J
ACENAPHTHYLENE	0.0029 J	0.0053 J	0.0048 UJ	0.0043 J	0.0018 J	0.0026 J	0.0072 J	0.0027 J	0.0053 J
ANTHRACENE	0.0046 J	0.0062	0.0048 U	0.0029 J	0.0023 J	0.015	0.016	0.012	0.016
BAP EQUIVALENT-HALFND	0.030118	0.040878	0.009353	0.036053	0.019612	0.042069	0.044204	0.031435	0.057547
BAP EQUIVALENT-POS	0.030118	0.040878	0.006953	0.036053	0.019612	0.042069	0.044204	0.031435	0.057547
BENZO(A)ANTHRACENE	0.024	0.037	0.0051	0.032	0.014	0.035	0.039	0.026	0.052
BENZO(A)PYRENE	0.021	0.028	0.0054	0.025	0.013	0.029	0.03	0.021	0.039
BENZO(B)FLUORANTHENE	0.024	0.035	0.0073	0.036	0.021	0.037	0.039	0.027	0.052
BENZO(G,H,I)PERYLENE	0.01	0.013	0.003 J	0.01	0.0072	0.013	0.014	0.012	0.019
BENZO(K)FLUORANTHENE	0.0097	0.015	0.0029 J	0.013	0.0074	0.014	0.017	0.011	0.02
CHRYSENE	0.021	0.028	0.0048	0.023	0.018	0.029	0.034	0.025	0.047
DIBENZO(A,H)ANTHRACENE	0.0032 J	0.0043 J	0.0048 U	0.0031 J	0.0023 J	0.0044 J	0.0048 J	0.0039 J	0.0061
FLUORANTHENE	0.043	0.056	0.0093	0.039	0.029	0.075	0.094	0.15	0.066
FLUORENE	0.0012 J	0.0012 J	0.0048 U	0.0052 U	0.0012 J	0.0069	0.0083	0.031	0.0037 J
HIGH MOLECULAR WEIGHT PAHS	0.1629	0.2163	0.0409	0.1861	0.1161	0.2374	0.2608	0.2569	0.3351
INDENO(1,2,3-CD)PYRENE	0.01	0.012	0.0028 J	0.01	0.0072	0.013	0.014	0.011	0.018
LOW MOLECULAR WEIGHT PAHS	0.0695	0.0859	0.0121	0.0541	0.0477	0.1552	0.1931	0.2722	0.1399
NAPHTHALENE	0.0018 J	0.0022 J	0.0048 U	0.0014 J	0.0034 J	0.003 J	0.0027 J	0.0045 J	0.0057
PENTACHLOROPHENOL	0.0098 U	0.0094 U	0.0097 U	0.011 U	0.01 U	0.01 U	0.011 U	0.0095 U	0.011 U
PHENANTHRENE	0.016	0.015	0.0028 J	0.0065	0.01	0.05	0.063	0.056	0.041
PYRENE	0.04	0.044	0.0096	0.034	0.026	0.063	0.069	0.12	0.082
TOTAL PAHS	0.021	0.028	0.0048	0.023	0.018	0.029	0.034	0.025	0.047
PESTICIDES (MG/KG)									
4,4'-DDD	0.0048 U	0.0046 U	0.0048 U	0.0052 U	0.005 U	0.0049 U	0.00059 J	0.00041 J	0.00054 J-
4,4'-DDE	0.0048 U	0.0046 U	0.0048 U	0.0052 U	0.005 U	0.0049 U	0.0052 U	0.0047 UJ	0.0055 UJ
4,4'-DDT	0.0048 U	0.0046 U	0.0048 U	0.0052 U	0.005 U	0.0049 U	0.00031 R	0.0047 UJ	0.0055 UJ
ALDRIN	0.0025 U	0.0024 U	0.0025 U	0.0027 U	0.0026 U	0.0025 U	0.0027 U	0.0024 UJ	0.0028 UJ
ALPHA-BHC	0.0025 U	0.0024 U	0.0025 U	0.0027 U	0.0026 U	0.0025 U	0.0027 U	0.0024 UJ	0.0028 UJ
ALPHA-CHLORDANE	0.0025 U	0.0024 U	0.0025 U	0.0027 U	0.0026 U	0.0025 U	0.0027 U	0.0024 UJ	0.0028 UJ
BETA-BHC	0.0025 U	0.0024 U	0.0025 U	0.0027 U	0.0026 U	0.0025 U	0.0027 U	0.0024 UJ	0.0028 UJ
DELTA-BHC	0.0025 U	0.0024 U	0.0025 U	0.0027 U	0.0026 U	0.0025 U	0.0027 U	0.0024 UJ	0.0028 UJ
DIELDRIN	0.0048 U	0.0046 U	0.0048 U	0.0052 U	0.005 U	0.0049 U	0.0052 U	0.0047 UJ	0.0055 UJ
ENDOSULFAN I	0.0025 U	0.0024 U	0.0025 U	0.0027 U	0.0026 U	0.0025 U	0.0027 U	0.0024 UJ	0.0028 UJ
ENDOSULFAN II	0.0048 U	0.0046 U	0.0048 U	0.0052 U	0.005 U	0.0049 U	0.0052 U	0.0047 UJ	0.0055 UJ

TABLE 25

SEDIMENT ANALYTICAL DATA - NEW RIVER
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD348	SW/SD348	SW/SD349	SW/SD349	SW/SD351	SW/SD351	SW/SD352	SW/SD352	SW/SD353
SAMPLE ID	SD348-20200225-0006	SD348-20200225-0612	SD349-20200225-0006	SD349-20200225-0612	SD351-20200224-0006	SD351-20200224-0612	SD352-20200224-0006	SD352-20200224-0612	SD353-20200224-0006
SAMPLE DATE	20200225	20200225	20200225	20200225	20200224	20200224	20200224	20200224	20200224
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	New River (Upstream)	New River (Upstream)	New River (Upstream)	New River (Upstream)	New River	New River	New River	New River	New River
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0.5	0	0.5	0	0.5	0	0.5	0
BOTTOM DEPTH	0.5	1	0.5	1	0.5	1	0.5	1	0.5
ENDOSULFAN SULFATE	0.0048 U	0.0046 U	0.0048 U	0.0052 U	0.005 U	0.0049 U	0.0052 U	0.0047 UJ	0.0055 UJ
ENDRIN	0.0048 U	0.0046 U	0.0048 U	0.0052 U	0.005 U	0.0049 U	0.0052 U	0.0047 UJ	0.0055 UJ
ENDRIN ALDEHYDE	0.0048 U	0.0046 U	0.0048 U	0.0052 U	0.005 U	0.0049 U	0.0052 U	0.0047 UJ	0.0055 UJ
ENDRIN KETONE	0.0048 U	0.0046 U	0.0048 U	0.0052 U	0.005 U	0.0049 U	0.0052 U	0.0047 UJ	0.0055 UJ
GAMMA-BHC (LINDANE)	0.0025 U	0.0024 U	0.0025 U	0.0027 U	0.0026 U	0.0025 U	0.0027 U	0.0024 UJ	0.0028 UJ
GAMMA-CHLORDANE	0.0025 U	0.0024 U	0.0025 U	0.0027 U	0.0026 U	0.0025 U	0.0027 U	0.0024 UJ	0.0028 UJ
HEPTACHLOR	0.0025 U	0.0024 U	0.0025 U	0.0027 U	0.0026 U	0.0025 U	0.0027 U	0.0024 UJ	0.0028 UJ
HEPTACHLOR EPOXIDE	0.0025 U	0.0024 U	0.0025 U	0.0027 U	0.0026 U	0.0025 U	0.0027 U	0.0024 UJ	0.0028 UJ
METHOXYCHLOR	0.025 U	0.024 U	0.025 U	0.027 U	0.026 U	0.025 U	0.027 U	0.024 UJ	0.029 UJ
TOXAPHENE	0.25 U	0.24 U	0.25 U	0.27 U	0.26 U	0.25 U	0.27 U	0.24 UJ	0.28 UJ
PCBS (MG/KG)									
AROCLOR-1016	0.048 U	0.046 U	0.048 U	0.053 U	0.051 U	--	--	--	--
AROCLOR-1221	0.048 U	0.046 U	0.048 U	0.053 U	0.051 U	--	--	--	--
AROCLOR-1232	0.048 U	0.046 U	0.048 U	0.053 U	0.051 U	--	--	--	--
AROCLOR-1242	0.048 U	0.046 U	0.048 U	0.053 U	0.051 U	--	--	--	--
AROCLOR-1248	0.048 U	0.046 U	0.048 U	0.053 U	0.051 U	--	--	--	--
AROCLOR-1254	0.048 U	0.046 U	0.048 U	0.053 U	0.051 U	--	--	--	--
AROCLOR-1260	0.048 U	0.046 U	0.048 U	0.053 U	0.051 U	--	--	--	--
AROCLOR-1262	0.048 U	0.046 U	0.048 U	0.053 U	0.051 U	--	--	--	--
AROCLOR-1268	0.048 U	0.046 U	0.048 U	0.053 U	0.051 U	--	--	--	--
TOTAL AROCLOR	0 U	0 U	0 U	0 U	0 U	--	--	--	--
TOTAL AROCLOR HALFND	0.216	0.207	0.216	0.2385	0.2295	--	--	--	--
PCB CONGENERS (MG/KG)									
PCB-105	0.0000441	0.0000417	0.0000806	0.000114	0.000258	0.0000302	0.0000544	0.0000994	0.0000609
PCB-114	0.00000204 J	0.00000174 J	0.00000377 J	0.00000504 J	0.0000116	0.00000162 J	0.00000246 J	0.00000453 J	0.00000288 J
PCB-118	0.0000985	0.0000946	0.000177	0.000231	0.000616	0.0000827	0.000317	0.0003	0.000137
PCB-123	0.00000227 Z	0.0000021 J	0.00000367 J	0.00000539 J	0.00000949 J	0.00000131 J	0.00000211 J	0.00000349 J	0.00000275 J
PCB-126	0.00000973 U	0.00000974 U	0.000000823 J	0.00000999 U	0.00000997 U	0.00000977 U	0.0000109 U	0.00001 U	0.0000102 U
PCB-128/166	0.000017 J	0.00002	0.000037	0.0000451	0.000118	0.000025	0.000103	0.0000889	0.0000319 J
PCB-129/138/163	0.000128	0.000143	0.000301	0.000331	0.00101	0.000404	0.00214	0.00151	0.0000305 U
PCB-153/168	0.0000935	0.0000993	0.000217	0.000231	0.000763	0.000373	0.00326	0.00149	0.000247 J
PCB-156	0.0000153 J	0.0000183 J	0.0000341	0.0000408	0.000111	0.0000287	0.000108	0.000108	0.00003 J
PCB-167	0.00000537 J	0.00000625 J	0.0000119	0.0000141	0.0000363	0.0000107	0.0000421	0.0000406	0.0000105
PCB-169	0.00000973 U	0.00000974 U	0.0000104 U	0.00000999 U	0.00000997 U	0.00000977 U	0.0000109 U	0.00001 U	0.0000102 U
PCB-170	0.0000263	0.0000315	0.000089	0.0000734	0.000255	0.000148	0.000879	0.000548	0.0000828
PCB-18/30	0.00000917 J	0.0000145 J	0.0000312	0.00000983 J	0.0000407	0.00000848 j	0.0000146 J	0.0000244	0.0000116 J
PCB-180/193	0.000061	0.0000688	0.000204	0.000161	0.000577	0.000352	0.00226	0.00139	0.000187
PCB-187	0.0000331	0.0000378	0.000124	0.000111	0.000311	0.000206	0.00169	0.000868	0.000102
PCB-189	0.00000125 U	0.00000168 J	0.00000413 J	0.00000349 J	0.0000107	0.0000056 J	0.0000286	0.0000197	0.00000343 J
PCB-195	0.00000521 J	0.00000642 J	0.0000212	0.000021	0.0000508	0.0000272	0.000143	0.000101	0.0000165
PCB-20/28	0.0000401	0.0000328	0.000116	0.0000782	0.000168	0.0000353	0.0000601	0.0000975	0.0000481
PCB-206	0.0000267	0.0000349	0.0000461	0.000782	0.0000745	0.0000263	0.0000742	0.0000951	0.0000347
PCB-209	0.0000377 J	0.000061	0.0000539	0.000292 J	0.0000863 J	0.0000164 J	0.0000394	0.0000312 J	0.0000256 J
PCB-44/47/65	0.000032 J	0.0000239 J	0.0000589 J	0.0000404 J	0.000165	0.000055 J	0.0000547	0.000183 J	0.0000436 J
PCB-52	0.0000392 J	0.0000288 J	0.0000591 J	0.0000444 J	0.000228	0.0000365 J	0.0000563	0.00012 J	0.0000546 J
PCB-66	0.0000447 J	0.0000293 J	0.0000959 J	0.000101 J	0.000204	0.0000322 J	0.0000411	0.0001 J	0.0000508 J
PCB-77	0.00000506 J	0.00000412 J	0.0000141	0.0000158	0.0000258	0.00000393 J	0.00000612 J	0.0000104	0.00000621 J
PCB-8	0.00000897 J	0.00000589 J	0.0000358	0.0000162 J	0.0000343 J	0.00000937 J	0.0000104 J	0.000022 J	0.00000909 J
PCB-81	0.000000339 J	0.000000236 Z	0.000000652 J	0.000000801 J	0.00000115 J	0.00000977 U	0.000000266 J	0.000000432 J	0.000000386 J
PCB-90/101/113	0.0000629	0.0000566	0.000123	0.000105	0.000543	0.000144	0.00109	0.000505	0.000122
TEQ DIOXIN-LIKE PCBs (BIRD)	2.94104E-07	2.36819E-07	8.66313E-07	8.88622E-07	1.44978E-06	2.03555E-07	3.52984E-07	5.8803E-07	3.60014E-07
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	7.85475E-07	7.28689E-07	8.71513E-07	1.39312E-06	1.95327E-06	1.18544E-06	9.03434E-07	1.09303E-06	8.75114E-07
TEQ DIOXIN-LIKE PCBs (FISH)	1.51E-09	1.359E-09	7.424E-09	4.047E-09	8.419E-09	1.195E-09	3.517E-09	4.133E-09	2.049E-09
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	2.6081E-08	2.5952E-08	7.684E-09	2.9271E-08	3.3593E-08	2.8306E-08	3.1039E-08	2.9383E-08	2.7804E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	5.634E-09	5.472E-09	9.3359E-08	1.4233E-08	3.4517E-08	5.217E-09	1.733E-08	1.8439E-08	8.158E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	6.38102E-07	6.38572E-07	2.49359E-07	6.63583E-07	6.82567E-07	6.41732E-07	7.2583E-07	6.68439E-07	6.71158E-07
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.000172979	0.000170726	0.000330745	0.000430421	0.00108004	0.00016476	0.000561056	0.000586552	0.000254056
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00066555	0.00069451	0.0016131	0.00244253	0.0046286	0.00189875	0.0119158	0.0071741	0.00106729
TOTAL PCB CONGENERS ZEROND	0.000838529	0.000865236	0.001943845	0.002872951	0.00570864	0.00206351	0.012476856	0.007760652	0.001321346
TOTAL PCB CONGENERS-NOAA	0.00080815	0.00083081	0.0018707	0.00278753	0.0055026	0.00201165	0.0122872	0.0075735	0.00126519
TOTAL PCB CONGENERS-NOAA HALFND	0.000848884	0.000874976	0.001949045	0.002882941	0.00571861	0.002078165	0.0124877556	0.007770652	0.001346796
TOTAL PCB CONGENERS-NOAA X2	0.0016163	0.00166162	0.0037414	0.00557506	0.0110052	0.0040233	0.0245744	0.015147	0.00253038
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.0016163	0.00166162	0.0037414	0.00557506	0.0110052	0.0040233	0.0245744	0.015147	0.00256088
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	241	306	581	1970	129	292	78	276	101
1,2,3,4,6,7,8,9-OCDF	5.3 J	6.23 J	12.5	31.5	3.45 J	5.91 J	5.66 J	7.34 J	3.83 J
1,2,3,4,6,7,8-HPCDD	16.3	13.3	20.5	71.5	6.52	11.9	5.92	17	6.59
1,2,3,4,6,7,8-HPCDF	2.4 J	5.07	5.05	12.4	2.38 J	3.72 J	1.9 J	1.97 J	1.15 Z
1,2,3,4,7,8,9-HPCDF	4.96 U	4.82 U	4.71 U	1.01 J	5 U	5 U	4.73 U	4.96 U	4.92 U
1,2,3,4,7,8-HXCDD	4.96 U	4.82 U	4.71 U	4.6 U	5 U	5 U	4.73 U	4.96 U	4.92 U
1,2,3,4,7,8-HXCDF	0.361 Z	0.771 J	0.418 J	1.2 J	0.438 Z	0.795 Z	4.73 U	0.214 Z	4.92 U
1,2,3,6,7,8-HXCDD	0.849 Z	4.82 U	0.835 J	2.04 J	5 U	5 U	4.73 U	4.96 U	4.92 U
1,2,3,6,7,8-HXCDF	4.96 U	0.603 J	0.411 Z	0.814 J	0.296 J	0.258 J	4.73 U	4.96 U	4.92 U
1,2,3,7,8,9-HXCDD	1.03 Z	4.82 U	4.71 U	1.31 J	5 U	5 U	4.73 U	4.96 U	4.92 U
1,2,3,7,8,9-HXCDF	4.96 U	4.82 U	4.71 U	4.6 U	5 U	5 U	4.73 U	4.96 U	4.92 U
1,2,3,7,8-PECDD	4.96 U	4.82 U	4.71 U	0.451 Z	5 U	5 U	4.73 U	4.96 U	4.92 U
1,2,3,7,8-PECDF	4.96 U	4.82 U	4.71 U	1.02 Z	5 U	0.799 J	4.73 U	4.96 U	0.263 Z
2,3,4,6,7,8-HXCDF	4.96 U	0.765 J	0.49 Z	0.772 Z	5 U	0.296 Z	4.73 U	4.96 U	4.92 U
2,3,4,7,8-PECDF	4.96 U	0.771 J	4.71 U	0.882 J	5 U	0.406 Z	4.73 U	4.96 U	4.92 U
2,3,7,8-TCDD	0.992 U	0.964 U	0.942 U	0.378 Z	0.266 Z	0.999 U	0.946 U	0.992 U	0.983 U
2,3,7,8-TCDF	0.992 U	0.594 Z	0.942 U	1.09	1 U	0.999 U	0.946 U	0.992 U	0.983 U

