

# **Appendix A**

## **Pre-Design Investigation Supporting Documents**



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**Appendix A-1**  
**First Phase Pre-Design Investigation**  
**Lab Reports**

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**First Phase Pre-Design Investigation**  
**Data Validation Memo**





**DATA VALIDATION REPORT**

**SAN JACINTO RIVER WASTE PITS  
NORTH IMPOUNDMENT SAMPLING**

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February 4, 2019

**Approved for Release:**

A handwritten signature in black ink that reads "Christina Mott Frans". The signature is written in a cursive style.

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# PROJECT NARRATIVE

## Basis for Data Validation

This report summarizes the results of full and summary validation (EPA Stage 4 and Stage 2B) performed on sediment sample data for the San Jacinto Waste Pits Sampling. A complete list of samples is provided in the **Sample Index**.

Samples were analyzed by ALS Environmental, Houston, Texas, ALS Environmental, Kelso, Washington, and ALS Environmental, Holland, Michigan. The analytical methods and EcoChem project chemists are listed below.

ANALYSIS	METHOD	PRIMARY REVIEW	SECONDARY REVIEW
Dioxin/Furan Compounds	EPA 1613B	C. Ransom & E. Clayton	C. Frans & C. Ransom
TCLP Volatile Organic Compounds	SW 1311/8260C	E. Clayton	C. Ransom
TCLP Semivolatile Organic Compounds	SW 1311/8270D		
TCLP Organochlorine Pesticide Compounds	SW 1311/8081B		
TCLP Herbicides Compounds	SW 1311/8151A		
TCLP Metals	SW6010C/7470A		
Reactive Sulfide	SW 9034M		
Flash Point	SW 1020A		
pH	SW 9045D		
Reactive Cyanide	SW 7.3.3.2		

The data were reviewed using guidance and quality control criteria documented in the analytical methods and the following project and guidance documents:

- *Pre-Design Investigation Quality Assurance Project Plan San Jacinto River Waste Pits Superfund Site* (Integral/Anchor QEA, August 2018).
- *USEPA National Functional Guidelines for Chlorinated Dibenzo-p-Dioxins (CDDs) and Chlorinated Dibenzofurans (CDFs) Data Review* (USEPA 2011).
- *USEPA National Functional Guidelines for Organic Data Review* (USEPA 2008 & 2014).
- *USEPA National Functional Guidelines for Inorganic Data Review* (USEPA 2010).

EcoChem’s goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. If values are assigned an R, the data are to be rejected and should not be used for any site evaluation purposes. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Data qualifier definitions, reason codes, and validation criteria are included as **APPENDIX A**. A Qualified Data Summary Table is included in **APPENDIX B**. Data Validation Worksheets and project associated communications will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted with this report.

**Sample Index**  
**San Jacinto Waste Pits**  
**North Impoundments**

SDG	SAMPLE ID	LABORATORY ID	Dioxins/Furans	Solids	TCLP VOCs	TCLP SVOCs	TCLP OCPs	TCLP Herbicides	TCLP Metals	Reactive Cyanide	Reactive Sulfide	pH	Flash Point
E1801018	SL0500	E1801018-001	✓	✓									
	SL0501	E1801018-002	✓	✓									
	SL0502	E1801018-003	✓	✓									
	SL0503	E1801018-004	✓	✓									
	SL0504	E1801018-005	✓	✓									
	SL0505	E1801018-006	✓	✓									
	SL0506	E1801018-007	✓	✓									
	SL0507	E1801018-008	✓	✓									
	SL0508	E1801018-009	✓	✓									
E1801038	SL0519	E1801038-001	✓	✓									
	SL0520	E1801038-002	✓	✓									
	SL0521	E1801038-003	✓	✓									
	SL0522	E1801038-004	✓	✓									
	SL0523	E1801038-005	✓	✓									
	SL0524	E1801038-006	✓	✓									
	SL0525	E1801038-007	✓	✓									
	SL0526	E1801038-008	✓	✓									
	SL0527	E1801038-009	✓	✓									
	SL0528	E1801038-010	✓	✓									
	SL0529	E1801038-011	✓	✓									
	SL0530	E1801038-012	✓	✓									
	SL0531	E1801038-013	✓	✓									
	SL0532	E1801038-014	✓	✓									
	SL0533	E1801038-015	✓	✓									
	SL0534	E1801038-016	✓	✓									
	SL0535	E1801038-017	✓	✓									
	SL0536	E1801038-018	✓	✓									
	SL0537	E1801038-019	✓	✓									
SL0515	E1801038-020	✓	✓										
SL0516	E1801038-021	✓	✓										
SL0517	E1801038-022	✓	✓										

**Sample Index**  
**San Jacinto Waste Pits**  
**North Impoundments**

SDG	SAMPLE ID	LABORATORY ID	Dioxins/Furans	Solids	TCLP VOCs	TCLP SVOCs	TCLP OCPs	TCLP Herbicides	TCLP Metals	Reactive Cyanide	Reactive Sulfide	pH	Flash Point
E1801038	FW0050	E1801038-023	✓	✓									
E1801040	SL0509	E1801040-001	✓	✓									
	SL0510	E1801040-002	✓	✓									
	SL0511	E1801040-003	✓	✓									
	SL0512	E1801040-004	✓	✓									
	SL0513	E1801040-005	✓	✓									
	SL0514	E1801040-006	✓	✓									
	SL0518	E1801040-007	✓	✓									
E1801046	SL0539	E1801046-001	✓	✓									
	SL0540	E1801046-002	✓	✓									
	SL0541	E1801046-003	✓	✓									
	SL0542	E1801046-004	✓	✓									
	SL0543	E1801046-005	✓	✓									
	SL0544	E1801046-006	✓	✓									
	FW0051	E1801046-007	✓	✓									
E1801055	SL0538	E1801055-001	✓	✓									
	SL0545	E1801055-002	✓	✓									
	SL0546	E1801055-003	✓	✓									
	SL0549	E1801055-004	✓	✓									
	SL0550	E1801055-005	✓	✓									
	SL0551	E1801055-006	✓	✓									
	SL0552	E1801055-008	✓	✓									
E1801057	SL0553	E1801057-001	✓	✓									
	SL0556	E1801057-004	✓	✓									
	SL0557	E1801057-005	✓	✓									
	SL0558	E1801057-006	✓	✓									
	SL0559	E1801057-007	✓	✓									
	SL0560	E1801057-008	✓	✓									
E1801065	SL0580	E1801065-001	✓	✓									
	SL0581	E1801065-002	✓	✓									
	SL0582	E1801065-003	✓	✓									
	SL0583	E1801065-004	✓	✓									

**Sample Index**  
**San Jacinto Waste Pits**  
**North Impoundments**

SDG	SAMPLE ID	LABORATORY ID	Dioxins/Furans	Solids	TCLP VOCs	TCLP SVOCs	TCLP OCPs	TCLP Herbicides	TCLP Metals	Reactive Cyanide	Reactive Sulfide	pH	Flash Point	
E1801065	SL0584	E1801065-005	✓	✓										
	SL0585	E1801065-006	✓	✓										
	SL0586	E1801065-007	✓	✓										
	SL0587	E1801065-008	✓	✓										
	SL0588	E1801065-009	✓	✓										
	SL0589	E1801065-010	✓	✓										
	SL0570	E1801065-011	✓	✓										
	SL0561	E1801065-012	✓	✓										
	SL0562	E1801065-013	✓	✓										
	SL0563	E1801065-014	✓	✓										
	SL0564	E1801065-015	✓	✓										
	SL0565	E1801065-016	✓	✓										
	SL0566	E1801065-017	✓	✓										
	SL0567	E1801065-018	✓	✓										
	SL0568	E1801065-019	✓	✓										
	SL0569	E1801065-020	✓	✓										
	SL0571	E1801065-021	✓	✓										
	SL0572	E1801065-022	✓	✓										
	SL0573	E1801065-023	✓	✓										
	SL0574	E1801065-024	✓	✓										
	SL0575	E1801065-025	✓	✓										
	SL0576	E1801065-026	✓	✓										
	SL0577	E1801065-027	✓	✓										
	SL0578	E1801065-028	✓	✓										
	SL0579	E1801065-029	✓	✓										
		FW0052	E1801065-030	✓	✓									
		FW0053	E1801065-031	✓	✓									
	E1801105	SL0590	E1801105-001	✓	✓									
SL0591		E1801105-002	✓	✓										
SL0592		E1801105-003	✓	✓										
SL0593		E1801105-004	✓	✓										
E1900031	SL0556	E1900031-001	✓	✓										

**Sample Index**  
**San Jacinto Waste Pits**  
**North Impoundments**

SDG	SAMPLE ID	LABORATORY ID	Dioxins/Furans	Solids	TCLP VOCs	TCLP SVOCs	TCLP OCPs	TCLP Herbicides	TCLP Metals	Reactive Cyanide	Reactive Sulfide	pH	Flash Point
E1900031	SL0557	E1900031-002	✓	✓									
	SL0558	E1900031-003	✓	✓									
K1811438	SL0547	K1811438-001		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	SL0554	K1811438-002		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
K1812382	SL0594	K1812382-001		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

**DATA VALIDATION REPORT**  
**San Jacinto North Impoundments**  
**Dioxin/Furan Compounds by EPA 1613B**

This report documents the review of analytical data from the analyses of soil samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by ALS Environmental, Houston, Texas. Refer to the **Sample Index** for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
E1801018	9 Soil	EPA Stage 2B
E1801020	1 Filter Blank	EPA Stage 2B
E1801038	22 Soil, 1 Filter Wipe	EPA Stage 2B (batch 326304) EPA Stage 4 (batch 326368)
E1801040	7 Soil	EPA Stage 4
E1801046	6 Soil, 1 Filter Wipe	EPA Stage 2B
E1801055	7 Soil	EPA Stage 2B
E1801057	6 Soil	EPA Stage 2B
E1801065	29 Soil, 2 Filter Wipe	EPA Stage 2B
E1801105	4 Soil	EPA Stage 2B
E1900031	3 Soil	EPA Stage 4

**DATA PACKAGE COMPLETENESS**

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

**SDG E1801105:** The data package contained the wrong ICAL. The correct ICAL from 09/25/18 on instrument HRMS-08 was taken from SDG E1801065. No further action was taken.

**EDD TO HARDCOPY VERIFICATION**

Ten percent (10%) of the results in the laboratory EDD were verified by comparison to the laboratory data package.

**SDG E1801105:** The laboratory sample IDs do not match the chain-of-custody (COC). For example: Sample SL0590 was logged in as SLO 0590. Sample IDs are correct in the EDD; no action was taken.



## TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
✓	System Performance and Resolution Checks	1	Field Duplicate Samples
✓	Initial Calibration (ICAL)	✓	Target Analyte List
✓	Calibration Verification	1	Reporting Limits
2	Laboratory Blanks	1	Reported Results
1	Field Blanks	2	Compound Identification
2	Labeled Compound Recovery	2	Compound Quantitation
2	Laboratory Control Samples (LCS/LCSD)	1	Calculation Verification

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control results are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

### Sample Receipt, Preservation, and Holding Times

Guidance documents state that the cooler temperature upon receipt at the laboratory should be between 0°C and 6°C.

**SDG E1801105:** The cooler temperature was less than the lower control limit, at -1.8°C. Samples were not affected by the temperature outlier; no action was taken.

### Laboratory Blanks

To assess the impact of any blank contaminant on the reported sample results, an action level was established at five times (5x) the concentration reported in the blank. If a contaminant was reported in an associated field sample and the concentration was less than the action level, the result was qualified as not detected (U-7). No action was taken if the sample result was greater than the action level, or for non-detected results. Analytes reported as an "estimated maximum possible concentration" (EMPC) are considered to be false positives. No action levels were established for these analytes. Total homolog groups were also not evaluated.