TABLE 25

SEDIMENT ANALYTICAL DATA - NEW RIVER
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD348	SW/SD348	SW/SD349	SW/SD349	SW/SD351	SW/SD351	SW/SD352	SW/SD352	SW/SD353
SAMPLE ID	SD348-20200225-0006	SD348-20200225-0612	SD349-20200225-0006	SD349-20200225-0612	SD351-20200224-0006	SD351-20200224-0612	SD352-20200224-0006	SD352-20200224-0612	SD353-20200224-0006
SAMPLE DATE	20200225	20200225	20200225	20200225	20200224	20200224	20200224	20200224	20200224
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019	Remedial Investigation 2019
AREA	New River (Upstream)	New River (Upstream)	New River (Upstream)	New River (Upstream)	New River	New River	New River	New River	New River
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0.5	0	0.5	0	0.5	0	0.5	0
BOTTOM DEPTH	0.5	1	0.5	1	0.5	1	0.5	1	0.5
TEQ DIOXINS (BIRD)	0.21252	1.674123	0.2706	3.73875	0.382965	0.699691	0.033286	0.086434	0.054873
TEQ DIOXINS (BIRD) HALFND	7.30532	5.457823	6.7704	4.08375	7.057965	4.873691	7.293836	7.452034	7.360073
TEQ DIOXINS (FISH)	0.11982	0.724323	0.2706	2.09335	0.382965	0.456741	0.033286	0.086434	0.041723
TEQ DIOXINS (FISH) HALFND	6.49342	5.255123	5.8755	3.47335	6.107965	5.056216	6.395136	6.509634	6.535598
TEQ DIOXINS (HUMANS/MAMMALS)	0.48489	0.781969	0.64895	3.29635	0.468135	0.526243	0.103298	0.296102	0.116739
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	5.34569	4.734369	5.02925	3.75635	5.118135	4.600693	5.448198	5.652902	5.601989
TOTAL HPCDD	35 J	28.4 J	49.2 J	156 J	16.5 J	26.8 J	5.92 J	138 J	15.2 J
TOTAL HPCDF	6.29 J	10.4 J	13.6 J	35.3 J	4.44 J	8.15 J	6.4 J	1.97 J	2.38 J
TOTAL HXCDD	4.18 J	4.82 U	7.68 J	17.6 J	5 U	4.06 J	4.73 U	3.68 J	4.92 U
TOTAL HXCDF	2.51 J	5.18 J	3.03 J	11.2 J	2.21 J	3.15 J	4.73 U	0.96 J	0.566 J
TOTAL PECDD	3.53 J	0.366 J	4.71 U	4.73 J	5 U	2.48 J	4.73 U	4.96 U	4.92 U
TOTAL PECDF	1.73 J	8.11 J	2.37 J	6.5 J	2.03 J	3.94 J	4.73 U	4.96 U	4.92 U
TOTAL TCDD	0.732 J	0.794 J	2.18 J	1.9 J	1 U	0.871 J	0.946 U	0.992 U	0.983 U
TOTAL TCDF	0.992 U	1.46 J	1.84 J	8.07 J	1 U	1.17 J	0.946 U	0.992 U	0.983 U
METALS (MG/KG)									
ALUMINUM	2460	3340	6020	8110	3730	3330	3630	2710	3470
ANTIMONY	1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.2 U
ARSENIC	4.4	5.9	5.2	7.3	4.6	4.5	3.8	2.5	6.7
BARIUM	43.7	45.1	95.6	121	50.1	47.1	45.4	34.4	66.6
BERYLLIUM	0.51 U	0.52	0.81	1	0.54 U	0.54 U	0.57 U	0.53 U	0.62
CADMIUM	0.51 U	0.51 U	0.54 U	0.57 U	0.54 U	0.54 U	0.57 U	0.53 U	0.61 U
CALCIUM	882	918	1860	2330	975	1010	1220	859	1960
CHROMIUM	7.5	8.5	11.7	15.2	7.9	7.5	6.7	5.3	8.2
COBALT	4.8	2.9	8.3	12.2	7.2	6.4	6.1	5.2	8.3
COPPER	10	10.8	18.4	21.6	9.2	7.9	8.5	7.9	12.2
CYANIDE	0.73 U	0.69 U	0.72 U	0.28 J	0.75 U	0.72 U	0.75 U	0.39 J	0.81 U
IRON	10900	11700	18300	24000	15800	15600	13600	9630	17500
LEAD	16.2	28.3	23.3	29.6	13.8	12.2	11.8	10.8	18.2
MAGNESIUM	681	809	1350	1700	1010	890	948	715	1020
MANGANESE	197	64.3	172	399	255	245	245	80.5	633
MERCURY	0.14 U	0.12 U	0.12 U	0.15 U	0.14 U	0.13 U	0.15 U	0.12 U	0.15 U
NICKEL	10	8.2	18.5	26	13.3	11.4	11	10.1	15.2
POTASSIUM	296 J	411 J	546	708	408 J	365 J	440 J	361 J	480 J
SELENIUM	2.5 U	0.32 J	0.49 J	0.65 J	2.7 U	2.7 U	2.9 U	2.6 U	3 U
SILVER	0.51 U	0.51 U	0.54 U	0.57 U	0.54 U	0.54 U	0.57 U	0.53 U	0.61 U
SODIUM	523 UJ	515 UJ	516 UJ	578 UJ	529 UJ	548 UJ	554 UJ	512 UJ	588 UJ
THALLIUM	0.51 U	0.51 U	0.54 U	0.57 U	0.54 U	0.54 U	0.57 U	0.53 U	0.61 U
VANADIUM	8.4	9.7	14.2	18.2	8.5	7.4	7.4	5.6	9.5
ZINC	70.7	90.6	92	118	67.3	60.5	63	55.3	82.3
MISCELLANEOUS (%)									
TOTAL SOLIDS	69	70	65	69	72	68	68	65	63
MISCELLANEOUS (MG/KG)									
TOTAL ORGANIC CARBON	19200	26300	23500	24200	20000	17500	18300 J	62900	35700

TABLE 25

SEDIMENT ANALYTICAL DATA - NEW RIVER
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD354	SW/SD354
SAMPLE ID	SD354-20200224-0006	SD354-20200224-0612
SAMPLE DATE	20200224	20200224
DUPLICATE		
SAMPLE CODE	NORMAL	NORMAL
MATRIX	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019
AREA	New River	New River
SUBMATRIX	NA	NA
TOP DEPTH	0	0.5
BOTTOM DEPTH	0.5	1
VOLATILES (MG/KG)		
1,1,1-TRICHLOROETHANE	0.0061 R	0.0069 U
1,1,2,2-TETRACHLOROETHANE	0.0061 R	0.0069 U
1,1,2-TRICHLOROETHANE	0.0061 R	0.0069 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.0061 R	0.0069 U
1,1-DICHLOROETHANE	0.0061 R	0.0069 U
1,1-DICHLOROETHENE	0.0061 R	0.0069 U
1,2,3-TRICHLOROBENZENE	0.0061 R	0.0069 U
1,2,4-TRICHLOROBENZENE	0.0061 R	0.0069 U
1,2-DIBROMO-3-CHLOROPROPANE	0.0061 R	0.0069 U
1,2-DIBROMOETHANE	0.0061 R	0.0069 U
1,2-DICHLOROBENZENE	0.0061 R	0.0069 U
1,2-DICHLOROETHANE	0.0061 R	0.0069 U
1,2-DICHLOROPROPANE	0.0061 R	0.0069 U
1,3-DICHLOROBENZENE	0.0061 R	0.0069 U
1,4-DICHLOROBENZENE	0.0061 R	0.0069 U
2-BUTANONE	0.012 R	0.014 U
2-HEXANONE	0.012 R	0.014 U
4-METHYL-2-PENTANONE	0.012 R	0.014 U
ACETONE	0.012 R	0.014 U
BENZENE	0.0061 R	0.0069 U
BROMOCHLOROMETHANE	0.0061 R	0.0069 U
BROMODICHLOROMETHANE	0.0061 R	0.0069 U
BROMOFORM	0.0061 R	0.0069 U
BROMOMETHANE	0.0061 R	0.0069 U
CARBON DISULFIDE	0.0061 R	0.0069 U
CARBON TETRACHLORIDE	0.0061 R	0.0069 U
CHLOROBENZENE	0.0061 R	0.0069 U
CHLORODIBROMOMETHANE	0.0061 R	0.0069 U
CHLOROETHANE	0.0061 R	0.0069 U
CHLOROFORM	0.0061 R	0.0069 U
CHLOROMETHANE	0.0061 R	0.0069 U
CIS-1,2-DICHLOROETHENE	0.0061 R	0.0069 U
CIS-1,3-DICHLOROPROPENE	0.0061 R	0.0069 U
CYCLOHEXANE	0.0061 R	0.0069 U
DICHLORODIFLUOROMETHANE	0.0061 R	0.0069 U
ETHYLBENZENE	0.0061 R	0.0069 U
ISOPROPYLBENZENE	0.0061 R	0.0069 U
M+P-XYLENES	0.0061 R	0.0069 U
METHYL ACETATE	0.0061 R	0.0069 U
METHYL CYCLOHEXANE	0.0061 R	0.0069 U
METHYL TERT-BUTYL ETHER	0.0061 R	0.0069 U
METHYLENE CHLORIDE	0.0061 R	0.0069 U
O-XYLENE	0.0061 R	0.0069 U
STYRENE	0.0061 R	0.0069 U
TETRACHLOROETHENE	0.0061 R	0.0069 U
TOLUENE	0.0061 R	0.0069 U
TRANS-1,2-DICHLOROETHENE	0.0061 R	0.0069 U
TRANS-1,3-DICHLOROPROPENE	0.0061 R	0.0069 U
TRICHLOROETHENE	0.0061 R	0.0069 U
TRICHLOROFLUOROMETHANE	0.0061 R	0.0069 U
VINYL CHLORIDE	0.0061 R	0.0069 U
SEMIVOLATILES (MG/KG)		
1,1-BIPHENYL	0.22 U	0.25 U
1,2,4,5-TETRACHLOROBENZENE	0.22 U	0.25 U
1,4-DIOXANE	0.086 U	0.098 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.42 U	0.48 U
2,3,4,6-TETRACHLOROPHENOL	0.22 U	0.25 U
2,4,5-TRICHLOROPHENOL	0.22 U	0.25 U
2,4,6-TRICHLOROPHENOL	0.22 U	0.25 U
2,4-DICHLOROPHENOL	0.22 U	0.25 U
2,4-DIMETHYLPHENOL	0.22 U	0.25 U
2,4-DINITROPHENOL	0.42 U	0.48 U
2,4-DINITROTOLUENE	0.22 U	0.25 U
2,6-DINITROTOLUENE	0.22 U	0.25 U
2-CHLORONAPHTHALENE	0.22 U	0.25 U
2-CHLOROPHENOL	0.22 U	0.25 U
2-METHYLNAPHTHALENE	0.22 U	0.25 U
2-METHYLPHENOL	0.42 U	0.48 U
2-NITROANILINE	0.22 U	0.25 U
2-NITROPHENOL	0.22 U	0.25 U
3&4-METHYLPHENOL	0.42 U	0.48 U
3,3'-DICHLOROBENZIDINE	0.42 U	0.48 U
3-NITROANILINE	0.42 U	0.48 U
4,6-DINITRO-2-METHYLPHENOL	0.42 U	0.48 U
4-BROMOPHENYL PHENYL ETHER	0.22 U	0.25 U
4-CHLORO-3-METHYLPHENOL	0.22 U	0.25 U
4-CHLOROANILINE	0.42 U	0.48 U
4-CHLOROPHENYL PHENYL ETHER	0.22 U	0.25 U
4-NITROANILINE	0.42 U	0.48 U
4-NITROPHENOL	0.42 U	0.48 U

TABLE 25

SEDIMENT ANALYTICAL DATA - NEW RIVER
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD354	SW/SD354
SAMPLE ID	SD354-20200224-0006	SD354-20200224-0612
SAMPLE DATE	20200224	20200224
DUPLICATE		
SAMPLE CODE	NORMAL	NORMAL
MATRIX	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019
AREA	New River	New River
SUBMATRIX	NA	NA
TOP DEPTH	0	0.5
BOTTOM DEPTH	0.5	1
ACENAPHTHENE	0.22 U	0.25 U
ACENAPHTHYLENE	0.22 U	0.25 U
ACETOPHENONE	0.42 U	0.48 U
ANTHRACENE	0.22 U	0.25 U
ATRAZINE	0.42 U	0.48 U
BAP EQUIVALENT-HALFND	0.22 U	0.25 U
BAP EQUIVALENT-POS	0.22 U	0.25 U
BENZALDEHYDE	0.42 U	0.48 U
BENZO(A)ANTHRACENE	0.22 U	0.25 U
BENZO(A)PYRENE	0.22 U	0.25 U
BENZO(B)FLUORANTHENE	0.22 U	0.25 U
BENZO(G,H,I)PERYLENE	0.22 U	0.25 U
BENZO(K)FLUORANTHENE	0.22 U	0.25 U
BIS(2-CHLOROETHOXY)METHANE	0.22 U	0.25 U
BIS(2-CHLOROETHYL)ETHER	0.42 U	0.48 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.22 U	0.25 U
BUTYL BENZYL PHTHALATE	0.22 U	0.25 U
CAPROLACTAM	0.42 U	0.48 U
CARBAZOLE	0.42 U	0.48 U
CHRYSENE	0.22 U	0.25 U
DIBENZO(A,H)ANTHRACENE	0.22 U	0.25 U
DIBENZOFURAN	0.22 U	0.25 U
DIETHYL PHTHALATE	0.22 U	0.25 U
DIMETHYL PHTHALATE	0.34	0.39
DI-N-BUTYL PHTHALATE	0.22 U	0.25 U
DI-N-OCTYL PHTHALATE	0.42 U	0.48 U
FLUORANTHENE	0.42 U	0.48 U
FLUORENE	0.22 U	0.25 U
HEXACHLOROBENZENE	0.22 U	0.25 U
HEXACHLOROBUTADIENE	0.22 U	0.25 U
HEXACHLOROCYCLOPENTADIENE	0.42 U	0.48 U
HEXACHLOROETHANE	0.22 U	0.25 U
HIGH MOLECULAR WEIGHT PAHS	0 U	0 U
INDENO(1,2,3-CD)PYRENE	0.22 U	0.25 U
ISOPHORONE	0.22 U	0.25 U
LOW MOLECULAR WEIGHT PAHS	0 U	0 U
NAPHTHALENE	0.22 U	0.25 U
NITROBENZENE	0.22 U	0.25 U
N-NITROSO-DI-N-PROPYLAMINE	0.22 U	0.25 U
N-NITROSODIPHENYLAMINE	0.22 U	0.25 U
PENTACHLOROPHENOL	0.42 U	0.48 U
PHENANTHRENE	0.22 U	0.25 U
PHENOL	0.42 U	0.48 U
PYRENE	0.22 U	0.25 U
TOTAL PAHS	0 U	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K		
2-METHYLNAPHTHALENE	0.002 J	0.0048 U
ACENAPHTHENE	0.0042 U	0.0048 U
ACENAPHTHYLENE	0.0013 J	0.0016 J
ANTHRACENE	0.0017 J	0.0019 J
BAP EQUIVALENT-HALFND	0.011083	0.015767
BAP EQUIVALENT-POS	0.011083	0.015767
BENZO(A)ANTHRACENE	0.0055	0.0087
BENZO(A)PYRENE	0.0075	0.011
BENZO(B)FLUORANTHENE	0.0093	0.014
BENZO(G,H,I)PERYLENE	0.0053	0.0056
BENZO(K)FLUORANTHENE	0.0036 J	0.0056
CHRYSENE	0.0078	0.011
DIBENZO(A,H)ANTHRACENE	0.0016 J	0.0019 J
FLUORANTHENE	0.0085	0.0086
FLUORENE	0.0042 U	0.0048 U
HIGH MOLECULAR WEIGHT PAHS	0.0534	0.0751
INDENO(1,2,3-CD)PYRENE	0.0046	0.0053
LOW MOLECULAR WEIGHT PAHS	0.0197	0.016
NAPHTHALENE	0.0032 J	0.0014 J
PENTACHLOROPHENOL	0.0086 U	0.0098 U
PHENANTHRENE	0.005	0.0025 J
PYRENE	0.0082	0.012
TOTAL PAHS	0.0078	0.011
PESTICIDES (MG/KG)		
4,4'-DDD	0.0042 U	0.0048 U
4,4'-DDE	0.0042 U	0.0048 U
4,4'-DDT	0.0042 U	0.0048 U
ALDRIN	0.0022 U	0.0025 U
ALPHA-BHC	0.0022 U	0.0025 U
ALPHA-CHLORDANE	0.0022 U	0.0025 U
BETA-BHC	0.0022 U	0.0025 U
DELTA-BHC	0.0022 U	0.0025 U
DIELDRIN	0.0042 U	0.0048 U
ENDOSULFAN I	0.0022 U	0.0025 U
ENDOSULFAN II	0.0042 U	0.0048 U

TABLE 25

SEDIMENT ANALYTICAL DATA - NEW RIVER
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD354	SW/SD354
SAMPLE ID	SD354-20200224-0006	SD354-20200224-0612
SAMPLE DATE	20200224	20200224
DUPLICATE		
SAMPLE CODE	NORMAL	NORMAL
MATRIX	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019
AREA	New River	New River
SUBMATRIX	NA	NA
TOP DEPTH	0	0.5
BOTTOM DEPTH	0.5	1
ENDOSULFAN SULFATE	0.0042 U	0.0048 U
ENDRIN	0.0042 U	0.0048 U
ENDRIN ALDEHYDE	0.0042 U	0.0048 U
ENDRIN KETONE	0.0042 U	0.0048 U
GAMMA-BHC (LINDANE)	0.0022 U	0.0025 U
GAMMA-CHLORDANE	0.0022 U	0.0025 U
HEPTACHLOR	0.0022 U	0.0025 U
HEPTACHLOR EPOXIDE	0.0022 U	0.0025 U
METHOXYCHLOR	0.022 U	0.025 U
TOXAPHENE	0.22 U	0.25 U
PCBS (MG/KG)		
AROCLOR-1016	0.042 U	0.048 U
AROCLOR-1221	0.042 U	0.048 U
AROCLOR-1232	0.042 U	0.048 U
AROCLOR-1242	0.042 U	0.048 U
AROCLOR-1248	0.042 U	0.048 U
AROCLOR-1254	0.042 U	0.048 U
AROCLOR-1260	0.042 U	0.048 U
AROCLOR-1262	0.042 U	0.048 U
AROCLOR-1268	0.042 U	0.048 U
TOTAL AROCLOR	0 U	0 U
TOTAL AROCLOR HALFND	0.189	0.216
PCB CONGENERS (MG/KG)		
PCB-105	0.0000153	0.00000954 J
PCB-114	0.000000754 J	0.000000485 J
PCB-118	0.0000318	0.0000219
PCB-123	0.000000853 J	0.000000582 J
PCB-126	0.00000931 U	0.0000097 U
PCB-128/166	0.00000772 J	0.00000737 J
PCB-129/138/163	0.000069	0.0000767
PCB-153/168	0.0000532	0.0000617
PCB-156	0.00000742 J	0.00000769 J
PCB-167	0.0000027 J	0.00000291 J
PCB-169	0.00000931 U	0.0000097 U
PCB-170	0.0000208	0.0000315
PCB-18/30	0.00000387 J	0.0000009 Z
PCB-180/193	0.0000528	0.0000823
PCB-187	0.0000318	0.0000485
PCB-189	0.000000988	0.00000145
PCB-195	0.00000496 J	0.00000792 J
PCB-20/28	0.0000158 J	0.00000567 J
PCB-206	0.00015	0.000314
PCB-209	0.000253	0.000441
PCB-44/47/65	0.000017 J	0.00000314
PCB-52	0.0000195 J	0.00000401 U
PCB-66	0.0000213 J	0.00000711 J
PCB-77	0.00000213 J	0.00000108 J
PCB-8	0.00000312 J	0.00000119 J
PCB-81	0.000000181 J	0.0000097 U
PCB-90/101/113	0.0000232 J	0.0000113 J
TEQ DIOXIN-LIKE PCBs (BIRD)	1.27309E-07	5.6038E-08
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	5.97464E-07	1.03089E-06
TEQ DIOXIN-LIKE PCBs (FISH)	5.99E-10	3.27E-10
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	2.4106E-08	2.7244E-08
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	2.059E-09	1.442E-09
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	6.07209E-07	6.33397E-07
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	0.000062126	0.000045637
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	0.00074707	0.0011003
TOTAL PCB CONGENERS ZEROND	0.000809196	0.001145937
TOTAL PCB CONGENERS-NOAA	0.00079417	0.00113174
TOTAL PCB CONGENERS-NOAA HALFND	0.000818506	0.001162492
TOTAL PCB CONGENERS-NOAA X2	0.00158834	0.00226348
TOTAL PCB CONGENERS-NOAA X2 HALFND	0.00158834	0.00226749
DIOXINS/FURANS (NG/KG)		
1,2,3,4,6,7,8,9-OCDD	2350	808
1,2,3,4,6,7,8,9-OCDF	3.28 J	0.955 Z
1,2,3,4,6,7,8-HPCDD	32.6	14.9
1,2,3,4,6,7,8-HPCDF	3.12 Z	1.95 Z
1,2,3,4,7,8,9-HPCDF	4.72 U	4.72 U
1,2,3,4,7,8-HXCDD	4.72 U	4.72 U
1,2,3,4,7,8-HXCDF	0.432 Z	4.72 U
1,2,3,6,7,8-HXCDD	0.864 Z	4.72 U
1,2,3,6,7,8-HXCDF	4.72 U	4.72 U
1,2,3,7,8,9-HXCDD	0.943 Z	4.72 U
1,2,3,7,8,9-HXCDF	4.72 U	4.72 U
1,2,3,7,8-PECDD	4.72 U	4.72 U
1,2,3,7,8-PECDF	4.72 U	0.429 Z
2,3,4,6,7,8-HXCDF	0.466 J	0.408 J
2,3,4,7,8-PECDF	1.02 Z	4.72 U
2,3,7,8-TCDD	0.943 U	0.944 U
2,3,7,8-TCDF	0.658 J	0.944 U