Method blanks were analyzed at the appropriate frequency. Several analytes were detected in the method blanks; however, only the following outliers resulted in qualification of data:

Blank ID	Batch	SDG	Analyte	Samples Qualified	Qualifier
EQ1800468-01	326304	E1801038	1,2,3,4,7,8-HxCDF	SL0525, SL0529, SL0533, SL0535	U-7
EQ1800467-01	326300		OCDF	FW0050	U-7
EQ1800498-01	327579	E1801065	1,2,3,7,8-PeCDD	SL0564, SL0566, SL0567	U-7
EQ1800500-01	327661		123478-HxCDD	SL0577	U-7
			123678-HxCDD	SL0577	U-7
EQ1800515-01	328369	E1801105	OCDF	SL0592	U-7
EQ1900021-01	329897	E1900031	2,3,4,7,8-PeCDF	SL0557	U-7

## Field Blanks

Filter wipes were submitted as field blanks. The filter wipe amounts of total pg were converted to ng/kg in order to compare them to the field samples concentrations. This was done using conversion factors 32 oz (two 16 oz jars collected for each sample), 29.57 cc/oz, and 1.6 g/cc. Any positive results remaining in the filter wipes after method blank evaluation were used to evaluate the potential impact of field contamination on the samples. Action levels were established at 5x the amount reported for the filter wipes. Positive results in the associated samples that were less than the action levels were qualified as not-detected (U-6).

**SDG E1801020:** One filter blank, FB001 was submitted. This wipe blank is associated with all wipe samples. After method blank evaluation OCDD and 1,2,3,6,7,8-HxCDF were remained. The associated filter wipe results for these compounds were either greater than the action levels or were not-detected. No qualification of data was necessary.

**SDG E1801038:** One filter wipe, FW0050 was submitted. This filter wipe is associated with all samples collected 11/6/18 through 11/9/18. These samples are reported in SDGs E1801018, E1801038, and E1801040. After qualification based on method blank contamination, positive results remained for 1,2,3,4,6,7,8-HpCDD and OCDD. All associated sample results were either greater than the action levels or were not-detected. No qualification of data was necessary.

**SDG E1801046:** One filter wipe, FW0051, was submitted. This filter wipe is associated with all samples collected 11/10/18 through 11/12/18. These samples are reported in SDGs E1801038 and E1801046. There were positive results for 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, and OCDF. All associated sample results were either greater than the action levels or were not-detected. No qualification of data was necessary.

**SDG E1801065:** Two filter wipes were submitted: FW0052 and FW0053. Filter wipe FW0052 is associated with all samples collected 11/14/18 through 11/17/18. These samples are in SDGs E1801055, E1801057, and E1801065. There was a positive result for 2,3,7,8-TCDF in this blank. All associated sample results were either greater than the action levels or were not-detected. No qualification of data was necessary.

Filter wipe FW0053 is associated with all samples collected on 11/18 and 11/19/18. These samples are in SDG E1801065. There was a positive result for 1,2,3,4,6,7,8-HxCDF. All associated sample results were either greater than the action levels or were not-detected. No qualification of data was necessary.

## Labeled Compound Recovery

Isotope-stable labeled compounds were added to each field and QC sample. With the following exceptions, the percent recovery (%R) values were within the method acceptance criteria.

SDG	Sample	Labeled Compound Outlier	Bias	Qualifier
E1801038	SL0520	13C-2,3,7,8-TCDF	Low	UJ-13L
		13C-2,3,7,8-TCDD	Low	UJ-13L

SDG	Sample	Labeled Compound Outlier	Bias	Qualifier
E1801038	SL0526	13C-2,3,7,8-TCDF	Low	J-13L
		13C-2,3,7,8-TCDD	Low	J-13L
	SL0529	13C-2,3,7,8-TCDF	Low	J-13L
	SL0531	13C-2,3,7,8-TCDF	Low	UJ-13L
E1801038	SL0533	13C-2,3,7,8-TCDF	Low	UJ-13L
	SL0534	13C-2,3,7,8-TCDF	Low	J-13L
		13C-123678HxCDF	Low	UJ-13L
E1801040	SL0509	13C-OCDD	Low	J-13L
	SL0513	13C-1,2,3,4,7,8,9-HpCDF	Low	UJ-13L
E1801065	SL0586	13C-2,3,7,8-TCDD	Low	UJ-13L
	SL0563	13C-2,3,7,8-TCDD	Low	J-13L
		13C-1,2,3,4,7,8-HxCDD	Low	UJ-13L
	SL0569	13C-2,3,7,8-TCDD	Low	J-13L

### Laboratory Control Samples

Laboratory control sample/Laboratory control sample duplicate (LCS/LCSD) samples were analyzed at the proper frequency. With the following exceptions, recovery values and RPD values were within the control limits.

**SDG E1801038:** For Batch 326304, the LCS %R value for OCDF was greater than the upper control limit. The LCSD %R value was acceptable; no action was taken for a single outlier. In addition, the RPD value was greater than the control limit. All positive results for OCDF in the associated samples were estimated (J-9).

**SDGs E1801046 & E1801065:** For Batch 327660, the LCS %R value for 1,2,3,4,6,7,8-HpCDD was less than the lower control limit. The LCSD %R value was acceptable; no action was taken on this basis.

### Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) samples are not required by the method and were not analyzed. Accuracy and precision were evaluated using the labeled compound and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) results.

### Field Duplicates

The relative percent difference (RPD) control limit is 50% for results greater than 5x the reporting limit (RL). For results less than 5x the RL, the difference between the sample and duplicate must be less than 2x the RL.

No qualifiers were applied based on field duplicate precision outliers. However, data users should take field precision into account when interpreting sample data. Field duplicate pairs and any outliers are noted below:

SDG	Field Duplicate Set	Compound	Outlier Type
E1801038	SL0534/SL0537	2,3,7,8-TCDF	Diff >2xRL
		Total TCDF	Diff >2xRL
E1801040	SL0509/SL0518		No outliers
E1801065	SL0584/SL0589	1,2,3,4,6,7,8-HpCDF	Diff >2xRL
		2,3,7,8-TCDD	87% RPD
		2,3,7,8-TCDF	106% RPD
		OCDF	110% RPD
		Total HpCDF	103% RPD
		Total HxCDF	Diff >2xRL
		Total TCDD	Diff >2xRL
		Total TCDF	97% RPD
	SL0563/SL0570	1,2,3,4,7,8,9-HpCDF	Diff >2xRL
		1,2,3,4,7,8-HxCDD	58% RPD
		1,2,3,6,7,8-HxCDD	62% RPD
		1,2,3,7,8,9-HxCDD	Diff >2xRL
		1,2,3,7,8-PeCDF	63% RPD
		2,3,4,7,8-PeCDF	52% RPD
		2,3,7,8-TCDD	58% RPD
		2,3,7,8-TCDF	61% RPD
		Total HxCDD	62% RPD
		Total PeCDD	Diff >2xRL

## Reported Results

Reporting limits were adjusted for percent solids, starting sample size, and required dilutions. Non-detected results were reported as ND at the reporting limit (RL).

## Compound Identification

The laboratory assigned K-flags to results where a peak was detected but did not meet ion ratio quantitation criteria. The reported values cannot be considered as positive identifications for these analytes. These results were considered potential false positives or estimated maximum possible concentrations (EMPC) and were qualified as not detected (U-25) at the reported values.

The method requires the confirmation of 2,3,7,8-TCDF using an alternate GC column as the DB-5 column that is typically used cannot fully separate 2,3,7,8-TCDF from closely eluting non-target TCDF isomers. The laboratory did not perform a second column confirmation; however, the laboratory uses a DB-5MSUI column. This column provides adequate resolution of the TCDF isomers as indicated by the acceptable peak to valley ratios. Since the 2,3,7,8-TCDF resolution was acceptable, no action was necessary.

## Compound Quantitation

**SDG E1801046:** The result for 1,2,3,4,6,7,8-HpCDF in Sample SL0544 was flagged "P" by the laboratory indicating chlorodiphenyl ether interference. This result was estimated (J-23).

*SDG E1801055:* The result for 1,2,3,4,6,7,8-HpCDF in Sample SL0551 was flagged "P" indicating chlorodiphenyl ether interference. This result was also reported as an EMPC, so was estimated (UJ-23).

*SDG E1801065:* The result for 1,2,3,4,6,7,8-HpCDF in Sample SL0574 was flagged "P" indicating chlorodiphenyl ether interference. This result was estimated (J-23).

### **Calculation Verification**

*SDGs E1801040, E1900031:* Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

### **OVERALL ASSESSMENT**

As determined by this evaluation, the laboratory performed an acceptable modification of the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by labeled compound and LCS/LCSD %R values and precision was acceptable as demonstrated by the LCS/LCSD and field duplicate RPD values.

Detection limits were elevated due to ion ratio outliers and method blank contamination. Results were estimated due to chlorodiphenyl ether interferences, labeled compound recovery outliers, and an LCS/LCSD RPD outlier.

All data, as qualified, are acceptable for use.

**DATA VALIDATION REPORT**  
**San Jacinto North Impoundments**  
**TCLP Volatile Organic Compounds - Method SW8260C**

This report documents the review of analytical data from the analyses of TCLP leachates and the associated laboratory quality control (QC) samples. Samples were analyzed by ALS Environmental, Kelso, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
K1811438	2 TCLP Leachate	EPA Stage 4
K1812382	1 TCLP Leachate	EPA Stage 2B

**DATA PACKAGE COMPLETENESS**

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

**EDD TO HARDCOPY VERIFICATION**

Ten percent (10%) of the results in the laboratory EDD were verified by comparison to the laboratory data package.

**TECHNICAL DATA VALIDATION**

The QC requirements that were reviewed are listed below.

1	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
✓	GC/MS Instrument Performance (Tune)	1	Field Duplicates
✓	Initial Calibration (ICAL)	✓	Internal Standards
✓	Continuing Calibration (CCAL)	✓	Target Analyte List
✓	Laboratory Blanks	✓	Reporting Limits
1	Field Blanks	✓	Compound Identification
✓	Surrogate Compounds	✓	Reported Results
2	Laboratory Control Samples (LCS)	1	Calculation Verification

*✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.*

*1 Quality control outliers are discussed below, but no data were qualified.*

*2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

## **Sample Receipt, Preservation, and Holding Times**

Guidance documents state that the cooler temperature upon receipt at the laboratory should be between 0°C and 6°C.

*SDG K1811438:* One cooler temperature was less than the lower control limit, at -5.5°C. Samples were not affected by the temperature outlier; no action was taken.

## **Field Blanks**

Field blanks were not submitted with this sampling event.

## **Laboratory Control Samples**

Laboratory control samples (LCS) were analyzed at the required frequency of one per batch of 20 or fewer samples. With the exception noted below, the spike recoveries were within the laboratory control limits.

*SDG K1811438:* The LCS recovery for 2-butanone (MEK) was less than the lower control limit; associated results were estimated (UJ-10L) to indicate a potential low bias.

## **Matrix Spike/Matrix Spike Duplicates**

*SDG K1811438:* No matrix spike/matrix spike duplicates were analyzed. Accuracy was evaluated using the surrogate and LCS recoveries. Precision could not be assessed.

*SDG K1812382:* A matrix spike duplicate was not analyzed. Precision could not be assessed.

## **Field Duplicates**

No field duplicates were submitted.

## **Calculation Verification**

*SDG K1811438:* Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

## **OVERALL ASSESSMENT**

As determined by this evaluation, the laboratory followed the specified analytical method. With the exception noted above, accuracy was acceptable as demonstrated by the surrogate, laboratory control sample and matrix spike recoveries. There were no replicate analyses; precision could not be assessed.

Data were estimated due to an LCS recovery outlier.

All data, as qualified, are acceptable for use.

**DATA VALIDATION REPORT**  
**San Jacinto North Impoundments**  
**TCLP Semi-Volatile Organic Compounds by 8270D**

This report documents the review of analytical data from the analyses of TCLP leachates and the associated laboratory quality control (QC) samples. Samples were analyzed by ALS Environmental, Kelso, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
K1811438	2 TCLP leachate	EPA Stage 4
K1812382	1 TCLP leachate	EPA Stage 2B

**DATA PACKAGE COMPLETENESS**

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

**EDD TO HARDCOPY VERIFICATION**

Ten percent (10%) of the results in the laboratory EDD were verified by comparison to the laboratory data package.

**SDG K1811438:** The field sample summary forms reported an extraction date of 1/3/18. This should be 1/3/19.

**TECHNICAL DATA VALIDATION**

The QC requirements that were reviewed are listed below.