TABLE 25

SEDIMENT ANALYTICAL DATA - NEW RIVER
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SW/SD354	SW/SD354
SAMPLE ID	SD354-20200224-0006	SD354-20200224-0612
SAMPLE DATE	20200224	20200224
DUPLICATE		
SAMPLE CODE	NORMAL	NORMAL
MATRIX	SD	SD
EVENT	Remedial Investigation 2019	Remedial Investigation 2019
AREA	New River	New River
SUBMATRIX	NA	NA
TOP DEPTH	0	0.5
BOTTOM DEPTH	0.5	1
TEQ DIOXINS (BIRD)	2.169868	0.1989955
TEQ DIOXINS (BIRD) HALFND	5.850968	6.9721955
TEQ DIOXINS (FISH)	0.949898	0.1775455
TEQ DIOXINS (FISH) HALFND	5.574998	6.1719455
TEQ DIOXINS (HUMANS/MAMMALS)	1.705484	0.4648565
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	5.339384	5.4916565
TOTAL HPCDD	73.9 J	32.9 J
TOTAL HPCDF	2.35 J	1.17 J
TOTAL HXCDD	3.48 J	4.72 U
TOTAL HXCDF	4.01 J	1.68 J
TOTAL PECDD	1.18 J	1.38 J
TOTAL PECDF	9.5 J	5.97 J
TOTAL TCDD	2.25 J	1.17 J
TOTAL TCDF	3.71 J	1.39 J
METALS (MG/KG)		
ALUMINUM	8030	10400
ANTIMONY	0.96 U	1 U
ARSENIC	7.2	7.1
BARIUM	80.9	122
BERYLLIUM	0.79	1.2
CADMIUM	0.48 U	0.51 U
CALCIUM	1390	1520
CHROMIUM	12	19.8
COBALT	8.6	15.1
COPPER	19.8	37.1
CYANIDE	0.18 J	0.7 U
IRON	20400	25900
LEAD	38.3	58.2
MAGNESIUM	1410	1820
MANGANESE	375	926
MERCURY	0.14	0.19
NICKEL	13.9	20.6
POTASSIUM	559	773
SELENIUM	0.65 J	0.8 J
SILVER	0.48 U	0.51 U
SODIUM	473 UJ	508 UJ
THALLIUM	0.48 U	0.51 U
VANADIUM	17.4	32.2
ZINC	130	211
MISCELLANEOUS (%)		
TOTAL SOLIDS	74	69
MISCELLANEOUS (MG/KG)		
TOTAL ORGANIC CARBON	36100	40400

APPENDIX G.11

MINES ANALYTICAL DATA

TABLE 26

SOIL ANALYTICAL DATA - MINES
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SS-244	SS-245	SS-248	SS-249
SAMPLE ID	SEC-SS-244	SEC-SS-245	SEC-SS-248	SEC-SS-249
SAMPLE DATE	20180627	20180627	20180627	20180627
DUPLICATE				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Mines	Mines	Mines	Mines
SUBMATRIX	SS	SS	SS	SS
TOP DEPTH	0	0	0	0
BOTTOM DEPTH	6	6	6	6
SEMIVOLATILES (MG/KG)				
1,1-BIPHENYL	0.33 U	0.54 U	0.2 U	0.2 U
1,2,4,5-TETRACHLOROBENZENE	0.33 U	0.54 U	0.2 U	0.2 U
1,4-DIOXANE	0.13 U	0.21 U	0.077 U	0.079 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.64 U	1.1 U	0.38 U	0.39 U
2,3,4,6-TETRACHLOROPHENOL	0.33 U	0.54 U	0.2 U	0.2 U
2,4,5-TRICHLOROPHENOL	0.33 U	0.54 U	0.2 U	0.2 U
2,4,6-TRICHLOROPHENOL	0.33 U	0.54 U	0.2 U	0.2 U
2,4-DICHLOROPHENOL	0.33 U	0.54 U	0.2 U	0.2 U
2,4-DIMETHYLPHENOL	0.33 U	0.54 U	0.2 U	0.2 U
2,4-DINITROPHENOL	0.64 U	1.1 U	0.38 U	0.39 U
2,4-DINITROTOLUENE	0.33 U	0.54 R	0.2 U	0.2 U
2,6-DINITROTOLUENE	0.33 U	0.54 R	0.2 U	0.2 U
2-CHLORONAPHTHALENE	0.33 U	0.54 U	0.2 U	0.2 U
2-CHLOROPHENOL	0.33 U	0.54 U	0.2 U	0.2 U
2-METHYLNAPHTHALENE	0.33 U	0.54 U	0.2 U	0.2 U
2-METHYLPHENOL	0.64 U	1.1 U	0.38 U	0.39 U
2-NITROANILINE	0.33 U	0.54 U	0.2 U	0.2 U
2-NITROPHENOL	0.33 U	0.54 R	0.2 U	0.2 U
3&4-METHYLPHENOL	0.64 U	1.1 U	0.38 U	0.39 U
3,3'-DICHLOROBENZIDINE	0.64 U	1.1 R	0.38 U	0.39 U
3-NITROANILINE	0.64 U	1.1 U	0.38 U	0.39 U
4,6-DINITRO-2-METHYLPHENOL	0.64 U	1.1 R	0.38 U	0.39 U
4-BROMOPHENYL PHENYL ETHER	0.33 U	0.54 U	0.2 U	0.2 U
4-CHLORO-3-METHYLPHENOL	0.33 U	0.54 U	0.2 U	0.2 U
4-CHLOROANILINE	0.64 U	1.1 U	0.38 U	0.39 U
4-CHLOROPHENYL PHENYL ETHER	0.33 U	0.54 U	0.2 U	0.2 U
4-NITROANILINE	0.64 U	1.1 U	0.38 U	0.39 U
4-NITROPHENOL	0.64 U	1.1 U	0.38 U	0.39 U
ACENAPHTHENE	0.33 U	0.54 U	0.2 U	0.2 U
ACENAPHTHYLENE	0.33 U	0.54 U	0.2 U	0.2 U
ACETOPHENONE	0.64 U	1.1 R	0.38 U	0.39 U
ANTHRACENE	0.33 U	0.54 U	0.2 U	0.2 U
ATRAZINE	0.64 U	1.1 U	0.38 U	0.39 U
BAP EQUIVALENT-HALFND	0.375815	0.54 U	0.22238	0.22913
BAP EQUIVALENT-POS	0.011	0.54 U	0.12138	0.00813
BENZALDEHYDE	0.64 U	1.1 U	0.38 U	0.39 U
BENZO(A)ANTHRACENE	0.33 U	0.54 U	0.073 J	0.2 U
BENZO(A)PYRENE	0.33 U	0.54 U	0.086 J	0.2 U
BENZO(B)FLUORANTHENE	0.11 J	0.54 U	0.21	0.08 J
BENZO(G,H,I)PERYLENE	0.33 U	0.54 U	0.067 J	0.2 U
BENZO(K)FLUORANTHENE	0.33 U	0.54 U	0.2 U	0.2 U
BIS(2-CHLOROETHOXY)METHANE	0.33 U	0.54 U	0.2 U	0.2 U
BIS(2-CHLOROETHYL)ETHER	0.64 U	1.1 U	0.38 U	0.39 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.33 U	0.54 U	0.2 U	0.2 U
BUTYL BENZYL PHTHALATE	0.33 U	0.54 U	0.2 U	0.2 U
CAPROLACTAM	0.64 U	1.1 U	0.38 U	0.39 U
CARBAZOLE	0.64 UJ	1.1 UJ	0.38 UJ	0.39 UJ
CHRYSENE	0.33 U	0.54 U	0.18 J	0.13 J
DIBENZO(A,H)ANTHRACENE	0.33 U	0.54 U	0.2 U	0.2 U
DIBENZOFURAN	0.33 U	0.54 U	0.2 U	0.2 U
DIETHYL PHTHALATE	0.33 U	0.54 U	0.2 U	0.2 U
DIMETHYL PHTHALATE	0.33 U	0.54 U	0.2 U	0.2 U
DI-N-BUTYL PHTHALATE	0.33 U	0.54 U	0.2 U	0.2 U
DI-N-OCTYL PHTHALATE	0.64 U	1.1 U	0.38 U	0.39 U
FLUORANTHENE	0.13 J	1.1 U	0.13 J	0.066 J
FLUORENE	0.33 U	0.54 U	0.2 U	0.2 U
HEXACHLOROBENZENE	0.33 U	0.54 U	0.2 U	0.2 U
HEXACHLOROBUTADIENE	0.33 U	0.54 U	0.2 U	0.2 U
HEXACHLOROCYCLOPENTADIENE	0.64 UJ	1.1 R	0.38 UJ	0.39 UJ
HEXACHLOROETHANE	0.33 U	0.54 R	0.2 U	0.2 U
HIGH MOLECULAR WEIGHT PAHS	0.22	0 U	0.785	0.21
INDENO(1,2,3-CD)PYRENE	0.33 U	0.54 U	0.069 J	0.2 U
ISOPHORONE	0.33 U	0.54 R	0.2 U	0.2 U
LOW MOLECULAR WEIGHT PAHS	0.13	0 U	0.26	0.186
NAPHTHALENE	0.33 U	0.54 U	0.2 U	0.2 U
NITROBENZENE	0.33 U	0.54 R	0.2 U	0.2 U
N-NITROSO-DI-N-PROPYLAMINE	0.33 U	0.54 R	0.2 U	0.2 U
N-NITROSODIPHENYLAMINE	0.33 U	0.54 R	0.2 U	0.2 U
PENTACHLOROPHENOL	0.64 U	1.1 U	0.38 U	0.39 U
PHENANTHRENE	0.33 U	0.54 U	0.13 J	0.12 J
PHENOL	0.64 U	1.1 U	0.38 U	0.39 U
PYRENE	0.11 J	0.54 U	0.1 J	0.2 U
TOTAL PAHS	0.35	0 U	1.045	0.396
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K				
2-METHYLNAPHTHALENE	0.0033 J	0.011 U	0.026	0.02
ACENAPHTHENE	0.0022 J	0.011 U	0.0065	0.005
ACENAPHTHYLENE	0.017	0.0015 J	0.037	0.0085
ANTHRACENE	0.02	0.0028 J	0.032	0.0074
BAP EQUIVALENT-HALFND	0.116149	0.0129	0.14989	0.05405
BAP EQUIVALENT-POS	0.116149	0.000745	0.14989	0.05405

TABLE 26

SOIL ANALYTICAL DATA - MINES
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA
PAGE 2 OF 2

LOCATION	SS-244	SS-245	SS-248	SS-249
SAMPLE ID	SEC-SS-244	SEC-SS-245	SEC-SS-248	SEC-SS-249
SAMPLE DATE	20180627	20180627	20180627	20180627
DUPLICATE				
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SO	SO	SO	SO
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Mines	Mines	Mines	Mines
SUBMATRIX	SS	SS	SS	SS
TOP DEPTH	0	0	0	0
BOTTOM DEPTH	6	6	6	6
BENZO(A)ANTHRACENE	0.07	0.011 U	0.08	0.031
BENZO(A)PYRENE	0.078	0.011 U	0.086	0.027
BENZO(B)FLUORANTHENE	0.1	0.0074 J	0.18	0.078
BENZO(G,H,I)PERYLENE	0.05	0.011 U	0.062	0.023
BENZO(K)FLUORANTHENE	0.028	0.011 U	0.053	0.012
CHRYSENE	0.069	0.0058 J	0.16	0.13
DIBENZO(A,H)ANTHRACENE	0.015	0.011 U	0.029	0.014
FLUORANTHENE	0.15	0.014	0.11	0.062
FLUORENE	0.0025 J	0.0055 J	0.0078	0.0076
HIGH MOLECULAR WEIGHT PAHS	0.553	0.0232	0.815	0.37
INDENO(1,2,3-CD)PYRENE	0.058	0.011 U	0.082	0.019
LOW MOLECULAR WEIGHT PAHS	0.2396	0.0238	0.3263	0.2187
NAPHTHALENE	0.0029 J	0.011 U	0.013	0.0082
PENTACHLOROPHENOL	0.013 U	0.021 U	0.0077 U	0.0079 U
PHENANTHRENE	0.045	0.011 U	0.12	0.12
PYRENE	0.085	0.01 J	0.083	0.036
TOTAL PAHS	0.069	0.0058	0.16	0.13
PESTICIDES (MG/KG)				
4,4'-DDD	0.0064 U	0.011 U	0.0078 J	0.0073 J
4,4'-DDE	0.0018 J	0.0016 R	0.0021 R	0.0024 J
4,4'-DDT	0.0064 U	0.011 U	0.0022 R	0.0027 R
ALDRIN	0.0033 U	0.0055 U	0.00051 R	0.00033 R
ALPHA-BHC	0.0033 U	0.0055 U	0.002 U	0.002 U
ALPHA-CHLORDANE	0.0033 U	0.0016 R	0.002 R	0.0019 R
BETA-BHC	0.0033 U	0.00045 R	0.00047 R	0.00035 R
DELTA-BHC	0.0033 U	0.0055 U	0.0004 R	0.00094 J
DIELDRIN	0.0064 U	0.0015 R	0.0038 U	0.0039 U
ENDOSULFAN I	0.00059 R	0.0015 J	0.0027 J	0.002 U
ENDOSULFAN II	0.0064 U	0.011 U	0.0014 R	0.0013 R
ENDOSULFAN SULFATE	0.0056 J	0.001 J	0.0075 J	0.0064 J
ENDRIN	0.0016 J	0.004 J	0.017 J	0.014 J
ENDRIN ALDEHYDE	0.00082 R	0.011 U	0.0089 J	0.0073 J
ENDRIN KETONE	0.0012 R	0.011 U	0.011 J	0.0092 J
GAMMA-BHC (LINDANE)	0.0033 U	0.0055 U	0.002 U	0.002 U
GAMMA-CHLORDANE	0.00099 R	0.0055 U	0.0045 J	0.0036 J
HEPTACHLOR	0.0033 U	0.00078 J	0.00095 R	0.00088 J
HEPTACHLOR EPOXIDE	0.00083 J	0.0055 U	0.0022 R	0.0021 J
METHOXYCHLOR	0.033 U	0.0062 J	0.0069 R	0.0052 R
TOXAPHENE	0.33 U	0.55 U	0.2 U	0.2 U
PCBS (MG/KG)				
AROCLOR-1016	0.064 U	0.11 U	0.038 U	0.039 U
AROCLOR-1221	0.064 U	0.11 U	0.038 U	0.039 U
AROCLOR-1232	0.064 U	0.11 U	0.038 U	0.039 U
AROCLOR-1242	0.064 U	0.11 U	0.038 U	0.039 U
AROCLOR-1248	0.064 U	0.11 U	0.038 U	0.039 U
AROCLOR-1254	0.064 U	0.11 U	0.038 U	0.039 U
AROCLOR-1260	0.064 U	0.11 U	0.038 U	0.039 U
AROCLOR-1262	0.064 U	0.11 U	0.038 U	0.039 U
AROCLOR-1268	0.064 U	0.11 U	0.038 U	0.039 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U
TOTAL AROCLOR HALFND	0.288	0.495	0.171	0.1755
METALS (MG/KG)				
ALUMINUM	2960	194	1970	1720
ANTIMONY	14.7 U	13.6 U	6.5 U	6.1 U
ARSENIC	9.6	5.4	12.9	15.4
BARIUM	449	140	43.3	44.1
BERYLLIUM	0.32 J	1.1 U	1.3	2
CADMIUM	0.54 J	0.51 J	0.23 J	0.28 J
CALCIUM	5200	2460	1380	1500
CHROMIUM	14.7	2.3 U	8.1	7.8
COBALT	152	10.8	3.9 J	4 J
COPPER	23.7	1.9 J	23.9	16.3
IRON	182000	300000	9110	13100
LEAD	27.2	4.9	9.9	10.6
MAGNESIUM	789 J	1130 U	523 J	483 J
MANGANESE	25100	1430	48.9	116
NICKEL	44.3	15.4	9	9.7
POTASSIUM	946 J	1130 U	708	627
SELENIUM	8.6 U	7.9 U	3.8 U	3.5 U
SILVER	2.4 U	2.3 U	1.1 U	1 U
SODIUM	1220 U	1130 U	407 J	527
THALLIUM	3.6 J	4.2 J	2.7 U	2.5 U
VANADIUM	12.2 U	11.3 U	11.9	11.3
ZINC	183	193	25.5	22.3

TABLE 27

WATER ANALYTICAL DATA - MINES
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	GW-001	GW-002	GW-005	GW-006	GW-007
SAMPLE ID	SEC-GW-01	SEC-GW-02	GW-005	GW-006	GW-007
SAMPLE DATE	20180627	20180627	20170612	20170612	20170612
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW
EVENT	Remedial Investigation	Remedial Investigation	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Mines	Mines	Mines	Mines	Mines
SEMIVOLATILES (UG/L)					
1,1-BIPHENYL	5 U	5 U	--	--	--
1,2,4,5-TETRACHLOROBENZENE	5 U	5 U	--	--	--
1,4-DIOXANE	2 U	2 U	--	--	--
2,2'-OXYBIS(1-CHLOROPROPANE)	10 UJ	10 UJ	--	--	--
2,3,4,6-TETRACHLOROPHENOL	5 U	5 U	--	--	--
2,4,5-TRICHLOROPHENOL	5 U	5 U	--	--	--
2,4,6-TRICHLOROPHENOL	5 U	5 U	--	--	--
2,4-DICHLOROPHENOL	5 U	5 U	--	--	--
2,4-DIMETHYLPHENOL	5 U	5 U	--	--	--
2,4-DINITROPHENOL	10 UJ	10 UJ	--	--	--
2,4-DINITROTOLUENE	5 U	5 U	--	--	--
2,6-DINITROTOLUENE	5 U	5 U	--	--	--
2-CHLORONAPHTHALENE	5 U	5 U	--	--	--
2-CHLOROPHENOL	5 U	5 U	--	--	--
2-METHYLNAPHTHALENE	5 U	5 U	--	--	--
2-METHYLPHENOL	10 U	10 U	--	--	--
2-NITROANILINE	5 U	5 U	--	--	--
2-NITROPHENOL	5 U	5 U	--	--	--
3&4-METHYLPHENOL	10 U	10 U	--	--	--
3,3'-DICHLOROBENZIDINE	10 U	10 U	--	--	--
3-NITROANILINE	10 U	10 U	--	--	--
4,6-DINITRO-2-METHYLPHENOL	10 UJ	10 UJ	--	--	--
4-BROMOPHENYL PHENYL ETHER	5 U	5 U	--	--	--
4-CHLORO-3-METHYLPHENOL	5 U	5 U	--	--	--
4-CHLOROANILINE	10 U	10 U	--	--	--
4-CHLOROPHENYL PHENYL ETHER	5 U	5 U	--	--	--
4-NITROANILINE	10 U	10 U	--	--	--
4-NITROPHENOL	10 U	10 U	--	--	--
ACENAPHTHENE	5 U	5 U	--	--	--
ACENAPHTHYLENE	5 U	5 U	--	--	--
ACETOPHENONE	10 U	10 U	--	--	--
ANTHRACENE	5 U	5 U	--	--	--
ATRAZINE	10 U	10 U	--	--	--
BAP EQUIVALENT-HALFND	5 U	5 U	--	--	--
BAP EQUIVALENT-POS	5 U	5 U	--	--	--
BENZALDEHYDE	10 U	10 U	--	--	--
BENZO(A)ANTHRACENE	5 U	5 U	--	--	--
BENZO(A)PYRENE	5 U	5 U	--	--	--
BENZO(B)FLUORANTHENE	5 U	5 U	--	--	--
BENZO(G,H,I)PERYLENE	5 U	5 U	--	--	--
BENZO(K)FLUORANTHENE	5 U	5 U	--	--	--
BIS(2-CHLOROETHOXY)METHANE	5 U	5 U	--	--	--
BIS(2-CHLOROETHYL)ETHER	10 U	10 U	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	5 U	5 U	--	--	--
BUTYL BENZYL PHTHALATE	5 U	5 U	--	--	--
CAPROLACTAM	10 U	10 U	--	--	--
CARBAZOLE	10 UJ	10 UJ	--	--	--
CHRYSENE	5 U	5 U	--	--	--
DIBENZO(A,H)ANTHRACENE	5 U	5 U	--	--	--
DIBENZOFURAN	5 U	5 U	--	--	--
DIETHYL PHTHALATE	5 U	5 U	--	--	--
DIMETHYL PHTHALATE	5 U	5 U	--	--	--
DI-N-BUTYL PHTHALATE	5 U	5 U	--	--	--
DI-N-OCTYL PHTHALATE	10 UJ	10 UJ	--	--	--
FLUORANTHENE	10 U	10 U	--	--	--
FLUORENE	5 U	5 U	--	--	--
HEXACHLOROBENZENE	5 U	5 U	--	--	--
HEXACHLOROBUTADIENE	5 U	5 U	--	--	--
HEXACHLOROCYCLOPENTADIENE	10 UJ	10 UJ	--	--	--
HEXACHLOROETHANE	5 UJ	5 UJ	--	--	--
HIGH MOLECULAR WEIGHT PAHS	0 U	0 U	--	--	--
INDENO(1,2,3-CD)PYRENE	5 U	5 U	--	--	--
ISOPHORONE	5 U	5 U	--	--	--
LOW MOLECULAR WEIGHT PAHS	0 U	0 U	--	--	--
NAPHTHALENE	5 U	5 U	--	--	--
NITROBENZENE	5 U	5 U	--	--	--
N-NITROSO-DI-N-PROPYLAMINE	5 U	5 U	--	--	--
N-NITROSODIPHENYLAMINE	5 U	5 U	--	--	--
PENTACHLOROPHENOL	10 U	10 U	--	--	--
PHENANTHRENE	5 U	5 U	--	--	--
PHENOL	10 U	10 U	--	--	--
PYRENE	5 U	5 U	--	--	--
TOTAL PAHS	0 U	0 U	--	--	--
SEMIVOLATILE SELECTIVE ION MONITORING (UG/L)					
2-METHYLNAPHTHALENE	0.1 U	0.1 U	--	--	--
ACENAPHTHENE	0.1 U	0.1 U	--	--	--
ACENAPHTHYLENE	0.1 U	0.1 U	--	--	--
ANTHRACENE	0.1 U	0.1 U	--	--	--
BAP EQUIVALENT-HALFND	0.087256	0.071936	--	--	--
BAP EQUIVALENT-POS	0.036756	0.016436	--	--	--
BENZO(A)ANTHRACENE	0.035 J	0.019 J	--	--	--
BENZO(A)PYRENE	0.027 J	0.012 J	--	--	--
BENZO(B)FLUORANTHENE	0.044 J	0.025 J	--	--	--

TABLE 27

WATER ANALYTICAL DATA - MINES
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	GW-001	GW-002	GW-005	GW-006	GW-007
SAMPLE ID	SEC-GW-01	SEC-GW-02	GW-005	GW-006	GW-007
SAMPLE DATE	20180627	20180627	20170612	20170612	20170612
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW
EVENT	Remedial Investigation	Remedial Investigation	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Mines	Mines	Mines	Mines	Mines
BENZO(G,H,I)PERYLENE	0.014 J	0.1 U	--	--	--
BENZO(K)FLUORANTHENE	0.1 U	0.1 U	--	--	--
CHRYSENE	0.056 J	0.036 J	--	--	--
DIBENZO(A,H)ANTHRACENE	0.1 U	0.1 U	--	--	--
FLUORANTHENE	0.068 J	0.038 J	--	--	--
FLUORENE	0.1 U	0.1 U	--	--	--
HIGH MOLECULAR WEIGHT PAHS	0.251	0.092	--	--	--
INDENO(1,2,3-CD)PYRENE	0.018 J	0.1 U	--	--	--
LOW MOLECULAR WEIGHT PAHS	0.153	0.095	--	--	--
NAPHTHALENE	0.1 U	0.1 U	--	--	--
PENTACHLOROPHENOL	0.2 U	0.2 U	--	--	--
PHENANTHRENE	0.085 J	0.057 J	--	--	--
PYRENE	0.057 J	0.1 U	--	--	--
TOTAL PAHS	0.056	0.036	--	--	--
PESTICIDES (UG/L)					
4,4'-DDD	0.1 U	0.1 U	--	--	--
4,4'-DDE	0.1 U	0.1 U	--	--	--
4,4'-DDT	0.1 U	0.1 U	--	--	--
ALDRIN	0.05 U	0.05 U	--	--	--
ALPHA-BHC	0.05 U	0.05 U	--	--	--
ALPHA-CHLORDANE	0.05 U	0.05 U	--	--	--
BETA-BHC	0.05 U	0.05 U	--	--	--
DELTA-BHC	0.05 U	0.05 U	--	--	--
DIELDRIN	0.1 U	0.1 U	--	--	--
ENDOSULFAN I	0.05 U	0.05 U	--	--	--
ENDOSULFAN II	0.1 U	0.1 U	--	--	--
ENDOSULFAN SULFATE	0.1 U	0.1 U	--	--	--
ENDRIN	0.1 U	0.1 U	--	--	--
ENDRIN ALDEHYDE	0.1 U	0.1 U	--	--	--
ENDRIN KETONE	0.1 U	0.1 U	--	--	--
GAMMA-BHC (LINDANE)	0.05 U	0.05 U	--	--	--
GAMMA-CHLORDANE	0.05 U	0.05 U	--	--	--
HEPTACHLOR	0.05 U	0.05 U	--	--	--
HEPTACHLOR EPOXIDE	0.05 U	0.05 U	--	--	--
METHOXYCHLOR	0.5 U	0.5 U	--	--	--
TOXAPHENE	5 U	5 U	--	--	--
PCBS (UG/L)					
AROCLOR-1016	1 U	1 U	--	--	--
AROCLOR-1221	1 U	1 U	--	--	--
AROCLOR-1232	1 U	1 U	--	--	--
AROCLOR-1242	1 U	1 U	--	--	--
AROCLOR-1248	1 U	1 U	--	--	--
AROCLOR-1254	1 U	1 U	--	--	--
AROCLOR-1260	1 U	1 U	--	--	--
AROCLOR-1262	1 U	1 U	--	--	--
AROCLOR-1268	1 U	1 U	--	--	--
TOTAL AROCLOR	0 U	0 U	--	--	--
TOTAL AROCLOR HALFND	4.5	4.5	--	--	--
PCB CONGENERS (UG/L)					
DICHLOROBIPHENYLS	--	--	0.00002 J	0 UJ	0 UJ
HEPTACHLOROBIPHENYLS	--	--	0.000028 J	0.0000083 J	0.000059 J
HEXACHLOROBIPHENYLS	--	--	0.000043 J	0.000015 J	0.00007 J
MONOCHLOROBIPHENYLS	--	--	0 UJ	0 UJ	0 UJ
NONACHLOROBIPHENYLS	--	--	0 UJ	0 UJ	0 UJ
OCTACHLOROBIPHENYLS	--	--	0.0000072 J	0.0000046 J	0.000018 J
PCB-1	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-10	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-103	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-104	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-105	--	--	0.0000017 U	0.0000025 U	0.0000022 U
PCB-106	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-107	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-108/124	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-11	--	--	0.00003 U	0.000019 U	0.00002 U
PCB-110/115	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-111	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-112	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-114	--	--	0.0000016 U	0.0000025 U	0.0000021 U
PCB-118	--	--	0.0000029 U	0.0000026 U	0.00002 U
PCB-12/13	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-120	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-121	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-122	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-123	--	--	0.0000015 U	0.0000023 U	0.0000021 U
PCB-126	--	--	0.0000016 U	0.000003 U	0.0000026 U
PCB-127	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-128/166	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-129/138/163	--	--	0.000058 U	0.000058 U	0.000059 U
PCB-130	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-131	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-132	--	--	0.0000028 J	0.000019 U	0.0000054 J
PCB-133	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-134	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-135/151	--	--	0.000039 U	0.000039 U	0.000039 U