<b>2</b>	Sample Receipt, Preservation, and Holding Times	<b>1</b>	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
✓	Tune	<b>1</b>	Field Duplicates
✓	Initial Calibration	✓	Internal Standards
✓	Continuing Calibration	✓	Target Analyte List
✓	Laboratory Blanks	✓	Reporting Limits
<b>1</b>	Field Blanks	✓	Reported Results
✓	Labeled Compounds/ Surrogate Compounds	<b>1</b>	Compound Identification
✓	Laboratory Control Sample (LCS)		

✓ **Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.**

<sup>1</sup> **Quality control results are discussed below, but no data were qualified.**

<sup>2</sup> **Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.**



## **Sample Receipt, Preservation, and Holding Times**

Guidance documents state that the cooler temperature upon receipt at the laboratory should be between 0°C and 6°C.

*SDG K1811438:* One cooler temperature was less than the lower control limit, at -5.5°C. Samples were not affected by the temperature outlier; no action was taken.

Leachates for both field samples were extracted for SVOC analysis after the 7-day holding time from leaching to extraction. There were no target analytes detected in these samples; detection limits were estimated (UJ-1).

## **Field Blanks**

No field blanks were submitted.

## **Matrix Spike/Matrix Spike Duplicates**

*SDG K1811438:* No matrix spike/matrix spike duplicates were analyzed. Accuracy was evaluated using the surrogate and LCS recoveries. Precision could not be assessed for this SDG.

*SDG K1812382:* The matrix spike/matrix spike duplicate (MS/MSD) analyses were performed using Sample SL0594; all recoveries and RPD values were in control.

## **Field Duplicates**

No field duplicates were submitted.

## **Calculation Verification**

*SDG K1811438:* Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

## **OVERALL ASSESSMENT**

As was determined by this evaluation, the laboratory performed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample, and MS/MSD recoveries. Precision was also acceptable as demonstrated by the MS/MSD relative percent difference values.

Results were estimated due to exceeded holding times.

All data, as qualified, are acceptable for use.

# DATA VALIDATION REPORT

## San Jacinto North Impoundments

### TCLP Chlorinated Pesticides by 8081B

This report documents the review of analytical data from the analyses of TCLP leachates and the associated laboratory quality control (QC) samples. Samples were analyzed by ALS Environmental, Kelso, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
K1811438	2 TCLP Leachate	EPA Stage 4
K1812382	1 TCLP Leachate	EPA Stage 2B

#### DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

**SDG K1811438:** The initial calibration quantitation reports were missing from the data package. The laboratory was contacted and provided the missing documentation.

#### EDD TO HARDCOPY VERIFICATION

Ten percent (10%) of the results in the laboratory EDD were verified by comparison to the laboratory data package.

#### TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

<b>1</b>	Sample Receipt, Preservation, and Holding Times	<b>1</b>	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
✓	Tune	<b>1</b>	Field Duplicates
✓	Initial Calibration	✓	Internal Standards
✓	Continuing Calibration	✓	Target Analyte List
✓	Laboratory Blanks	<b>1</b>	Reporting Limits
<b>1</b>	Field Blanks	✓	Reported Results
✓	Labeled Compounds/ Surrogate Compounds	<b>1</b>	Compound Identification
✓	Laboratory Control Samples (LCS/LCSD)		

✓ **Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.**

<sup>1</sup> **Quality control results are discussed below, but no data were qualified.**

<sup>2</sup> **Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.**

## **Sample Receipt, Preservation, and Holding Times**

Guidance documents state that the cooler temperature upon receipt at the laboratory should be between 0°C and 6°C.

*SDG K1811438:* One cooler temperature was less than the lower control limit, at -5.5°C. Samples were not affected by the temperature outlier; no action was taken.

## **Field Blanks**

No field blanks were submitted.

## **Laboratory Control Samples**

Laboratory control samples (LCS) were analyzed at the required frequency of one per batch of 20 or fewer samples. With the exception noted below, the spike recoveries were within the laboratory control limits.

*SDG K1811438:* The laboratory control sample recovery for heptachlor was greater than the upper control limit. This analyte was not detected in the associated samples; no action was taken.

## **Matrix Spike/Matrix Spike Duplicates**

*SDG K1811438:* The matrix spike/matrix spike duplicate (MS/MSD) analyses were performed using a sample that was not from this project.

*SDG K1812382:* MS/MSD analyses were not performed. Precision and accuracy were evaluated using the laboratory control sample/laboratory control sample duplicate results.

## **Field Duplicates**

No field duplicates were submitted.

## **Reporting Limits**

All reporting limits exceeded the target reporting limits specified in the QAPP.

## **Calculation Verification**

*SDG K1811438:* Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

## **OVERALL ASSESSMENT**

As was determined by this evaluation, the laboratory performed the specified analytical method. With the exception noted above, accuracy was acceptable as demonstrated by the surrogate and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries. Precision was also acceptable as demonstrated by the LCS/LCSD relative percent difference values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

# DATA VALIDATION REPORT

## San Jacinto North Impoundments

### TCLP Herbicides by 8151A

This report documents the review of analytical data from the analyses of TCLP leachates and the associated laboratory quality control (QC) samples. Samples were analyzed by ALS Environmental, Kelso, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
K1811438	2 TCLP Leachate	EPA Stage 4
K1812382	1 TCLP Leachate	EPA Stage 2B

#### DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

#### EDD TO HARDCOPY VERIFICATION

Ten percent (10%) of the results in the laboratory EDD were verified by comparison to the laboratory data package.

#### TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

<b>1</b>	Sample Receipt, Preservation, and Holding Times	✓	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
✓	Tune	<b>1</b>	Field Duplicates
✓	Initial Calibration	✓	Internal Standards
✓	Continuing Calibration	✓	Target Analyte List
✓	Laboratory Blanks	<b>1</b>	Reporting Limits
<b>1</b>	Field Blanks	✓	Reported Results
✓	Labeled Compounds/ Surrogate Compounds	✓	Compound Identification
✓	Laboratory Control Sample (LCS)	1	Calculation Verification

✓ **Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.**

<sup>1</sup> **Quality control results are discussed below, but no data were qualified.**

<sup>2</sup> **Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.**

#### Sample Receipt, Preservation, and Holding Times

Guidance documents state that the cooler temperature upon receipt at the laboratory should be between 0°C and 6°C.

**SDG K1811438:** One cooler temperature was less than the lower control limit, at -5.5°C. Samples were not affected by the temperature outlier; no action was taken.

### Field Blanks

No field blanks were submitted.

### Field Duplicates

No field duplicates were submitted.

### Reporting Limits

Reporting limits are greater than the those specified in the QAPP.

### Calculation Verification

*SDG K1811438:* Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

### **OVERALL ASSESSMENT**

As was determined by this evaluation, the laboratory performed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS, and MS/MSD recoveries. Precision was also acceptable as demonstrated by the MS/MSD relative percent difference values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

# DATA VALIDATION REPORT

## San Jacinto North Impoundments

### TCLP Metals - Method SW6010C and 7470A

This report documents the review of analytical data from the analyses of TCLP leachates and the associated laboratory quality control (QC) samples. Samples were analyzed by ALS Environmental, Kelso, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	NUMBER OF SAMPLES AND MATRIX	VALIDATION LEVEL
K1811438	2 TCLP Leachate	EPA Stage 3
K1812382	1 TCLP Leachate	Stage 2B

#### DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

#### EDD TO HARDCOPY VERIFICATION

Ten percent (10%) of the results in the laboratory EDD were verified by comparison to the laboratory data package.

#### TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Sample Receipt, Preservation, and Holding Times	✓	Laboratory Duplicates
✓	Initial Calibration	✓	Interference Check Samples
✓	Calibration Verification	✓	Serial Dilutions
✓	CRDL Standards	1	Field Duplicates
2	Laboratory Blanks	1	Reporting Limits
1	Field Blanks	✓	Reported Results
✓	Laboratory Control Samples (LCS)	✓	Calculation Verification
✓	Matrix Spikes		

✓ *Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.*

1 *Quality control outliers are discussed below, but no data were qualified.*

2 *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

## **Sample Receipt, Preservation, and Holding Times**

Guidance documents state that the cooler temperature upon receipt at the laboratory should be between 0°C and 6°C.

*SDG K1811438:* One cooler temperature was less than the lower control limit, at -5.5°C. Samples were not affected by the temperature outlier; no action was taken.

## **Laboratory Blanks**

To assess the impact of any blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). No action is taken if the sample result is greater than the action level, or for non-detected results. For laboratory blanks that are less than the negative MDL, positive results less than the action level of five times the absolute value of the blank concentration are estimated (J-7) and non-detects are estimated (UJ-7L) to indicate a potential low bias.

Laboratory blanks were analyzed at the appropriate frequency. Contaminant levels, associated samples, and action levels are documented in the data validation worksheets.

*SDG K1811438:* An instrument blank exhibited a negative response for silver that was outside of acceptance criterion. The results for silver in both samples were estimated (UJ-7L) to indicate a potential low bias.

*SDG K1812382:* Arsenic, cadmium, and silver were detected in the method blank. These elements were not detected in the field sample; no data were qualified. Several instrument blanks were found to have detections for barium, cadmium, silver, and selenium that were outside of acceptance criteria. After evaluating the samples against the action levels, no data were qualified.

## **Field Blanks**

No field blanks were submitted.

## **Field Duplicates**

No field duplicates were submitted.

## **Reporting Limits**

Several samples were diluted due to interferences or other factors. Reporting limits were elevated accordingly.

## **Calculation Verification**

*SDG K1811438:* Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.



## **OVERALL ASSESSMENT**

As determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the laboratory control sample and matrix spike recoveries. Precision was also acceptable as demonstrated by the laboratory duplicate relative percent difference values.

Detection limits were estimated based on a low instrument blank response.

All data, as qualified, are acceptable for use.

## DATA VALIDATION REPORT

### San Jacinto North Impoundments

### Conventional Tests

This report documents the review of analytical data from the analyses of soil samples and the associated laboratory quality control (QC) samples. Samples were analyzed by ALS Environmental, Kelso, Washington and ALS Environmental, Holland, Michigan. Refer to the **Sample Index** for a list of samples reviewed.

SDG	NUMBER OF SAMPLES AND MATRIX	VALIDATION LEVEL
K1811438	2 Soil	EPA Stage 3
K1812382	1 Soil	EPA Stage 2B

The analytical tests that were performed are summarized below:

LABORATORY	PARAMETER	METHOD
ALS-Kelso	Flashpoint	SW 1020A
	pH	SW 9045D
	Reactive Sulfide	SW 9034M
ALS-Holland	Reactive Cyanide	SW 7.3.3.2

#### DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

#### EDD TO HARDCOPY VERIFICATION

Ten percent (10%) of the results in the laboratory EDD were verified by comparison to the laboratory data package.

**SDG K1811438:** The reactive cyanide results in the EDD were reported as not-detected (ND) at the method detection limit (MDL), but the summary forms had results reported as ND at the reporting limit (RL); no action taken.

**SDG K1812382:** The reactive cyanide result for Sample SL0594 was reported as not-detected at the RL in the EDD. The result was updated to indicate that reactive cyanide was not-detected at the MDL.

## TECHNICAL DATA VALIDATION

This report documents the review of analytical QC requirements as listed in the following table.

2	Sample Receipt, Preservation, and Holding Times	✓	Matrix Spike/Matrix Spike Duplicates (MS/MSD)
✓	Initial Calibration	✓	Laboratory Duplicates
✓	Calibration Verification	1	Field Duplicates
✓	Laboratory Blanks	✓	Reporting Limits
1	Field Blanks	✓	Reported Results
✓	Laboratory Control Samples (LCS)	1	Calculation Verification (Full validation only)

*✓ Method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.*

*1 Quality control results are discussed below, but no data were qualified.*

*2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

### Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of  $\leq 6^{\circ}\text{C}$ . With the following exceptions noted below, the laboratory received the sample coolers within the advisory temperature range.

**SDG K1811438:** One cooler temperature was less than the lower control limit, at  $-5.5^{\circ}\text{C}$ . Samples were not affected by the temperature outlier; no action was taken.

Both samples were analyzed for pH and total solids after the holding times had expired. Results for these analytes were estimated (J/UJ-1).

**SDG K1812382:** The sample was analyzed for pH, reactive sulfide, and total solids after the holding times had expired. Results for these analytes were estimated (J/UJ-1).

### Field Blanks

No field blanks were submitted.

### Field Duplicate

No field duplicates were submitted.

### Calculation Verification

**SDG K1811438:** Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

## **OVERALL ASSESSMENT**

As was determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the laboratory control sample and matrix spike/matrix spike duplicate (MS/MSD) recoveries. Precision was also acceptable as demonstrated by the laboratory duplicate and MS/MSD relative percent difference values.