TABLE 27

WATER ANALYTICAL DATA - MINES
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	GW-001	GW-002	GW-005	GW-006	GW-007
SAMPLE ID	SEC-GW-01	SEC-GW-02	GW-005	GW-006	GW-007
SAMPLE DATE	20180627	20180627	20170612	20170612	20170612
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW
EVENT	Remedial Investigation	Remedial Investigation	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Mines	Mines	Mines	Mines	Mines
PCB-136	--	--	0.0000015 J	0.000019 U	0.0000027 J
PCB-137	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-139/140	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-14	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-141	--	--	0.000003 J	0.000019 U	0.0000045 J
PCB-142	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-143	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-144	--	--	0.000019 U	0.000019 U	0.0000013 J
PCB-145	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-146	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-147/149	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-148	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-15	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-150	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-152	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-153/168	--	--	0.000011 J	0.0000035 J	0.000018 J
PCB-154	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-155	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-156/157	--	--	0.0000024 U	0.0000032 U	0.0000025 U
PCB-158	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-159	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-16	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-160	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-161	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-162	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-164	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-165	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-167	--	--	0.0000011 U	0.0000014 U	0.0000014 U
PCB-169	--	--	0.0000014 U	0.0000016 U	0.0000015 U
PCB-17	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-170	--	--	0.0000037 J	0.000019 U	0.00002 U
PCB-171/173	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-172	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-174	--	--	0.0000042 J	0.000019 U	0.0000087 J
PCB-175	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-176	--	--	0.000019 U	0.000019 U	0.0000018 J
PCB-177	--	--	0.000019 U	0.000019 U	0.0000041 J
PCB-178	--	--	0.000019 U	0.000019 U	0.0000023 J
PCB-179	--	--	0.0000023 J	0.000019 U	0.0000045 J
PCB-18/30	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-180/193	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-181	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-182	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-183/185	--	--	0.0000025 J	0.000039 U	0.0000075 J
PCB-184	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-186	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-187	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-188	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-189	--	--	0.0000025 U	0.0000026 U	0.0000026 U
PCB-19	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-190	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-191	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-192	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-194	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-195	--	--	0.000019 U	0.000019 U	0.0000019 J
PCB-196	--	--	0.000019 U	0.000019 U	0.0000023 J
PCB-197/200	--	--	0.000039 U	0.000039 U	0.0000013 J
PCB-198/199	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-2	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-20/28	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-201	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-202	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-203	--	--	0.0000017 J	0.0000022 J	0.0000033 J
PCB-204	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-205	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-206	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-207	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-208	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-209	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-21/33	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-22	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-23	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-24	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-25	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-26/29	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-27	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-3	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-31	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-32	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-34	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-35	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-36	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-37	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-38	--	--	0.000019 U	0.000019 U	0.00002 U

TABLE 27

WATER ANALYTICAL DATA - MINES
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	GW-001	GW-002	GW-005	GW-006	GW-007
SAMPLE ID	SEC-GW-01	SEC-GW-02	GW-005	GW-006	GW-007
SAMPLE DATE	20180627	20180627	20170612	20170612	20170612
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW
EVENT	Remedial Investigation	Remedial Investigation	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Mines	Mines	Mines	Mines	Mines
PCB-39	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-4	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-40/71	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-41	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-42	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-43	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-44/47/65	--	--	0.000058 U	0.000058 U	0.000059 U
PCB-45/51	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-46	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-48	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-49/69	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-5	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-50/53	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-52	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-54	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-55	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-56	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-57	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-58	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-59/62/75	--	--	0.000058 U	0.000058 U	0.000059 U
PCB-6	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-60	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-61/70/74/76	--	--	0.000078 U	0.000078 U	0.000079 U
PCB-63	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-64	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-66	--	--	0.0000012 J	0.000019 U	0.00002 U
PCB-67	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-68	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-7	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-72	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-73	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-77	--	--	0.0000019 U	0.0000022 U	0.0000021 U
PCB-78	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-79	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-8	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-80	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-81	--	--	0.0000012 U	0.0000022 U	0.0000021 U
PCB-82	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-83	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-84	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-85/116/117	--	--	0.000058 U	0.000058 U	0.000059 U
PCB-86/87/97/109/119/125	--	--	0.00012 U	0.00012 U	0.00012 U
PCB-88/91	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-89	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-9	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-90/101/113	--	--	0.000058 U	0.000058 U	0.000059 U
PCB-92	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-93/100	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-94	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-95	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-96	--	--	0.000019 U	0.000019 U	0.00002 U
PCB-98/102	--	--	0.000039 U	0.000039 U	0.000039 U
PCB-99	--	--	0.000019 U	0.000019 U	0.00002 U
PENTACHLOROBIPHENYLS	--	--	0.000017 J	0.0000035 J	0.000016 J
TEQ DIOXIN-LIKE PCBs (BIRD)	--	--	0.0000017 U	0.0000025 U	0.0000022 U
TEQ DIOXIN-LIKE PCBs (BIRD) HALFND	--	--	0.0000017 U	0.0000025 U	0.0000022 U
TEQ DIOXIN-LIKE PCBs (FISH)	--	--	0.0000017 U	0.0000025 U	0.0000022 U
TEQ DIOXIN-LIKE PCBs (FISH) HALFND	--	--	0.0000017 U	0.0000025 U	0.0000022 U
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS)	--	--	0.0000017 U	0.0000025 U	0.0000022 U
TEQ DIOXIN-LIKE PCBs (HUMANS/MAMMALS) HALFND	--	--	0.0000017 U	0.0000025 U	0.0000022 U
TETRACHLOROBIPHENYLS	--	--	0.000015 J	0.0000053 J	0.000011 J
TOTAL DIOX-LIKE PCB CONGENERS ZEROND	--	--	0 U	0 U	0 U
TOTAL NON DIOX-LIKE PCB CONGENERS ZEROND	--	--	0.0000339	0.0000057	0.0000696
TOTAL PCB CONGENERS ZEROND	--	--	0.0000339	0.0000057	0.0000696
TOTAL PCB CONGENERS-NOAA	--	--	0.0000159	0.0000035	0.0000199
TOTAL PCB CONGENERS-NOAA HALFND	--	--	0.0018243	0.00187975	0.0018667
TOTAL PCB CONGENERS-NOAA X2	--	--	0.0000318	0.000007	0.0000398
TOTAL PCB CONGENERS-NOAA X2 HALFND	--	--	0.0004804	0.0004941	0.000535
TRICHLOROBIPHENYLS	--	--	0.000012 J	0.0000038 J	0.0000088 J
DIOXINS/FURANS (PG/L)					
1,2,3,4,6,7,8,9-OCDD	--	--	3.8 U	3.7 U	120 U
1,2,3,4,6,7,8,9-OCDF	--	--	3 U	2.9 U	3.5 U
1,2,3,4,6,7,8-HPCDD	--	--	1.4 U	1.3 U	1.6 U
1,2,3,4,6,7,8-HPCDF	--	--	1.6 U	1.5 U	1.8 U
1,2,3,4,7,8,9-HPCDF	--	--	1.4 U	1.3 U	1.6 U
1,2,3,4,7,8-HXCDD	--	--	0.63 U	0.61 U	0.98 UJ
1,2,3,4,7,8-HXCDF	--	--	1.1 U	1 U	1.2 U
1,2,3,6,7,8-HXCDD	--	--	0.74 U	0.71 U	0.98 UJ
1,2,3,6,7,8-HXCDF	--	--	1.1 U	1 U	1.2 U
1,2,3,7,8,9-HXCDD	--	--	1.4 U	1.4 U	1.6 U
1,2,3,7,8,9-HXCDF	--	--	0.87 Z	49 U	1.1 UJ
1,2,3,7,8-PECDD	--	--	1.2 U	1.1 U	1.3 U
1,2,3,7,8-PECDF	--	--	0.71 U	0.68 U	0.81 U
2,3,4,6,7,8-HXCDF	--	--	1.4 U	1.4 U	1.6 U

TABLE 27

WATER ANALYTICAL DATA - MINES
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	GW-001	GW-002	GW-005	GW-006	GW-007
SAMPLE ID	SEC-GW-01	SEC-GW-02	GW-005	GW-006	GW-007
SAMPLE DATE	20180627	20180627	20170612	20170612	20170612
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW
EVENT	Remedial Investigation	Remedial Investigation	Removal Assessment	Removal Assessment	Removal Assessment
AREA	Mines	Mines	Mines	Mines	Mines
2,3,4,7,8-PECDF	--	--	0.8 U	0.77 U	0.92 U
2,3,7,8-TCDD	--	--	0.49 U	0.47 U	0.74 UJ
2,3,7,8-TCDF	--	--	0.44 U	0.42 UJ	0.78 UJ
TEQ DIOXINS (BIRD)	--	--	0.087	0.47 U	0.74 U
TEQ DIOXINS (BIRD) HALFND	--	--	1.87299	0.47 U	0.74 U
TEQ DIOXINS (FISH)	--	--	0.087	0.47 U	0.74 U
TEQ DIOXINS (FISH) HALFND	--	--	1.52499	0.47 U	0.74 U
TEQ DIOXINS (HUMANS/MAMMALS)	--	--	0.087	0.47 U	0.74 U
TEQ DIOXINS (HUMANS/MAMMALS) HALFND	--	--	1.42617	0.47 U	0.74 U
TOTAL HPCDD	--	--	1.4 UJ	1.3 UJ	1.6 UJ
TOTAL HPCDF	--	--	1.4 UJ	1.3 UJ	1.6 UJ
TOTAL HXCDD	--	--	0.63 UJ	0.61 UJ	0.99 UJ
TOTAL HXCDF	--	--	0.65 UJ	0.62 UJ	1.1 UJ
TOTAL PECDD	--	--	1.2 UJ	1.1 UJ	1.3 UJ
TOTAL PECDF	--	--	0.71 UJ	0.68 UJ	0.81 UJ
TOTAL TCDD	--	--	0.49 UJ	0.47 UJ	0.74 UJ
TOTAL TCDF	--	--	0.44 UJ	0.42 UJ	0.78 UJ
METALS (UG/L)					
ALUMINUM	143	738	--	--	--
ANTIMONY	2 U	2 U	--	--	--
ARSENIC	1	2.4	--	--	--
BARIUM	40.2	68.7	--	--	--
BERYLLIUM	1 U	1 U	--	--	--
CADMIUM	1 U	1 U	--	--	--
CALCIUM	19900 J	21500 J	--	--	--
CHROMIUM	1.1 J	1.7 J	--	--	--
COBALT	1 U	1.7	--	--	--
COPPER	3.5	12.7	--	--	--
IRON	450	2970	--	--	--
LEAD	1.3	8.9	--	--	--
MAGNESIUM	2780	3040	--	--	--
MANGANESE	22.3 J	93.6 J	--	--	--
NICKEL	1.3	4.5	--	--	--
POTASSIUM	4600	4760	--	--	--
SELENIUM	5 U	5 U	--	--	--
SILVER	1 U	1 U	--	--	--
SODIUM	4360	4380	--	--	--
THALLIUM	1 U	0.25 J	--	--	--
VANADIUM	5 U	1.1 J	--	--	--
ZINC	4.1	24.7	--	--	--

TABLE 28

SEDIMENT ANALYTICAL DATA - MINES
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-079	SD-080	SD-081	SD-082	SD-083	SD-084	SD-085	SD-090	SD-091
SAMPLE ID	SEC-SD-79	SEC-SD-80	SEC-SD-81	SEC-SD-82	SEC-SD-83	SEC-SD-84	SEC-SD-85	SEC-SD-90	SEC-SD-91
SAMPLE DATE	20180627	20180627	20180626	20180626	20180627	20180627	20180627	20180626	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Mines	Mines	Mines	Mines	Mines	Mines	Mines	Mines	Mines
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6
SEMIVOLATILES (MG/KG)									
1,1-BIPHENYL	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
1,2,4,5-TETRACHLOROBENZENE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
1,4-DIOXANE	0.096 U	0.11 U	0.24 U	0.28 U	0.084 U	0.098 U	0.21 U	0.24 U	0.18 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.47 U	0.54 UJ	1.2 UJ	1.4 UJ	0.41 U	0.48 U	1 U	1.2 UJ	0.9 UJ
2,3,4,6-TETRACHLOROPHENOL	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
2,4,5-TRICHLOROPHENOL	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
2,4,6-TRICHLOROPHENOL	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
2,4-DICHLOROPHENOL	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
2,4-DIMETHYLPHENOL	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
2,4-DINITROPHENOL	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
2,4-DINITROTOLUENE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
2,6-DINITROTOLUENE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
2-CHLORONAPHTHALENE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
2-CHLOROPHENOL	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
2-METHYLNAPHTHALENE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
2-METHYLPHENOL	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
2-NITROANILINE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
2-NITROPHENOL	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
3&4-METHYLPHENOL	0.47 U	0.52 J	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
3,3'-DICHLOROBENZIDINE	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
3-NITROANILINE	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
4,6-DINITRO-2-METHYLPHENOL	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
4-BROMOPHENYL PHENYL ETHER	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
4-CHLORO-3-METHYLPHENOL	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
4-CHLOROANILINE	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 UJ	0.9 U
4-CHLOROPHENYL PHENYL ETHER	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
4-NITROANILINE	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
4-NITROPHENOL	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
ACENAPHTHENE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
ACENAPHTHYLENE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
ACETOPHENONE	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
ANTHRACENE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
ATRAZINE	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
BAP EQUIVALENT-HALFND	0.24 U	0.28 U	0.80746	1.18416	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
BAP EQUIVALENT-POS	0.24 U	0.28 U	0.49941	0.82916	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
BENZALDEHYDE	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	0.19 J	0.9 U
BENZO(A)ANTHRACENE	0.24 U	0.28 U	0.36 J	0.6 J	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
BENZO(A)PYRENE	0.24 U	0.28 U	0.38 J	0.63 J	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
BENZO(B)FLUORANTHENE	0.24 U	0.28 U	0.6 J	0.96	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
BENZO(G,H,I)PERYLENE	0.24 U	0.28 U	0.22 J	0.38 J	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
BENZO(K)FLUORANTHENE	0.24 U	0.28 U	0.61 U	0.35 J	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
BIS(2-CHLOROETHOXY)METHANE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
BIS(2-CHLOROETHYL)ETHER	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
BUTYL BENZYL PHTHALATE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
CAPROLACTAM	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
CARBAZOLE	0.47 UJ	0.54 UJ	1.2 UJ	1.4 UJ	0.41 U	0.48 U	1 U	1.2 UJ	0.9 UJ
CHRYSENE	0.24 U	0.28 U	0.41 J	0.66 J	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
DIBENZO(A,H)ANTHRACENE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
DIBENZOFURAN	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
DIETHYL PHTHALATE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
DIMETHYL PHTHALATE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
DI-N-BUTYL PHTHALATE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
DI-N-OCTYL PHTHALATE	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
FLUORANTHENE	0.47 U	0.54 U	1 J	1.7	0.41 U	0.48 U	1 U	1.2 U	0.9 U
FLUORENE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
HEXACHLOROBENZENE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
HEXACHLOROBUTADIENE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
HEXACHLOROCYCLOPENTADIENE	0.47 UJ	0.54 UJ	1.2 UJ	1.4 UJ	0.41 UJ	0.48 UJ	1 UJ	1.2 UJ	0.9 UJ
HEXACHLOROETHANE	0.24 U	0.28 UJ	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 UJ	0.46 UJ
HIGH MOLECULAR WEIGHT PAHS	0 U	0 U	2.82	5.07	0 U	0 U	0 U	0 U	0 U
INDENO(1,2,3-CD)PYRENE	0.24 U	0.28 U	0.23 J	0.39 J	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
ISOPHORONE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
LOW MOLECULAR WEIGHT PAHS	0 U	0 U	1.52	2.5	0 U	0 U	0 U	0 U	0.17
NAPHTHALENE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
NITROBENZENE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
N-NITROSO-DI-N-PROPYLAMINE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
N-NITROSODIPHENYLAMINE	0.24 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
PENTACHLOROPHENOL	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
PHENANTHRENE	0.24 U	0.28 U	0.52 J	0.8	0.21 U	0.25 U	0.52 U	0.61 U	0.17 J
PHENOL	0.47 U	0.54 U	1.2 U	1.4 U	0.41 U	0.48 U	1 U	1.2 U	0.9 U
PYRENE	0.24 U	0.28 U	0.62	1.1	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
TOTAL PAHS	0 U	0 U	4.34	7.57	0 U	0 U	0 U	0 U	0.17
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K									
2-METHYLNAPHTHALENE	0.0047 U	0.0054 U	0.014	0.015	0.017	0.0021 J	0.0043 J	0.012 U	0.023
ACENAPHTHENE	0.0047 U	0.0054 U	0.019	0.025	0.0014 J	0.00052 J	0.0024 J	0.012 U	0.009 U
ACENAPHTHYLENE	0.0047 U	0.004 J	0.077	0.12	0.0041 U	0.0048 U	0.0071 J	0.0026 J	0.0068 J
ANTHRACENE	0.00078 J	0.0071	0.11	0.17	0.0041 U	0.0031 J	0.0087 J	0.0041 J	0.01
BAP EQUIVALENT-HALFND	0.008321	0.026896	0.53075	0.9188	0.006927	0.016162	0.052908	0.018877	0.05887
BAP EQUIVALENT-POS	0.005948	0.026896	0.53075	0.9188	0.0026	0.013738	0.052908	0.012217	0.05887

TABLE 28

SEDIMENT ANALYTICAL DATA - MINES
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-079	SD-080	SD-081	SD-082	SD-083	SD-084	SD-085	SD-090	SD-091
SAMPLE ID	SEC-SD-79	SEC-SD-80	SEC-SD-81	SEC-SD-82	SEC-SD-83	SEC-SD-84	SEC-SD-85	SEC-SD-90	SEC-SD-91
SAMPLE DATE	20180627	20180627	20180626	20180626	20180627	20180627	20180627	20180626	20180626
DUPLICATE									
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Mines	Mines	Mines	Mines	Mines	Mines	Mines	Mines	Mines
SUBMATRIX	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6	6	6	6	6
BENZO(A)ANTHRACENE	0.0038 J	0.021	0.34	0.61	0.015	0.012	0.033	0.021	0.046
BENZO(A)PYRENE	0.0043 J	0.018	0.37	0.65	0.0041 U	0.01	0.032	0.0083 J	0.038
BENZO(B)FLUORANTHENE	0.0082	0.025	0.48	0.84	0.011	0.018	0.059	0.018	0.07
BENZO(G,H,I)PERYLENE	0.0043 J	0.0094	0.16	0.39	0.0026 J	0.007	0.031	0.012 U	0.016
BENZO(K)FLUORANTHENE	0.0047 U	0.0076	0.14	0.22	0.0041 U	0.0048 U	0.016	0.012 U	0.016
CHRYSENE	0.0083	0.02	0.35	0.6	0.0041 U	0.018	0.048	0.017	0.11
DIBENZO(A,H)ANTHRACENE	0.0047 U	0.003 J	0.05	0.073	0.0041 U	0.0048 U	0.0081 J	0.012 U	0.0071 J
FLUORANTHENE	0.0083	0.046	0.86	1.5 J	0.0072	0.025	0.073	0.16	0.097
FLUORENE	0.0047 U	0.00097 J	0.04	0.059	0.0069	0.0048 U	0.0032 J	0.012 U	0.029
HIGH MOLECULAR WEIGHT PAHS	0.0396	0.144	2.64	4.703	0.0348	0.0882	0.3121	0.0823	0.3871
INDENO(1,2,3-CD)PYRENE	0.0044 J	0.012	0.27	0.48	0.0041 U	0.0072	0.034	0.012 U	0.019
LOW MOLECULAR WEIGHT PAHS	0.01478	0.08007	1.565	2.604	0.0476	0.04572	0.1388	0.1867	0.3078
NAPHTHALENE	0.0047 U	0.0054 U	0.019	0.02	0.0021 J	0.0011 J	0.0034 J	0.012 U	0.015
PENTACHLOROPHENOL	0.0096 U	0.011 U	0.024 U	0.028 U	0.0084 U	0.0098 U	0.021 U	0.024 U	0.018 U
PHENANTHRENE	0.0057	0.022	0.44	0.71	0.03	0.016	0.041	0.02	0.15
PYRENE	0.0063	0.028	0.48	0.84	0.0062	0.016	0.051	0.018	0.065
TOTAL PAHS	0.0083	0.02	0.35	0.6	0.0041	0.018	0.048	0.017	0.11
PESTICIDES (MG/KG)									
4,4'-DDD	0.0048 U	0.0054 U	0.012 R	0.014 U	0.0041 J	0.0012 R	0.01 U	0.012 R	0.009 U
4,4'-DDE	0.00097 R	0.0016 R	0.0036 J	0.0043 J	0.0041 U	0.00096 R	0.01 J	0.0066 J	0.0049 J
4,4'-DDT	0.0048 U	0.0054 U	0.012 U	0.014 U	0.0041 U	0.0027 J	0.0049 J	0.056 J	0.009 U
ALDRIN	0.0025 U	0.00068 J	0.0061 U	0.0071 U	0.0021 U	0.0025 U	0.0052 U	0.0038 R	0.0012 J
ALPHA-BHC	0.0025 U	0.0014 J	0.0061 U	0.0071 U	0.0021 U	0.0025 U	0.0052 U	0.0061 U	0.0011 J
ALPHA-CHLORDANE	0.00083 J	0.0028 U	0.0061 U	0.0011 R	0.00056 J	0.0025 U	0.0049 J	0.014	0.0046 U
BETA-BHC	0.00019 R	0.00043 R	0.0061 U	0.00064 R	0.00032 R	0.0025 U	0.00032 R	0.0061 U	0.00059 R
DELTA-BHC	0.0025 U	0.0028 U	0.0061 U	0.0071 U	0.00062 J	0.0025 U	0.0052 U	0.0017 R	0.00097 J
DIELDRIN	0.00054 J	0.00086 J	0.012 R	0.014 U	0.0041 U	0.00053 R	0.0029 R	0.0043 R	0.00031 R
ENDOSULFAN I	0.0025 U	0.0028 U	0.0012 J	0.0012 J	0.00027 R	0.0025 U	0.0013 R	0.0042 R	0.0046 U
ENDOSULFAN II	0.0048 U	0.0054 U	0.012 U	0.014 U	0.00064 R	0.00038 R	0.0011 R	0.012	0.009 U
ENDOSULFAN SULFATE	0.0013 J	0.00082 J	0.0034 R	0.014 J	0.0017 J	0.0011 R	0.01 U	0.029 J	0.009 U
ENDRIN	0.0006 R	0.0014 J	0.012 U	0.014 R	0.0041 U	0.00044 R	0.0025 R	0.018 R	0.0014 J
ENDRIN ALDEHYDE	0.00016 R	0.0054 U	0.0069 R	0.0063 J	0.0014 J	0.0018 R	0.0054 J	0.03 J	0.009 U
ENDRIN KETONE	0.0048 U	0.001 J	0.0064 J	0.0077 J	0.0029 J	0.0011 J	0.0074 J	0.014	0.006 J
GAMMA-BHC (LINDANE)	0.0025 U	0.00048 J	0.0061 U	0.0035 J	0.0021 U	0.0025 U	0.0052 U	0.0061 U	0.0046 U
GAMMA-CHLORDANE	0.00069 J	0.0026 J	0.0018 R	0.0053 J	0.0021 U	0.00067 R	0.0052 U	0.0026 J	0.00057 R
HEPTACHLOR	0.0025 U	0.0028 U	0.001 J	0.0071 U	0.00036 J	0.00052 R	0.0052 U	0.0023 J	0.0046 U
HEPTACHLOR EPOXIDE	0.00089 J	0.001 R	0.0013 J	0.0017 J	0.00072 J	0.0025 U	0.0015 J	0.0014 R	0.0011 J
METHOXYCHLOR	0.0019 J	0.0043 J	0.061 U	0.071 U	0.0011 R	0.025 U	0.0044 R	0.041 J	0.0034 R
TOXAPHENE	0.25 U	0.28 U	0.61 U	0.71 U	0.21 U	0.25 U	0.52 U	0.61 U	0.46 U
PCBS (MG/KG)									
AROCLOR-1016	0.048 U	0.054 U	0.12 U	0.14 U	0.041 U	0.048 U	--	0.12 U	0.09 U
AROCLOR-1221	0.048 U	0.054 U	0.12 U	0.14 U	0.041 U	0.048 U	0.1 U	0.12 U	0.09 U
AROCLOR-1232	0.048 U	0.054 U	0.12 U	0.14 U	0.041 U	0.048 U	0.1 U	0.12 U	0.09 U
AROCLOR-1242	0.048 U	0.054 U	0.12 U	0.14 U	0.041 U	0.048 U	0.1 U	0.12 U	0.09 U
AROCLOR-1248	0.048 U	0.054 U	0.12 U	0.14 U	0.041 U	0.048 U	0.1 U	0.12 U	0.09 U
AROCLOR-1254	0.048 U	0.054 U	0.12 U	0.14 U	0.041 U	0.048 U	0.1 U	0.12 U	0.09 U
AROCLOR-1260	0.048 U	0.054 U	0.12 U	0.14 U	0.041 U	0.048 U	0.1 U	0.12 U	0.09 U
AROCLOR-1262	0.048 U	0.054 U	0.12 U	0.14 U	0.041 U	0.048 U	0.1 U	0.12 U	0.09 U
AROCLOR-1268	0.048 U	0.054 U	0.12 U	0.14 U	0.041 U	0.048 U	0.1 U	0.12 U	0.09 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U	0 U	0 U	--	0 U	0 U
TOTAL AROCLOR HALFND	0.216	0.243	0.54	0.63	0.1845	0.216	--	0.54	0.405
METALS (MG/KG)									
ALUMINUM	3900	4140	2700 J	1940 J	5170	4780	2960	2180 J	2380 J
ANTIMONY	9.1 U	8 U	10.6 U	8.9 U	6.7 U	8.6 U	10.3 U	13.7 U	13.1 U
ARSENIC	3.7	3.4	8.3	2.4	3.4	7.2	7.1	1.8 J	2.4
BARIUM	51.6	39.7	66	39.9	49.7	84.8	85.6	32.8 J	26 J
BERYLLIUM	0.51 J	0.35 J	0.42 J	0.25 J	0.85	0.69 J	0.53 J	1.9	0.72 J
CADMIUM	0.2 J	0.66 U	0.34 J	0.24 J	0.15 J	0.37 J	0.24 J	0.53 J	1.1 U
CALCIUM	1400	1190	1820	2580	839	5660	2180	6520	1960
CHROMIUM	6.2	5.8	5.7	3.9	13.9	11.7	7	3.3	4
COBALT	8.4	5.1 J	3.6 J	3 J	9.6	9.3	14.2	24.7	7.3 J
COPPER	5.8	6	20.6	15.4	16.1	19.9	25.5	12.2	9.3
IRON	10600	11500	17600	4510	18000	21500	70500	4120	5250
LEAD	12.2	8.6	22.3	14.9	19.8	46	20.3	19.4	7.6
MAGNESIUM	325 J	340 J	331 J	306 J	1520	663 J	411 J	1280	663 J
MANGANESE	403	270	124	76.1	191	391	71.7	2970	126
NICKEL	8.3	5 J	10.2	9.8	22.4	10.3	33.2	115	18.9
POTASSIUM	419 J	511 J	509 J	315 J	1440	811	698 J	689 J	529 J
SELENIUM	5.3 U	4.6 U	6.2 U	5.2 U	3.9 U	5 U	6 U	2.6 J	7.7 U
SILVER	1.5 U	1.3 U	1.8 U	1.5 U	1.1 U	1.4 U	1.7 U	0.5 J	2.2 U
SODIUM	761 U	663 U	885 U	744 U	558 U	719 U	862 U	1150 U	1090 U
THALLIUM	3.8 U	3.3 U	4.4 U	3.7 U	2.8 U	1.1 J	4.3 U	6.2	5.5 U
VANADIUM	9.1	8.9	4.3 J	4.4 J	15.5	10.4	8.6 U	4.2 J	4.6 J
ZINC	47.3	27.5	64.1	49	79.1	109	38.9	108	40.6