Results were estimated based on exceeded holding times.

All data, as qualified, are acceptable for use.



## **APPENDIX A**

# **DATA QUALIFIER DEFINITIONS REASON CODES AND CRITERIA TABLES**

## **DATA VALIDATION QUALIFIER CODES**

### **Based on National Functional Guidelines**

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

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U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.
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## DATA QUALIFIER REASON CODES

Group	Code	Reason for Qualification
Sample Handling	1	Improper Sample Handling or Sample Preservation (i.e., headspace, cooler temperature, pH, summa canister pressure); Exceeded Holding Times
Instrument Performance	24	Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass)
	5A	Initial Calibration (RF, %RSD, $r^2$ )
	5B	Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L) <sup>1</sup> where appropriate
	5C	Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L) <sup>1</sup> where appropriate
Blank Contamination	6	Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.)
	7	Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L) <sup>1</sup> for negative instrument blanks
Precision and Accuracy	8	Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L) <sup>1</sup> where appropriate
	9	Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate)
	10	Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L) <sup>1</sup> where appropriate
	12	Reference Material Use bias flags (H,L) <sup>1</sup> where appropriate
	13	Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L) <sup>1</sup> where appropriate
Interferences	16	ICP/ICP-MS Serial Dilution Percent Difference
	17	ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L) <sup>1</sup> where appropriate
	19	Internal Standard Performance (i.e., area, retention time, recovery)
	22	Elevated Detection Limit due to Interference (i.e., chemical and/or matrix)
	23	Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides)
Identification and Quantitation	2	Chromatographic pattern in sample does not match pattern of calibration standard
	3	2 <sup>nd</sup> column confirmation (RPD or %D)
	4	Tentatively Identified Compound (TIC) (associated with NJ only)
	20	Calibration Range or Linear Range Exceeded
	25	Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.)
Miscellaneous	11	A more appropriate result is reported (multiple reported analyses i.e., dilutions, re-extractions, etc. Associated with "R" and "DNR" only)
	14	Other (See DV report for details)
	26	Method QC information not provided

<sup>1</sup>H = high bias indicated

L = low bias indicated

**Dioxin/Furan Analysis by HRMS  
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)**

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Sample Handling</b>					
Cooler/Storage Temperature Preservation	Waters/Solids ≤ 6°C & in the dark Tissues < -10°C & in the dark <b>Preservation Aqueous:</b> If Cl <sub>2</sub> is present Thiosulfate must be added and if pH > 9 it must be adjusted to 7 - 9	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J(pos)/R(ND) if thiosulfate not added if Cl <sub>2</sub> present; J(pos)/UJ(ND) if pH not adjusted J(pos)/UJ(ND) if temp > 20°C	1	<b>EcoChem PJ, see TM-05</b>
Holding Time	<b>If properly stored, 1 year or:</b> <b>Extraction (all matrices):</b> 30 days from collection <b>Analysis (all matrices):</b> 45 days from extraction	NFG <sup>(1)</sup> Method <sup>(2)</sup>	If not properly stored or HT exceedance: J(pos)/UJ(ND)	1	<b>EcoChem PJ, see TM-05</b> Gross exceedance = > 1 year 2011 NFG <b>Note:</b> Under CWA, SDWA, and RCRA the HT for H <sub>2</sub> O is 7 days.
<b>Instrument Performance</b>					
Mass Resolution (Tuning)	PFK (Perfluorokerosene) ≥10,000 resolving power at m/z 304.9824. Exact mass of m/z 380.9760 w/in 5 ppm of theoretical value (380.97410 to 380.97790) . Analyzed prior to ICAL and at the start and end of each 12 hr. shift.	NFG <sup>(1)</sup> Method <sup>(2)</sup>	R(pos/ND) all analytes in all samples associated with the tune	24	Notify PM
Windows Defining Mix	Peaks for first and last eluters must be within established retention time windows for each selector group (chlorination level)	NFG <sup>(1)</sup> Method <sup>(2)</sup>	If peaks are not completely within windows (clipped): If natives are ok, J(pos)/UJ(ND) homologs (Totals) If natives are affected, R all results for that selector group	24	Notify PM
Column Performance Mix	Both mixes must be analyzed before ICAL and CCAL Valley < 25% (valley = (x/y)*100%) where x = ht. of TCDD (or TCDF) & y = baseline to bottom of valley For all isomers eluting near the 2378-TCDD (TCDF) peak (TCDD only for 8290)	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J(pos) if valley > 25%	24	<b>EcoChem PJ, see TM-05, Rev. 2;</b> Note: TCDF is evaluated only if second column confirmation is performed
Initial Calibration Sensitivity	S/N ratio > 10 for all native and labeled compounds in CS1 std.	NFG <sup>(1)</sup> Method <sup>(2)</sup>	If <10, elevate Det. Limit or R(ND)	5A	
Initial Calibration Selectivity	Ion Abundance ratios within QC limits (Table 8 of method 8290) (Table 9 of method 1613B)	NFG <sup>(1)</sup> Method <sup>(2)</sup>	If 2 or more ion ratios are out for one compound in ICAL, J(pos)	5A	<b>EcoChem PJ, see TM-05, Rev. 2</b>



**Dioxin/Furan Analysis by HRMS**  
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Instrument Performance (continued)</b>					
Initial Calibration (Minimum 5 stds.) <b>Stability</b>	%RSD < 20% for native compounds %RSD < 30% for labeled compounds (%RSD < 35% for labeled compounds under 1613b)	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J(pos) natives if %RSD > 20%	5A	<b>EcoChem PJ, see TM-05, Rev. 2</b>
	Absolute RT of <sup>13</sup> C <sub>12</sub> -1234-TCDD >25 min on DB5 & >15 min on DB-225	NFG <sup>(1)</sup> Method <sup>(2)</sup>	Narrate, no action		
Continuing Calibration (Prior to each 12 hr. shift) <b>Sensitivity</b>	S/N ratio for CS3 standard > 10	NFG <sup>(1)</sup> Method <sup>(2)</sup>	If <10, elevate Det. Limit or R(ND)	5B	
Continuing Calibration (Prior to each 12 hr. shift) <b>Selectivity</b>	Ion Abundance ratios within QC limits (Table 8 of method 8290) (Table 9 of method 1613B)	NFG <sup>(1)</sup> Method <sup>(2)</sup>	For congener with ion ratio outlier, J(pos) natives in all samples associated with CCAL. No action for labeled congener ion ratio outliers.	25	<b>EcoChem PJ, see TM-05</b>
Continuing Calibration (Prior to each 12 hr. shift) <b>Stability</b>	%D +/-20% for native compounds %D +/-30% for labeled compounds <b>(Must meet limits in Table 6, Method 1613B)</b>  If %D in the closing CCAL are within 25%/35%, the mean RF from the two CCAL may be used to calculate samples <b>(Section 8.3.2.4 of 8290).</b>	NFG <sup>(1)</sup> Method <sup>(2)</sup>	<b>Labeled compounds:</b> Narrate, no action. <b>Native compounds:</b> 1613: J(pos)/UJ(ND) if %D is outside Table 6 limits J(pos)/R(ND) if %D is +/-75% of Table 6 limits  8290: J(pos)/UJ(ND) if %D = 20% - 75% J(pos)/R(ND) if %D > 75%	5B (H,L) <sup>3</sup>	
	Absolute RT of <sup>13</sup> C <sub>12</sub> -1234-TCDD and <sup>13</sup> C <sub>12</sub> -123789-HxCDD should be ± 15 seconds of ICAL RRT for all other compounds must meet criteria listed in Table 2 Method 1316.	NFG <sup>(1)</sup> Method <sup>(2)</sup>	Narrate, no action	5B	<b>EcoChem PJ, see TM-05</b>
<b>Blank Contamination</b>					
Method Blank (MB)	MB: One per matrix per batch of (of ≤ 20 samples) No detected compounds > RL	NFG <sup>(1)</sup> Method <sup>(2)</sup>	U(pos) if result is < 5X action level.	7	<b>Hierarchy of blank review:</b> <b>#1 - Review MB, qualify as needed</b> <b>#2 - Review FB, qualify as needed</b>
Field Blank (FB)	FB: frequency as per QAPP No detected compounds > RL		U(pos) if result is < 5X action level.	6	

**Dioxin/Furan Analysis by HRMS  
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)**

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Precision and Accuracy</b>					
MS/MSD (recovery)	<b>MS/MSD not typically required for HRMS analyses.</b> If lab analyzes MS/MSD then one set per matrix per batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos) if both %R > UCL - high bias J(pos)/UJ(ND) if both %R < LCL - low bias J(pos)/R(ND) if both %R < 10% - very low bias J(pos)/UJ(ND) if one > UCL & one < LCL, with no bias <b>PJ if only one %R outlier</b>	8 (H,L) <sup>3</sup>	No action if only one spike %R is outside criteria. No action if parent concentration is > 4x the amount spiked.  Qualify parent sample only unless other QC indicates systematic problems.
MS/MSD (RPD)	<b>MS/MSD not typically required for HRMS analyses.</b> If lab analyzes MS/MSD then one set per matrix per batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos) in parent sample if RPD > CL	9	Qualify parent sample only.
LCS (or OPR)	One per lab batch (of ≤ 20 samples) Use most current laboratory control limits <b>or</b> Limits from Table 6 of 1613B	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if %R < 10% - very low bias	10 (H,L) <sup>3</sup>	No action if only one spike %R is outside criteria, when LCSD is analyzed.  Qualify all associated samples.
LCS/LCSD (RPD)	<b>LCSD not typically required for HRMS analyses.</b> One set per matrix and batch of 20 samples RPD < 35%	Method <sup>(2)</sup> EcoChem standard policy	J(pos) assoc. compound in all samples if RPD > CL	9	Qualify all associated samples.
Lab Duplicate (RPD)	<b>Lab Dup not typically required for HRMS analyses.</b> One per lab batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos)/UJ(ND) if RPD > CL	9	
Labeled Compounds (Internal Standards)	Added to all samples %R = 40% - 135% in all samples 8290 %R must meet limits in Table 7 Method 1613B	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if %R < 10% - very low bias	13 (H,L) <sup>3</sup>	
Field Duplicates	Solids: RPD < 50% OR difference < 2X RL (for results < 5X RL)  Aqueous: RPD < 35% OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	Narrate and qualify if required by project	9	<b>Use professional judgment</b>

**Dioxin/Furan Analysis by HRMS  
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)**

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Compound ID and Calculation</b>					
Quantitation/ Identification	All ions for each isomer must maximize within $\pm 2$ seconds. S/N ratio >2.5 Ion ratios must meet criteria listed in Table 8 Method 8290, or Table 9 of 1613B; RRTs w/in limits in Table 2 of 1613B	NFG <sup>(1)</sup> Method <sup>(2)</sup>	Narrate in report; qualify if necessary NJ(pos) for retention time outliers. U(pos) for ion ratio outliers.	25	<b>EcoChem PJ, see TM-05</b>
EMPC (estimated maximum possible concentration)	If quantitation identification criteria are not met, laboratory should report an EMPC value.	NFG <sup>(1)</sup> Method <sup>(2)</sup>	If laboratory correctly reported an EMPC value, qualify the native compound U(pos) to indicate that the value is a detection limit and qualify total homolog groups J (pos)	25	<b>Use professional judgment See TM-18</b>
Interferences	Interferences from chlorodiphenyl ether compounds	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J(pos)/UJ(ND) if present	23	<b>See TM-16</b>
	Lock masses must not deviate $\pm 20\%$ from values in Table 8 of 1613B	Method <sup>(2)</sup>	J(pos)/UJ(ND) if present	24	<b>See TM-17</b>
Second Column Confirmation	All 2,3,7,8-TCDF hits must be confirmed on a DB-225 (or equiv) column. All QC criteria must also be met for the confirmation analysis.	NFG <sup>(1)</sup> Method <sup>(2)</sup>	Report the DB-225 value. If not performed use PJ.	3	DNR-11 DB5 result if both results from both columns are reported. <b>EcoChem PJ, see TM-05</b>
Calculation Check	Check 10% of field & QC sample results	EcoChem standard policy	Contact laboratory for resolution and/or corrective action	na	Full data validation only.
<b>Electronic Data Deliverable (EDD)</b>					
Verification of EDD to hardcopy data	EcoChem verify @ 10% unless problems noted; then increase level up to 100% for next several packages.		Depending on scope of problem, correct at EcoChem (minor issues) to resubmittal by laboratory (major issues).	na	EcoChem Project Manager and/or Database Administrator will work with lab to provide long-term corrective action.
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	Standard reporting policy	Use "DNR" to flag results that will not be reported.	11	

(pos) - positive (detected) results; (ND) - not detected results

<sup>1</sup> National Functional Guidelines for Chlorinated Dibenzo-p-Dioxins (CDDs) & Chlorinated Dibenzofurans (CDFs) Data Review, September 2011

<sup>2</sup> Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by High-Resolution Gas Chromatography/High-Resolution Mass Spectrometry (HRGC/HRMS), USEPA SW-846, Method 8290

<sup>2</sup> EPA Method 1613, Rev.B, Tetra-through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGS/HRMS, October 1994

<sup>3</sup> NFG 2013 suggests using "+" / "-" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

**Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)  
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)**

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Sample Handling</b>					
Cooler/Storage Temperature Preservation	4°C±2°C Aqueous: HCl to pH < 2 Current SW846 criterion is ≤ 6° C <sup>(3)</sup>	NFG <sup>(1)</sup> Method <sup>(3)</sup>	<b>If required by project:</b> J (pos)/UJ (ND) if greater than 6° C	1	Use <b>PJ</b> for temp outliers; see <b>TM20</b> if pH ≤ 2, reject 2-chloroethyl vinyl ether (R-1) some projects may require methanol preserved soils/seds
Holding Time	<b>Aqueous:</b> 14 days preserved 7 Days: unpreserved <b>Solid:</b> 14 Days	NFG <sup>(1)</sup> Method <sup>(3)</sup>	J (pos)/UJ (ND) if HT exceeded J (pos)/R (ND) if gross exceedance (> 2x HT)	1	Gross exceedance = > 2x HT, as per 1999 NFG
<b>Instrument Performance</b>					
Tuning	BFB Beginning of each 12 hour period Use method or project acceptance criteria	NFG <sup>(1)</sup> Method <sup>(3)</sup>	R (pos/ND) all analytes in all samples associated with the tune	24	
Initial Calibration <b>Sensitivity</b>	Minimum 5 standards RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * RRF ≥ 0.005 1,4-dioxane	NFG <sup>(1)</sup> Method <sup>(3)</sup>	Use <b>PJ</b> to qualify J (pos)/UJ (ND)	5A	<b>TM-06</b> EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance <b>PJ</b> - no action if response is stable (ICAL RSD and CCAL %D acceptable)
Initial Calibration <b>Stability</b>	%RSD ≤ 20% except: %RSD ≤ 40% poor responders * %RSD ≤ 50% 1,4-dioxane	NFG <sup>(1)</sup> Method <sup>(3)</sup>	J (pos) if %RSD > limit	5A	
Initial Calibration Verification	Second source analyzed immediately after ICAL %R 70% - 130%	Method <sup>(3)</sup>	J (pos) %R > UCL J (pos)/UJ (ND) %R < LCL	5A (H,L) <sup>4</sup>	QAPP may have overriding accuracy limits.
Continuing Calibration <b>Sensitivity</b>	RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * RRF ≥ 0.005 1,4-dioxane	NFG <sup>(1)</sup> Method <sup>(3)</sup>	Use <b>PJ</b> to qualify J (pos)/UJ (ND)	5B	see ICAL RRF guidance
Continuing Calibration <b>Stability</b>	%D ≤ 25% except: %D ≤ 40% poor responders * %D ≤ 50% 1,4-dioxane	NFG <sup>(1)</sup> Method <sup>(3)</sup>	J (pos) - %D > control limit (high bias) J (pos)/UJ (ND) - %D < -control limit (low bias)	5B (H,L) <sup>4</sup>	

**Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)**  
**(Based on NFG 1999 & 2008 and SW-846 Method 8260C)**

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Blank Contamination</b>					
Method Blank (MB)	<u>MB: One per matrix per batch (of ≤ 20 samples)</u> No detected compounds > MDL	NFG <sup>(2)</sup> Method <sup>(3)</sup>	U (pos) if result is < 5X or 10X action level	7	10X action level for methylene chloride, acetone, & 2-butanone. 5X for all other target analytes <b>Hierarchy of blank review:</b> <b>#1 - Review MB, qualify as needed</b> <b>#2 - Review TB, qualify as needed</b> <b>#3 - Review FB, qualify as needed</b> <b>Note: Actions as per NFG 1999</b>
	No TICs present		R (pos) TICs using 10X rule		
Trip Blank (TB)	No detected compounds > MDL	NFG <sup>(2)</sup> Method <sup>(3)</sup>	U (pos) if result is < 5X or 10X action level	6	
Field Blank (FB)	No detected compounds > MDL	NFG <sup>(2)</sup> Method <sup>(3)</sup>	U (pos) if result is < 5X or 10X action level	6	
<b>Precision and Accuracy</b>					
LCS/LCSD (recovery)	One per matrix per batch (of ≤ 20 samples) LCSD not required by NFG or method Use method acceptance criteria/laboratory limits	Method <sup>(3)</sup>	J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND)%R < 10%	10 (H,L) <sup>4</sup>	No action if only one spike %R is outside criteria when LCSD is analyzed, unless one recovery is <10%. QAPP may have overriding accuracy limits.
LCS/LCSD RPD	If LCSD analyzed RPD < lab limits	Method <sup>(3)</sup>	J (pos)	9	Qualify all associated samples. QAPP may have overriding precision limits.
Reference Material (RM, SRM, or CRM)	Result ±20% of the 95% confidence interval of the true value for analytes	EcoChem standard policy	J (pos)/UJ (ND) if < LCL J (pos) if > UCL	12 (H,L) <sup>4</sup>	QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits
Surrogates	Added to all samples Within method/laboratory control limits	NFG <sup>(1)</sup> Method <sup>(3)</sup>	J (pos) if %R >UCL J (pos)/UJ (ND) if %R <LCL J (pos)/R (ND) if <10%	13 (H,L) <sup>4</sup>	No action if there are 4+ surrogates and only 1 outlier Qualify all compounds if qualification is required.
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	NFG <sup>(1)</sup> Method <sup>(3)</sup>	J (pos) if > 200% J (pos)/UJ (ND) if < 50% J (pos)/R (ND) if < 25% if RT >30 seconds use <b>PJ</b>	19	Qualify compounds quantified using particular internal standard

**Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)  
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)**

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Precision and Accuracy (continued)</b>					
MS/MSD (recovery)	One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits	NFG <sup>(1)</sup> Method <sup>(3)</sup>	J (pos) %R > UCL J (pos)/UJ (ND) if both %R < LCL J (pos)/R (ND) if both %R < 10% J (pos)/UJ (ND) if one > UCL & one < LCL, with no bias	8 (H,L) <sup>4</sup>	No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only.
MS/MSD (RPD)	One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits	NFG <sup>(1)</sup> Method <sup>(3)</sup>	J (pos) If RPD > control limit	9	Qualify parent sample only
Field Duplicates	<b>Solids:</b> RPD < 50% OR difference < 2X RL (for results < 5X RL) <b>Aqueous:</b> RPD < 35% OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	J (pos)/UJ (ND) Qualify only parent and field duplicate samples	9	Use project limits if specified
<b>Compound Identification and Quantitation</b>					
Retention Time Relative Ion Intensities	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	NFG <sup>(1)</sup> Method <sup>(3)</sup>	U (pos) if identification criteria not met	25	
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NFG <sup>(1)</sup> Method <sup>(3)</sup>	NJ TIC R (pos) if common laboratory contaminants	4	Common laboratory contaminants: aldol condensation products, solvent preservatives, and reagent contaminants
Calibration Range	Results greater than highest calibration standard	EcoChem standard policy	Qualify J (pos)	20	If result from dilution analysis is not reported.
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	EcoChem standard policy	Use "DNR" to flag results that will not be reported.	11	<b>TM-04</b> EcoChem Policy for Rejection/Selection Process for Multiple Results

<sup>1</sup> National Functional Guidelines for Organic Data Review, June, 2008<sup>2</sup> National Functional Guidelines for Organic Data Review, Oct, 1999<sup>3</sup> Method SW846 8260C Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)<sup>4</sup> NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

\* "Poor responder" compounds: Acetone, 2-butanone, carbon disulfide, chloroethane, chloromethane, cyclohexane, 1,2-dibromoethane, dichlorodifluoromethane, cis-1,2-dichloroethene, 1,2-dichloropropane, 1,2-dibromo-3-chloropropane, 2-hexanone, isopropylbenzene, methyl acetate, methylene chloride, methylcyclohexane, 4-methyl-2-pentanone, methyl tert-butyl ether, trans-1,2-dichloroethene, trichlorofluoromethane, 1,1,2-trichloro-1,2,2-trifluoroethane **criterion is 0.010 RRF**; 1,4-dioxane RRF **criterion is 0.005**.

(pos): Positive Result

(ND): Non-detect

DATA VALIDATION CRITERIA

**Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)**  
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Sample Handling</b>					
Cooler/Storage Temperature Preservation	4°C±2°C sediment/tissues may require storage at -20°C	NFG <sup>(1)</sup> Method <sup>(3)</sup>	<b>If required by project:</b> J (pos)/UJ (ND) if greater than 6° C	1	Use <b>PJ</b> for temp outliers; see <b>TM20</b> Current SW846 criterion is ≤ 6° C <sup>(3)</sup>
Holding Time	<b>Extraction Aqueous:</b> 7 days from collection <b>Extraction Solid:</b> 14 days from collection <b>Analysis (all matrices):</b> 40 days from extraction Holding time may be extended to 1 year for frozen sediments/tissues	NFG <sup>(1)</sup> Method <sup>(3)</sup>	J (pos)/UJ (ND) if HT exceeded J (pos)/R (ND) if gross exceedance (> 2x HT)	1	Gross exceedance = > 2x HT, as per 1999 NFG
<b>Instrument Performance</b>					
Tuning	DFTPP Beginning of each 12 hour period Use method or project acceptance criteria	NFG <sup>(1)</sup> Method <sup>(3)</sup>	R (pos/ND) all analytes in all samples associated with the tune	24	
Initial Calibration <b>Sensitivity</b>	RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders *	NFG <sup>(1)</sup> Method <sup>(3)</sup>	Use <b>PJ</b> to qualify J (pos)/UJ (ND)	5A	<b>TM-06</b> EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance <b>PJ</b> - no action if response is stable (ICAL RSD and CCAL %D acceptable)
Initial Calibration <b>Stability</b>	Minimum 5 standards %RSD ≤ 20.0% except: %RSD ≤ 40.0% poor responders * <b>or</b> co-efficient of determination (r <sup>2</sup> ) > 0.99	NFG <sup>(1)</sup> Method <sup>(3)</sup>	J (pos) if %RSD > limit <b>or</b> r <sup>2</sup> value <0.99	5A	
Initial Calibration Verification Check	Prepared from second source; analyze after each ICAL Percent recovery limits = 70-130%	Method <sup>(3)</sup>	J (pos) %R > UCL J (pos)/UJ (ND) %R < LCL	5A (H,L) <sup>4</sup>	QAPP may have overriding accuracy limits.