TABLE 28

SEDIMENT ANALYTICAL DATA - MINES
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-095	SD-098	SD-099	SD-103	SD-104
SAMPLE ID	SEC-SD-95	SEC-SD-98	SEC-SD-99	SEC-SD-103	SEC-SD-104
SAMPLE DATE	20180627	20180626	20180627	20180628	20180628
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Mines	Mines	Mines	Mines	Mines
SUBMATRIX	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6
SEMIVOLATILES (MG/KG)					
1,1-BIPHENYL	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
1,2,4,5-TETRACHLOROBENZENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
1,4-DIOXANE	0.086 U	0.093 U	0.099 U	0.095 U	0.084 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
2,3,4,6-TETRACHLOROPHENOL	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
2,4,5-TRICHLOROPHENOL	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
2,4,6-TRICHLOROPHENOL	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
2,4-DICHLOROPHENOL	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
2,4-DIMETHYLPHENOL	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
2,4-DINITROPHENOL	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
2,4-DINITROTOLUENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
2,6-DINITROTOLUENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
2-CHLORONAPHTHALENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
2-CHLOROPHENOL	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
2-METHYLNAPHTHALENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
2-METHYLPHENOL	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
2-NITROANILINE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
2-NITROPHENOL	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
3&4-METHYLPHENOL	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
3,3'-DICHLOROBENZIDINE	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
3-NITROANILINE	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
4,6-DINITRO-2-METHYLPHENOL	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
4-BROMOPHENYL PHENYL ETHER	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
4-CHLORO-3-METHYLPHENOL	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
4-CHLOROANILINE	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
4-CHLOROPHENYL PHENYL ETHER	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
4-NITROANILINE	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
4-NITROPHENOL	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
ACENAPHTHENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
ACENAPHTHYLENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
ACETOPHENONE	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
ANTHRACENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
ATRAZINE	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
BAP EQUIVALENT-HALFND	0.20803	0.24 U	0.25 U	0.24 U	0.21 U
BAP EQUIVALENT-POS	0.08593	0.24 U	0.25 U	0.24 U	0.21 U
BENZALDEHYDE	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
BENZO(A)ANTHRACENE	0.078 J	0.24 U	0.25 U	0.24 U	0.21 U
BENZO(A)PYRENE	0.066 J	0.24 U	0.25 U	0.24 U	0.21 U
BENZO(B)FLUORANTHENE	0.12 J	0.24 U	0.25 U	0.24 U	0.21 U
BENZO(G,H,I)PERYLENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
BENZO(K)FLUORANTHENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
BIS(2-CHLOROETHOXY)METHANE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
BIS(2-CHLOROETHYL)ETHER	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
BIS(2-ETHYLHEXYL)PHTHALATE	0.22 U	2.2	0.25 U	0.24 U	0.21 U
BUTYL BENZYL PHTHALATE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
CAPROLACTAM	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
CARBAZOLE	0.42 U	0.46 UJ	0.49 UJ	0.47 UJ	0.41 UJ
CHRYSENE	0.13 J	0.24 U	0.25 U	0.24 U	0.21 U
DIBENZO(A,H)ANTHRACENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
DIBENZOFURAN	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
DIETHYL PHTHALATE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
DIMETHYL PHTHALATE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
DI-N-BUTYL PHTHALATE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
DI-N-OCTYL PHTHALATE	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
FLUORANTHENE	0.19 J	0.077 J	0.49 U	0.47 U	0.41 U
FLUORENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
HEXACHLOROBENZENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
HEXACHLOROBUTADIENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
HEXACHLOROCYCLOPENTADIENE	0.42 UJ	0.46 UJ	0.49 UJ	0.47 UJ	0.41 UJ
HEXACHLOROETHANE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
HIGH MOLECULAR WEIGHT PAHS	0.504	0.079	0 U	0 U	0 U
INDENO(1,2,3-CD)PYRENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
ISOPHORONE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
LOW MOLECULAR WEIGHT PAHS	0.36	0.171	0 U	0 U	0 U
NAPHTHALENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
NITROBENZENE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
N-NITROSO-DI-N-PROPYLAMINE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
N-NITROSODIPHENYLAMINE	0.22 U	0.24 U	0.25 U	0.24 U	0.21 U
PENTACHLOROPHENOL	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
PHENANTHRENE	0.17 J	0.094 J	0.25 U	0.24 U	0.21 U
PHENOL	0.42 U	0.46 U	0.49 U	0.47 U	0.41 U
PYRENE	0.11 J	0.079 J	0.25 U	0.24 U	0.21 U
TOTAL PAHS	0.864	0.25	0 U	0 U	0 U
SEMIVOLATILE SELECTIVE ION MONITORING (MG/K					
2-METHYLNAPHTHALENE	0.037	0.017	0.0049 U	0.0055	0.0041 U
ACENAPHTHENE	0.0056	0.0055	0.0049 U	0.0047 U	0.0041 U
ACENAPHTHYLENE	0.024	0.0046 U	0.0049 U	0.0047 U	0.0015 J
ANTHRACENE	0.026	0.014	0.00059 J	0.00096 J	0.0012 J
BAP EQUIVALENT-HALFND	0.10673	0.054403	0.0049 U	0.00615	0.006054
BAP EQUIVALENT-POS	0.10673	0.054403	0.0049 U	0.001192	0.003984

TABLE 28

SEDIMENT ANALYTICAL DATA - MINES
SHAFFER EQUIPMENT/ARBUCKLE CREEK AREA SITE
MINDEN, WEST VIRGINIA

LOCATION	SD-095	SD-098	SD-099	SD-103	SD-104
SAMPLE ID	SEC-SD-95	SEC-SD-98	SEC-SD-99	SEC-SD-103	SEC-SD-104
SAMPLE DATE	20180627	20180626	20180627	20180628	20180628
DUPLICATE					
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	SD	SD	SD	SD	SD
EVENT	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation	Remedial Investigation
AREA	Mines	Mines	Mines	Mines	Mines
SUBMATRIX	NA	NA	NA	NA	NA
TOP DEPTH	0	0	0	0	0
BOTTOM DEPTH	6	6	6	6	6
BENZO(A)ANTHRACENE	0.081	0.044	0.0049 U	0.0034 J	0.0028 J
BENZO(A)PYRENE	0.07	0.038	0.0049 U	0.0047 U	0.0027 J
BENZO(B)FLUORANTHENE	0.1	0.052	0.0049 U	0.0084	0.0069
BENZO(G,H,I)PERYLENE	0.036	0.011	0.0049 U	0.0024 J	0.003 J
BENZO(K)FLUORANTHENE	0.031	0.014	0.0049 U	0.0047 U	0.0041 U
CHRYSENE	0.12	0.063	0.0049 U	0.012	0.0048
DIBENZO(A,H)ANTHRACENE	0.014	0.0053	0.0049 U	0.0047 U	0.0041 U
FLUORANTHENE	0.17	0.076	0.0049 U	0.0086	0.0041
FLUORENE	0.0063	0.017	0.003 J	0.0016 J	0.0041 U
HIGH MOLECULAR WEIGHT PAHS	0.587	0.2963	0.0022	0.0339	0.0272
INDENO(1,2,3-CD)PYRENE	0.042	0.013	0.0049 U	0.0047 U	0.0031 J
LOW MOLECULAR WEIGHT PAHS	0.3919	0.2035	0.00359	0.02816	0.0103
NAPHTHALENE	0.01	0.008	0.0049 U	0.0047 U	0.0041 U
PENTACHLOROPHENOL	0.0086 U	0.0012 J	0.0099 U	0.0095 U	0.0084 U
PHENANTHRENE	0.15	0.083	0.0049 U	0.017	0.0035 J
PYRENE	0.093	0.056	0.0022 J	0.0077	0.0039 J
TOTAL PAHS	0.12	0.063	0.0049	0.012	0.0048
PESTICIDES (MG/KG)					
4,4'-DDD	0.0066	0.0046 U	0.0004 R	0.00063 R	0.0042 U
4,4'-DDE	0.0043 U	0.0007 J	0.0049 U	0.00076 R	0.00042 J
4,4'-DDT	0.026	0.0046 U	0.0049 U	0.0047 U	0.0042 U
ALDRIN	0.00058 J	0.00025 J	0.0025 U	0.0024 U	0.0022 U
ALPHA-BHC	0.0022 U	0.0024 U	0.0025 U	0.0024 U	0.0022 U
ALPHA-CHLORDANE	0.0022 U	0.00064 R	0.0025 U	0.0024 U	0.0022 U
BETA-BHC	0.0022 U	0.00025 R	0.0025 U	0.0024 U	0.00033 R
DELTA-BHC	0.00063 J	0.0024 U	0.00063 J	0.00063 J	0.0022 U
DIELDRIN	0.013	0.0046 U	0.0049 U	0.00067 J	0.0042 U
ENDOSULFAN I	0.0022 U	0.00052 R	0.0025 U	0.0024 U	0.0022 U
ENDOSULFAN II	0.00073 R	0.0046 U	0.0049 U	0.0047 U	0.0042 U
ENDOSULFAN SULFATE	0.0056 R	0.00079 J	0.0049 U	0.0016 J	0.00054 J
ENDRIN	0.0044 R	0.0046 R	0.00032 R	0.00046 R	0.00093 J
ENDRIN ALDEHYDE	0.013	0.0046 U	0.00033 R	0.0007 R	0.00058 R
ENDRIN KETONE	0.03	0.0046 U	0.0049 U	0.00055 J	0.00043 J
GAMMA-BHC (LINDANE)	0.00058 R	0.0009 J	0.0025 U	0.0024 U	0.0022 U
GAMMA-CHLORDANE	0.0033 R	0.0017 R	0.0025 U	0.00052 J	0.0012 J
HEPTACHLOR	0.00033 R	0.00024 R	0.0025 U	0.0024 U	0.0022 U
HEPTACHLOR EPOXIDE	0.0018 R	0.00062 J	0.00045 J	0.001 J	0.00058 J
METHOXYCHLOR	0.0047 R	0.024 U	0.025 U	0.0015 R	0.0015 J
TOXAPHENE	0.22 U	0.24 U	0.25 U	0.24 U	0.22 U
PCBS (MG/KG)					
AROCLOR-1016	0.043 U	0.046 U	0.049 U	0.047 U	0.042 U
AROCLOR-1221	0.043 U	0.046 U	0.049 U	0.047 U	0.042 U
AROCLOR-1232	0.043 U	0.046 U	0.049 U	0.047 U	0.042 U
AROCLOR-1242	0.043 U	0.046 U	0.049 U	0.047 U	0.042 U
AROCLOR-1248	0.043 U	0.046 U	0.049 U	0.047 U	0.042 U
AROCLOR-1254	0.043 U	0.046 U	0.049 U	0.047 U	0.042 U
AROCLOR-1260	0.043 U	0.046 U	0.049 U	0.047 U	0.042 U
AROCLOR-1262	0.043 U	0.046 U	0.049 U	0.047 U	0.042 U
AROCLOR-1268	0.043 U	0.046 U	0.049 U	0.047 U	0.042 U
TOTAL AROCLOR	0 U	0 U	0 U	0 U	0 U
TOTAL AROCLOR HALFND	0.1935	0.207	0.2205	0.2115	0.189
METALS (MG/KG)					
ALUMINUM	1850	2420 J	4930	3520	2950
ANTIMONY	7.3 U	8.3 U	6.7 U	7.5 U	7.1 U
ARSENIC	8.6	2.8	14.8	3.2	2.9
BARIUM	26.5	32.2	36.8	33	58.4
BERYLLIUM	0.95	0.98	0.91	1.5	0.63
CADMIUM	0.17 J	0.29 J	0.38 J	0.25 J	0.59 U
CALCIUM	699	2090	508 J	917	649
CHROMIUM	6	5.2	36	8.6	6.2
COBALT	3 J	11.9	5 J	9.8	8.9
COPPER	16.7	57.2	5.9	12	8.4
IRON	6030	7860	104000	19500	13800
LEAD	7.3	84.8	34.2	10.5	13.5
MAGNESIUM	720	576 J	242 J	769	489 J
MANGANESE	38	258	233	187	249
NICKEL	12	30.3	10.6	36.8	16.2
POTASSIUM	483 J	393 J	766	560 J	408 J
SELENIUM	4.2 U	4.8 U	3.9 U	4.4 U	4.2 U
SILVER	1.2 U	1.4 U	1.1 U	1.2 U	1.2 U
SODIUM	244 J	691 U	555 U	623 U	593 U
THALLIUM	3 U	3.5 U	1.2 J	3.1 U	3 U
VANADIUM	11	6 J	33.6	5.8 J	6.1
ZINC	27.4	60	35.5	88.6	41.6