DATA VALIDATION CRITERIA

**Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)**  
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Instrument Performance (continued)</b>					
Continuing Calibration <b>Sensitivity</b>	RRF $\geq$ 0.05 except: RRF $\geq$ 0.01 poor responders *	NFG <sup>(1)</sup> Method <sup>(3)</sup>	Use <b>PJ</b> to qualify J (pos)/UJ (ND)	5B	see ICAL RRF guidance
Continuing Calibration <b>Stability</b>	Prior to sample analysis and every 12 hours %D $\leq$ 25% except: %D $\leq$ 40.0% poor responders *	NFG <sup>(1)</sup> Method <sup>(3)</sup>	J (pos) - %D > control limit (high bias) J (pos)/UJ (ND) - %D < -control limit (low bias)	5B (H,L) <sup>4</sup>	
<b>Blank Contamination</b>					
Method Blank (MB)	MB: One per matrix per batch of (of $\leq$ 20 samples) No detected compounds > MDL	NFG <sup>(2)</sup> Method <sup>(3)</sup>	U(pos) if result is < 5X or 10X action level	7	10X action level applies to phthalates only. 5X for all other target analytes  <b>Hierarchy of blank review:</b> <b>#1 - Review MB, qualify as needed</b> <b>#2 - Review FB , qualify as needed</b>  <b>Note: Actions as per 1999 NFG</b>
	No TICs present		R (pos) TICs using 10X rule	7	
Field Blank (FB)	No detected compounds > MDL	NFG <sup>(2)</sup> Method <sup>(3)</sup>	U (pos) if result is < 5X or 10X action level	6	
<b>Precision and Accuracy</b>					
LCS/LCSD (recovery)	One per matrix per batch (of $\leq$ 20 samples) LCSD not required by NFG or method Use method acceptance criteria/laboratory limits	Method <sup>(3)</sup>	J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND)%R < 10%	10 (H,L) <sup>4</sup>	No action if only one spike %R is outside criteria when LCSD is analyzed, unless one recovery is <10%.  QAPP may have overriding accuracy limits. Qualify all associated samples.
LCS/LCSD (RPD)	If LCSD analyzed RPD < lab limits	Method <sup>(3)</sup>	J (pos)	9	Qualify all associated samples. QAPP may have overriding precision limits.



DATA VALIDATION CRITERIA

**Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)**  
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Precision and Accuracy (continued)</b>					
Reference Material (RM, SRM, or CRM)	Result $\pm$ 20% of the 95% confidence interval of the true value for analytes	EcoChem standard policy	J (pos)/UJ (ND) if < LCL J (pos) if > UCL	12 (H,L) <sup>4</sup>	QAPP may have overriding accuracy limits. Some manufacturers have different RM control limits
MS/MSD (recovery)	One per matrix per batch (of $\leq$ 20 samples) Use method acceptance criteria/laboratory limits	NFG <sup>(1)</sup> Method <sup>(3)</sup>	J (pos) %R > UCL J (pos)/UJ (ND) if both %R < LCL J (pos)/R (ND) if both %R < 10% J (pos)/UJ (ND) if one > UCL & one < LCL, with no bias	8 (H,L) <sup>4</sup>	No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only.
MS/MSD (RPD)	One per matrix per batch (of $\leq$ 20 samples) Use method acceptance criteria/laboratory limits	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos) in parent sample if RPD > CL	9	Qualify parent sample only
Surrogates	Minimum of 3 acid & 3 base/neutral (B/N) compounds added to all samples Within method control limits	NFG <sup>(1)</sup> Method <sup>(3)</sup>	J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND) if %R < 10%	13 (H,L) <sup>4</sup>	Qualify all compounds in associated fraction. Do not qualify if only 1 acid and/or 1 B/N surrogate is out, unless <10%. If 1 surrogate outlier < 10% then J (pos)/R (ND)
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	NFG <sup>(1)</sup> Method <sup>(3)</sup>	J (pos) if > 200% J (pos)/UJ (ND) if < 50% J (pos)/R (ND) if < 25% if RT >30 seconds use <b>PJ</b>	19	Qualify compounds quantified using particular internal standard
Field Duplicates	<b>Solids:</b> RPD < 50% OR difference < 2X RL (for results < 5X RL) <b>Aqueous:</b> RPD < 35% OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	J (pos)/UJ (ND) Qualify only parent and field duplicate samples	9	Use project limits if specified

**Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)**  
(Based on NFG 1999 & 2008 and SW-846 Method 8270D)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Compound Identification and Quantitation and Calculation</b>					
Retention times and relative ion intensities	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	NFG <sup>(1)</sup> Method <sup>(3)</sup>	U (pos) if identification criteria not met	25	
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NFG <sup>(1)</sup> Method <sup>(3)</sup>	NJ the TIC unless: R (pos) common laboratory contaminants	4	
Calibration Range	Results greater than highest calibration standard	EcoChem standard policy	Qualify J (pos)	20	If result from dilution analysis is not reported.
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	EcoChem standard policy	Use "DNR" to flag results that will not be reported.	11	<b>TM-04</b> EcoChem Policy for Rejection/Selection Process for Multiple Results

<sup>1</sup> National Functional Guidelines for Organic Data Review, June, 2008

(pos): Positive Result(s)

<sup>2</sup> National Functional Guidelines for Organic Data Review, October, 1999

(ND): Non-detects

<sup>3</sup> Method SW846 8270D Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS), Revision 4, February 2007.

<sup>4</sup> NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

\* "Poor responder" compounds: acetophenone, atrazine, benzaldehyde, 1,1'-biphenyl, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, caprolactam, carbazole, 4-chloroaniline, diethylphthalate, di-n-butylphthalate, 3-3'-dichlorobenzidine, dimethylphthalate, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, di-n-octylphthalate, hexachlorobutadiene, hexachlorocyclopentadiene, 2-nitroaniline, 3-nitroaniline, 4-nitroaniline, 4-nitrophenol, N-nitrosodiphenylamine, 2,2'-oxybis-(1-chloropropane), 1,2,4,5-tetrachlorobenzene use a 0.010 RRF criterion.

**Pesticides by GC**  
**(Based on Organic NFG 1999 & 2008 and SW-846 Method 8081B)**

QC Element	Acceptance Criteria (NFG)	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Sample Handling</b>					
Cooler/Storage Temperature Preservation	4°C ± 2°C Tissue/sediments (may be frozen -20°C)	NFG <sup>(2)</sup> Method <sup>(3)</sup>	J (pos)/UJ (ND) if greater than 6° C	1	Use Professional Judgment (PJ) to qualify for temperature outlier. Current SW846 criterion is ≤ 6° C <sup>(3)</sup>
Holding Time	<i>Extraction Aqueous:</i> 7 days from collection <i>Extraction Solid:</i> 14 days from collection <i>Extraction Tissue/Sediment (frozen):</i> 1 year <i>Analysis (all matrices):</i> 40 days from extraction	NFG <sup>(2)</sup> Method <sup>(3)</sup>	J (pos)/UJ (ND) if ext/analyzed > HT J (pos)/R (ND) if gross exceedance (> 2x HT)	1	Gross exceedance > 2x HT, as per NFG 1999
<b>Instrument Performance</b>					
Resolution Check	Beginning of ICAL sequence Within RTW and resolution > 60%	NFG <sup>(2)</sup>	NJ (pos)/R (ND) results	14	CLP criterion; might not be submitted with SW846 data package
Retention Times	Surrogates: TCMX (± 0.05); DCB (± 0.10) Target analytes: within RTW	NFG <sup>(2)</sup> Method <sup>(3)</sup>	NJ (pos)/R (ND) results for analytes with RT shifts	24	Use PJ based on examination of raw data
Breakdown	DDT Breakdown: ≤ 20% Endrin Breakdown: ≤ 20% Combined Breakdown: ≤ 30% Compounds within RTW	NFG <sup>(2)</sup> Method <sup>(3)</sup>	If 4,4'-DDT is detected: J (pos) 4,4'-DDT, 4,4'-DDD and 4,4'-DDE If 4,4'-DDT is ND and either 4,4'-DDD or 4,4'-DDE are detected: R (ND) 4,4'-DDT, NJ (pos) DDD and DDE If Endrin is detected: J (pos) Endrin, Endrin Aldehyde and Endrin Ketone If Endrin is ND and either EA or EK are detected: R (ND) Endrin, NJ (pos) EA and EK	5A	Method 8081B breakdown criterion: ≤ 15%. For combined breakdown outliers, apply qualifiers considering the degree of individual breakdown.

**Pesticides by GC**  
**(Based on Organic NFG 1999 & 2008 and SW-846 Method 8081B)**

QC Element	Acceptance Criteria (NFG)	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Instrument Performance (continued)</b>					
Initial Calibration	Single Component Compounds: RSD ≤ 20% alpha-BHC and delta-BHC: RSD ≤ 25% toxaphene and surrogates: RSD ≤ 30%  <b>or</b> correlation coefficient (r-value) ≥ 0.995 OR Minimum 6-point with coefficient of determination (r <sup>2</sup> -value) ≥ 0.99	NFG <sup>(2)</sup> Method <sup>(4)</sup>	J (pos) if %RSD greater than control limit  <b>or</b> r-value < 0.995 <b>or</b> r <sup>2</sup> -value < 0.99	5A	Refer to TM-01 for additional information. Use bias flags (H,L) <sup>(6)</sup> where appropriate
Initial Calibration Verification (ICV)	No NFG criteria Project specific	Project QAPP	J (pos) if > UCL J (pos)/UJ (ND) if < LCL	5B	Use bias flags (H,L) <sup>(6)</sup> where appropriate
Continuing Calibration	%D ± 20% Analyzed prior to each 12 hour shift	Method <sup>(3)</sup>	If > 20% (high bias): J (pos) If <20% (low bias: J (pos)/UJ (ND)	5B	Refer to TM-01 for additional information. Use bias flags (H,L) <sup>(6)</sup> where appropriate
<b>Blank Contamination</b>					
Method Blank (MB)	One per matrix per batch (of ≤ 20 samples) No detected compounds > RL	NFG <sup>(1)</sup> Method <sup>(3)</sup>	U (pos) if result is less than appropriate 5X action level.	7	<b>Hierarchy of blank review:</b> #1 - Review MB and IB, qualify as needed #2 - Review FB , qualify as needed  <b>Note: Actions as per NFG 1999</b>  Note: IB not required by method
Field Blank (FB)	FB: frequency as per QAPP No detected compounds > RL	NFG <sup>(1)</sup> Method <sup>(3)</sup>	U (pos) if result is less than appropriate 5X action level.	6	
Instrument Blanks (IB)	Analyzed at the beginning and end of every 12 hour sequence No analyte > CRQL	NFG <sup>(1)</sup>	U (pos) if result is less than appropriate 5X action level.	7	

**Pesticides by GC**  
**(Based on Organic NFG 1999 & 2008 and SW-846 Method 8081B)**

QC Element	Acceptance Criteria (NFG)	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Precision and Accuracy</b>					
MS/MSD (recovery)	One set per matrix per batch (of ≤ 20 samples) Method or project acceptance limits	NFG <sup>(2)</sup> Method <sup>(3)</sup>	Qualify parent only unless other QC indicates systematic problems. J (pos) if both %R > upper control limit (UCL) J (pos)/UJ (ND) if both %R < lower control limit (LCL) J (pos)/R (ND) if both %R < 10%	8	No action if only one spike %R is outside criteria No action if native analyte conc. > 5x the amount spiked Use bias flags (H,L) <sup>(6)</sup> where appropriate
MS/MSD (RPD)	One set per matrix per batch (of ≤ 20 samples) Method or project acceptance limits	NFG <sup>(2)</sup> Method <sup>(3)</sup>	Qualify parent only unless other QC indicates systematic problems. J (pos) if RPD > control limit	9	No action if parent is ND
LCS	One per lab batch (of ≤ 20 samples) Method or project acceptance limits	NFG <sup>(2)</sup>	J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND) if %R < 10%	10	Qualify all associated samples. Use bias flags (H,L) <sup>(6)</sup> where appropriate
LCS/LCSD (RPD)	if analyzed use MS/MSD RPD criteria	NFG <sup>(2)</sup>	J (pos) assoc. compound in all samples	9	LCSD not required by method or NFG
Surrogates	TCMX and DCBP added to every sample %R = 30% - 150% <b>or</b> project limits	NFG <sup>(2)</sup> Method <sup>(3)</sup>	J (pos) if either %R > UCL J (pos)/UJ (ND) if either %R < LCL J (pos)/R (ND) if either %R < 10%	13	If %R < 10% (dilution is a factor), use PJ Use bias flags (H,L) <sup>(6)</sup> where appropriate
Internal Standards (if used)	Acceptable Range: IS area = 50% to 200% of CCAL area RT within 30 seconds of CC RT	Method <sup>(3)</sup>	J (pos) if area > 200% J (pos)/UJ (ND) if area < 50% J (pos)/R (ND) if area < 25% RT > 30 seconds, narrate	19	

**Pesticides by GC**  
**(Based on Organic NFG 1999 & 2008 and SW-846 Method 8081B)**

QC Element	Acceptance Criteria (NFG)	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Precision and Accuracy (continued)</b>					
Field Duplicates	<b>Solids:</b> RPD < 50% <b>or</b> difference < 2X RL (for results < 5X RL) <b>Aqueous:</b> RPD < 35% <b>or</b> difference < 1X RL (for results < 5X RL)	EcoChem standard practice	J (pos)/UJ (ND) Qualify only parent and field duplicate samples	9	Use project limits if specified
<b>Compound Identification/Quantification</b>					
Quantitation/ Identification	Between two columns: RPD < 40% or %D < 25% Within Retention Time Windows on both columns.	NFG <sup>(2)</sup> Method <sup>(3)</sup>	J (pos) if RPD = 40% - 60% (25% - 60% for %D) NJ (pos) if > 60% R (pos) if RTW criterion not met	3	See TM-08 for additional info
Calibration Range	On-column concentration < high calibration standard	NFG <sup>(2)</sup> Method <sup>(3)</sup>	J (pos) if conc > high standard and sample was not diluted	20	
Dilutions Re-extractions and/or Reanalyses	Report only one result per analyte	Standard reporting policy	Use "DNR" to flag results that will not be reported.	11	TM-04 for additional info
<b>Sample Clean-up</b>					
GPC/Sulfur/ Florisil	GPC or Florisil cleanup standards 80% - 120%	NFG <sup>(2)</sup>	J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND) if %R < 10%	14	Cleanups are optional under SW846 Use bias flags (H,L) <sup>(6)</sup> where appropriate

<sup>1</sup> National Functional Guidelines for Organic Data Review, October 1999

<sup>2</sup> National Functional Guidelines for Organic Data Review, June, 2008

<sup>3</sup> Organochlorine Pesticides by Gas Chromatography USEPA Method SW846 8081B, Feb 2007, Rev. 2

<sup>4</sup> SW846, Chapter 4, Organic Analytes

<sup>5</sup> Determinative Chromatographic Separations, Method 8000C, March 2003, Rev.3

<sup>6</sup> NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

Chlorinated Herbicides by GC, SW-846 Method 8151A

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Sample Handling</b>					
Cooler/Storage Temperature Preservation	4°C±2°C Protected from light	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J(pos)/UJ(ND) if > 6 deg. C (EcoChem PJ)	1	Use Professional Judgment (PJ) to qualify for temperature outlier.
Holding Time	<b>Extraction Aqueous:</b> 7 days from collection <b>Extraction Solid:</b> 14 days from collection <b>Analysis (all matrices):</b> 40 days from extraction	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J(pos)/UJ(ND) if HT exceeded J(pos)/R(ND) if gross exceedance(> 2X HT)	1	Use PJ to qualify for holding time outlier. Gross exceedance = > 2X HT, as per 1999 NFG
<b>Instrument Performance</b>					
Retention Times	Target compounds: Within RTW established by the laboratory.	NFG <sup>(1)</sup> Method <sup>(2)</sup>	NJ(pos)/R(ND) results for analytes with RT shifts	5B	Analyte RRT should be within ± 0.06 RRT units of the standard RRT (opening CCAL or midpoint ICAL standard). For full DV, use <b>PJ</b> based on examination of raw data.
Initial Calibration	5 standard minimum. Calibration may be internal or external. RSD ≤20%	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos) if > UCL J (pos)/UJ (ND) if < LCL OR r-value ≥ 0.99	5A	<b>TM-01</b> for additional information EcoChem Policy for the Evaluation of GC & HPLC Initial and Continuing Calibration using Method-Specific Control Limits. Calibration from methyl ester compounds (that have not undergone hydrolysis and esterification) will need MW correction.
Continuing Calibration (Prior to each 12 hour shift or bracketing for external standard calibration)	%D ± 20%	NFG <sup>(1)</sup> Method <sup>(2)</sup>	If > 20% (high bias): J (pos) If <20% (low bias: J (pos)/UJ (ND)	5A (H,L) <sup>3</sup>	<b>TM-01</b> for additional information EcoChem Policy for the Evaluation of GC & HPLC Initial and Continuing Calibration using Method-Specific Control Limits
<b>Blank Contamination</b>					
Method Blank (MB)	MB: One per matrix per batch of (of ≤ 20 samples) No detected compounds > RL	NFG <sup>(1)</sup> Method <sup>(2)</sup>	U(pos) if result is less than appropriate 5X action level.	7	<b>Hierarchy of blank review:</b> <b>#1 - Review MB, qualify as needed</b> <b>#2 - Review FB, qualify as needed</b> No common lab contaminants for Herbicide analyses
Field Blank (FB)	FB: frequency as per QAPP No detected compounds > RL	NFG <sup>(1)</sup> Method <sup>(2)</sup>	U(pos) if result is less than appropriate 5X action level.	6	

Chlorinated Herbicides by GC, SW-846 Method 8151A

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Precision and Accuracy</b>					
MS/MSD (recovery)	One set per matrix per batch (of ≤ 20 samples) Method acceptance criteria or project limits	NFG <sup>(1)</sup> Method <sup>(2)</sup>	Qualify parent only unless other QC indicates systematic problems J (pos) if both %R > upper control limit (UCL) J (pos)/UJ (ND) if both %R < lower control limit (LCL) J (pos)/R (ND) if both %R < 10%	8 (H,L) <sup>3</sup>	A sample duplicate may be run in place of the MSD. No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only.
MS/MSD or duplicate (RPD)	One set per matrix per batch (of ≤ 20 samples) Method acceptance criteria or project limits	NFG <sup>(1)</sup> Method <sup>(2)</sup>	Qualify parent only unless other QC indicates systematic problems. J(pos) if RPD > control limit	9	No action if parent is ND.
LCS	One per lab batch (of ≤ 20 samples) Method acceptance criteria or project limits	NFG <sup>(1)</sup> Method <sup>(2)</sup>	Qualify all associated samples J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if both %R < LCL - low bias J(pos)/R(ND) if both %R < 10% - very low bias J(pos)/UJ(ND) if one > UCL & one < LCL, with no bias <b>PJ if only one %R outlier</b>	10 (H,L) <sup>3</sup>	No action if only one spike %R is outside criteria, when LCSD is analyzed.  Qualify all associated samples.
LCS/LCSD (RPD)	One set per lab batch (of ≤ 20 samples) Method acceptance criteria or project limits	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J(pos) assoc. compound in all samples	9	
Surrogates	2,4-Dichlorophenylacetic acid (DCAA) added to every sample Method acceptance criteria or project limits	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos) if either %R > UCL J (pos)/UJ (ND) if either %R < LCL J (pos)/R (ND) if either %R < 10%	13 (H,L) <sup>3</sup>	If %R < 10% (sample dilution is a factor), use PJ
Internal Standards (if used)	Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	Method <sup>(2)</sup>	J (pos) if > 200% J (pos)/UJ (ND) if < 50% J (pos)/R (ND) if < 25% if RT > 30 seconds use PJ	19	Suggested internal standards: 4,4'-dibromooctafluorobiphenyl (DBOB) or 1,4-dichlorobenzene.
Field Duplicates	<b>Solids:</b> RPD < 50% OR difference < 2X RL (for results < 5X RL) <b>Aqueous:</b> RPD < 35% OR difference < 1X RL (for results < 5X RL)		J(pos)/UJ(ND) Qualify only field duplicate samples	9	



**Chlorinated Herbicides by GC, SW-846 Method 8151A**

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Compound Identification</b>					
Quantitation/ Identification	Between two columns: RPD < 40% or %D < 25% Within Retention Time Windows on both columns. Alternatively GC/MS may be used for confirmation.	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos) if RPD = 40% - 60% (25% - 60% for %D) NJ (pos) if > 60%R (pos) if RTW criterion not met	3 25 (false pos)	See TM-08 for additional info.
Calibration Range	Results exceed the upper calibration range	EcoChem standard policy	J (pos) if conc > high standard and sample was not diluted	20	
Calculation Check	Check 10% of field & QC sample results	EcoChem standard policy	Contact laboratory for resolution and/or corrective action	na	Full data validation only.
<b>Electronic Data Deliverable (EDD)</b>					
Verification of EDD to hardcopy data	EcoChem verify @ 10% unless problems noted; then increase level up to 100% for next several packages.	EcoChem standard policy	Depending on scope of problem, correct at EcoChem (minor issues) to resubmittal by laboratory (major issues).	na	EcoChem Project Manager and/or Database Administrator will work with lab to provide long-term corrective action.
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	EcoChem standard policy	Use "DNR" to flag results that will not be reported.	11	<b>TM-04 Rev. 1</b> EcoChem Policy for for additional info.

<sup>1</sup> National Functional Guidelines for Organic Data Review, June, 2008, based on Pesticide Review

(pos): Positive Result(s)

<sup>2</sup> Organochlorine Herbicides by GC using Methylation or Pentafluorobenzoylation Derivatization USEPA Method SW846 8151A, Dec. 1 (ND): Non-detects

<sup>3</sup> "H" = high bias indicate; "L" = low bias indicated

**Metals by ICP-AES**  
 (Based on Inorganic NFG 2010 and SW-846 6010C)

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Sample Handling</b>					
Cooler / Storage Temperature Preservation	<b>Solid:</b> Cooler temperature 4°C±2°C <b>Aqueous:</b> Nitric Acid to pH < 2 <b>Dissolved Metals:</b> 0.45 µm filter, preserve to pH < 2 after filtration	NFG <sup>(1)</sup> Method <sup>(2)</sup>	Cooler Temps: <b>If required by project</b> J (pos)/UJ (ND) if greater than 6° C Aqueous: J (pos)/UJ (ND) if pH > 2	1	Use <b>PJ</b> to qualify for temperature outlier. Current SW846 criterion is ≤ 6° C (4) No quals for pH if samples preserved by lab upon receipt and within 1 day of collection.
Holding Time	All matrices: 180 days from date sampled Frozen soils, sediments, tissues (-20°C) - HT extended to 1 year	NFG <sup>(1)</sup> Method <sup>(2)</sup> EcoChem standard policy	J (pos)/UJ (ND) if holding time exceeded	1	
<b>Instrument Performance</b>					
Initial Calibration (ICAL)	Based on instrument requirements, blank + 1 standard minimum requirement for calibration If more than 1 standard used, r ≥ 0.995	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos)/UJ (ND) if r < 0.995	5A	
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ± 10% of true value	NFG <sup>(1)</sup> Method <sup>(2)</sup>	R (pos/ND) if %R < 75% J (pos)/UJ (ND) if %R 75% - 89% J (pos) if %R > 111%	5A (H,L) <sup>3</sup>	Qualify all samples in run
Reporting Limit (RL) Standard Low Level ICV/CCV	concentration at RL %R = 70%-130%	Method <sup>(2)</sup>	J (pos) < 2x RL / R (ND) if %R < 50% J (pos) < 2x RL / UJ (ND) if %R 50 - 69% J (pos) < 2x RL if %R > 130%	5A (H,L) <sup>3</sup>	Qualify all samples in run
Continuing Calibration Verification (CCV)	Immediately following ICV/ICB, then every two hours or ten samples, and at end of run. %R within ± 10% of true value	NFG <sup>(1)</sup> Method <sup>(2)</sup>	R (pos/ND) if %R < 75% J (pos)/UJ (ND) if %R 75% - 89% J (pos) if %R > 111%	5B (H,L) <sup>3</sup>	Qualify samples bracketed by CCV outliers
Interference Check Samples (ICSA / ICSAB)	ICSAB %R 80% - 120% for all spiked elements   ICSA   < MDL for all unspiked elements	NFG <sup>(1)</sup> Method <sup>(2)</sup>	For samples with Al, Ca, Fe, Mg > ICS levels: <b>ICSAB:</b> J( pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R = 50% - 79% J (pos) if %R > 120% <b>ICSA:</b> J (pos) < 2x ICSA/UJ (ND) for ICSA < Neg MDL J (pos) < 2x ICSA for ICSA > MDL	17 (H,L) <sup>3</sup>	Use <b>PJ</b> and inter-element correction factors to evaluate ICSA to determine if bias is present. Refer to <b>TM-09</b> for additional information.

**Metals by ICP-AES**  
 (Based on Inorganic NFG 2010 and SW-846 6010C)

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Blank Contamination</b>					
Method Blank (MB)	One per matrix per batch of (of ≤ 20 samples) Blank conc < MDL	NFG <sup>(1)</sup> Method <sup>(2)</sup>	U (pos) if result is < 5X method blank concentration	7	Refer to <b>TM-02</b> for additional information. Blank Evaluation based on NFG 1994
Instrument Blanks (ICB/CCB)	After each ICV & CCV   blank concentration   < MDL	NFG <sup>(1)</sup> Method <sup>(2)</sup>	Action level is 5x absolute value of blank conc. For positive blanks: U (pos) results < action level For negative blanks: J (pos)/UJ (ND) results < action level	Pos Blanks: 7 Neg Blanks: 7L <sup>3</sup>	Use blanks bracketing samples for Qualification Refer to <b>TM-02</b> for additional information. <b>Hierarchy of blank review:</b> <b>#1 - Review MB, qualify as needed</b> <b>#2 - Review IB, qualify as needed</b> <b>#3 - Review FB, qualify as needed</b>
Field Blank (FB)	Blank conc < MDL	EcoChem standard policy	U (pos) if result is < 5x action level, as per analyte.	6	Qualify in associated field samples only. Refer to <b>TM-02</b> for additional information.
<b>Precision and Accuracy</b>					
LCS (recovery)	One per matrix per batch (of ≤ 20 samples); LCSD not required %R between 80-120%	Method <sup>(2)</sup>	J (pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R 50% - 79% J (pos) if %R > 120%	10 (H,L) <sup>3</sup>	Qualify all samples in batch QAPP may have overriding accuracy limits. NFG Limits 70% -130% (50% - 150% Ab, Ag)
LCS/LCSD (RPD)	LCSD not required, if analyzed: RPD ≤ 20%	Method <sup>(2)</sup>	J (pos)/UJ (ND) if RPD > 20%	9	Qualify all samples in batch QAPP may have overriding precision limits.
MS/MSD (recovery)	One per matrix per batch (of ≤ 20 samples); MSD not required %R between 75-125%	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos) if %R > 125% J (pos)/UJ (ND) if %R < 75% J (pos)/R (ND) if %R < 30%, unless post digestion spike analyzed, J (pos)/UJ (ND) if post digestion spike %R OK	8 (H,L) <sup>3</sup>	No action if only one spike %R is outside criteria. NA if parent concentration >4x the amount spiked. Qualify all samples in batch. QAPP may have overriding accuracy limits.

DATA VALIDATION CRITERIA

**Metals by ICP-AES**  
 (Based on Inorganic NFG 2010 and SW-846 6010C)

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Precision and Accuracy con't</b>					
Post Digestion Spikes	If MS is outside 75-125%, post-spike should be analyzed %R 80%-120% (method); 75%-125% (NFG)	NFG <sup>(1)</sup> Method <sup>(2)</sup>	Only used to support MS qualification decisions	NA	No qualifiers assigned based solely on this element.
MS/MSD (RPD)	MSD not required, if analyzed: RPD ≤ 20%	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos)/UJ (ND) if RPD > 20%	9	QAPP may have overriding precision limits.
Laboratory Duplicate	One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL  Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos)/UJ (ND) if RPD > 20% or if difference > control limit	9	Qualify all samples in batch. QAPP may have overriding precision limits.
Reference Material (RM, SRM, or CRM)	Result ±20% of the 95% confidence interval of the true value for analytes	EcoChem standard policy	J (pos)/UJ (ND) if < LCL J (pos) if > UCL	12 (H,L) <sup>3</sup>	QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits
Serial Dilution	Analyze one sample per matrix at a 5x dilution %D <10% for original sample conc. > 50x MDL	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos)/UJ (ND) if %D > 10% and native sample concentration > 50x MDL	16	Qualify all samples in batch.
Field Duplicate	Solids: RPD <50% (for results ≥ 5x RL) OR difference < 2X RL (for results < 5X RL)  Aqueous: RPD <35% (for results ≥ 5x RL) OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	Qualify only parent and field duplicate samples J (pos)/UJ (ND)	9	QAPP may have overriding precision limits. Client/QAPP may not require qualification based on field precision.

**Metals by ICP-AES**  
 (Based on Inorganic NFG 2010 and SW-846 6010C)

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Compound Quantitation</b>					
Total and Dissolved Comparison	Total > Dissolved	EcoChem standard policy	J (pos)/UJ (ND) if Dissolved > Total and results fall outside of standard duplicate precision criteria	14	
Calibration Range	Results < instrument linear range	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos) if result exceeds linear range and sample was not diluted	20	
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	EcoChem standard policy	Use "DNR" to flag results that will not be reported.	11	<b>TM-04</b> EcoChem Policy for Rejection/Selection Process for Multiple Results

<sup>1</sup> National Functional Guidelines for Inorganic Superfund Data Review, January 2010.

<sup>2</sup> Method SW846 6010C Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES), Revision 3, February 2007.

<sup>3</sup> "H" = high bias indicated; "L" = low bias indicated

<sup>4</sup> SW846, Chapter 3, Inorganic Analytes

(pos): Positive Result

(ND): Not Detected

**Mercury by CVAA**  
(Based on Inorganic NFG 2010 and SW846 7470A & 7471B)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Sample Handling</b>					
Cooler / Storage Temperature Preservation	<b>Solid:</b> Cooler temperature 4°C±2°C <b>Aqueous:</b> Nitric Acid to pH < 2 <b>Dissolved Metals:</b> 0.45 µm filter, preserve to pH < 2 after filtration	NFG <sup>(1)</sup> Method <sup>(2)</sup>	Cooler Temps: <b>If required by project</b> J (pos)/UJ (ND) if greater than 6° C Aqueous: J (pos)/UJ (ND) if pH > 2	1	Use <b>PJ</b> to qualify for temperature outlier. Current SW846 criterion is ≤ 6° C (4) No quals for pH if samples preserved by lab immediately upon receipt and within 1 day of collection.
Holding Time	28 days from date sampled Frozen solids and tissues HT extended to 6 months	NFG <sup>(1)</sup> Method <sup>(2)</sup> EcoChem standard policy	J (pos)/UJ (ND) if HT exceeded	1	
<b>Instrument Performance</b>					
Initial Calibration (ICAL)	Daily Calibration Blank + 5 standards, one ≤ RL Correlation coefficient (r) ≥ 0.995	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos)/UJ (ND) if r < 0.995	5A (H,L) <sup>3</sup>	
Initial Calibration Verification (ICV)	Independent source analyzed immediately after ICAL %R within ± 15% of true value	NFG <sup>(1)</sup> Method <sup>(2)</sup>	R(pos/ND) if %R < 70% J(pos)/UJ(ND) if %R = 70-84% J(pos) if %R = > 116%	5A (H,L) <sup>3</sup>	Qualify all samples in run
Reporting Limit (RL) Standard	Conc = RL %R = 70-130%	Method <sup>(2)</sup>	J (pos) < 2x RL / R (ND) if %R < 50% J (pos) < 2x RL / UJ (ND) if %R 50 - 69% J (pos) < 2x RL if %R > 130%	5A (H,L) <sup>3</sup>	Qualify all samples in run
Continuing Calibration Verification (CCV)	At beginning of run, every ten samples, and again after last sample. %R within ± 15% of true value	NFG <sup>(1)</sup> Method <sup>(2)</sup>	R(pos/ND) if %R < 70% J(pos)/UJ(ND) if %R = 70-84% J(pos) if %R = > 116%	5B (H,L) <sup>3</sup>	Qualify samples bracketed by CCV outliers
<b>Blank Contamination</b>					
Method Blank (MB)	One per matrix per batch of (of ≤ 20 samples) Blank conc < MDL	NFG <sup>(1)</sup> Method <sup>(2)</sup>	U (pos) if result is < 5X method blank concentration	7	Refer to <b>TM-02</b> for additional information. Blank Evaluation based on NFG 1994

**Mercury by CVAA**  
 (Based on Inorganic NFG 2010 and SW846 7470A & 7471B)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Instrument Blanks (ICB/CCB)	After each ICV & CCV   blank concentration   < MDL	NFG <sup>(1)</sup> Method <sup>(2)</sup>	Action level is 5x absolute value of blank conc. For positive blanks: U (pos) results < action level For negative blanks: J (pos)/UJ (ND) results < action level	Pos Blanks: 7 Neg Blanks: 7L <sup>3</sup>	Use blanks bracketing samples for Qualification Refer to <b>TM-02</b> for additional information.  <b>Hierarchy of blank review:</b> <b>#1 - Review MB, qualify as needed</b> <b>#2 - Review IB, qualify as needed</b> <b>#3 - Review FB, qualify as needed</b>
Field Blank (FB)	Blank conc < MDL	EcoChem standard policy	U (pos) if result is < 5x action level, as per analyte.	6	Qualify in associated field samples only. Refer to <b>TM-02</b> for additional information.
<b>Precision and Accuracy</b>					
Laboratory Control Sample (recovery)	One per matrix per batch (of ≤ 20 samples); LCSD not required %R between 80-120%	Method <sup>(2)</sup>	J (pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R 50% - 79% J (pos) if %R > 120%	10 (H,L) <sup>3</sup>	Qualify all samples in batch QAPP may have overriding accuracy limits. NFG does not address LCS
LCS/LCSD (RPD)	LCSD not required, if analyzed: RPD ≤ 20%	Method <sup>(2)</sup>	J (pos)/UJ (ND) if RPD > 20%	9	Qualify all samples in batch QAPP may have overriding precision limits.
Matrix Spike/Matrix Spike Duplicate MS/MSD (recovery)	One per matrix per batch (of ≤ 20 samples); MSD not required %R between 75-125%	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos) if %R > 125% J (pos)/UJ (ND) if %R < 75% J (pos)/R (ND) if %R < 30%	8 (H,L) <sup>3</sup>	No action if only one spike %R is outside criteria. NA if parent concentration > 4x the amount spiked. Qualify all samples in batch. QAPP may have overriding accuracy limits.
MS/MSD (RPD)	MSD not required, if analyzed: RPD ≤ 20%	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos)/UJ (ND) if RPD > 20%	9	QAPP may have overriding precision limits.
Laboratory Duplicate	One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL  Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos)/UJ (ND) if RPD > 20% or if difference > control limit	9	Qualify all samples in batch. QAPP may have overriding precision limits.

**Mercury by CVAA**  
**(Based on Inorganic NFG 2010 and SW846 7470A & 7471B)**

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Reference Material (RM, SRM, or CRM)	Result ±20% of the 95% confidence interval of the true value for analytes	EcoChem standard policy	J (pos)/UJ (ND) if < LCL J (pos) if > UCL	12 (H,L) <sup>3</sup>	QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits
Field Duplicate	Solids: RPD <50% (for results ≥ 5x RL) OR difference < 2X RL (for results < 5X RL)  Aqueous: RPD <35% (for results ≥ 5x RL) OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	Qualify only parent and field duplicate samples J (pos)/UJ (ND)	9	QAPP may have overriding precision limits. Client/QAPP may not require qualification based on field precision.
<b>Compound Quantitation</b>					
Total and Dissolved Comparison	Total > Dissolved	EcoChem standard policy	J (pos)/UJ (ND) if Dissolved > Total and results fall outside of standard duplicate precision criteria	14	
Calibration Range	Results < instrument linear range	NFG <sup>(1)</sup> Method <sup>(2)</sup>	if result exceeds linear range and sample was not diluted J (pos)	20	
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	EcoChem standard policy	Use "DNR" to flag results that will not be reported.	11	<b>TM-04</b> EcoChem Policy for Rejection/Selection Process for Multiple Results

<sup>1</sup> National Functional Guidelines for Inorganic Superfund Data Review, January 2010.

<sup>2</sup> Method SW846 7470A Mercury in Liquid Waste (Manual Cold-Vapor Technique), Revision 1, September 1994.  
 Method SW846 7471B Mercury in Solid or Semisolid Waste (Manual Cold-Vapor Technique), Revision 2, February 2007.

<sup>3</sup> "H" = high bias indicated; "L" = low bias indicated

<sup>4</sup> SW846, Chapter 3, Inorganic Analytes

(pos): Positive Result  
 (ND): Not Detected



**Conventional Methods by Colorimetric and Titrimetric Analyses (i.e., ammonia, cyanide, sulfide)  
 (Based on Inorganic NFG 2010 and EPA methods)**

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Sample Handling</b>					
Cooler/Storage Temperature Preservation	Cooler temperature: 4°C±2°C Preservation: Analyte/Method Specific	Method <sup>(1)</sup> NFG <sup>(2)</sup>	J (pos)/UJ (ND) if preservation requirements not met	1	Use <b>PJ</b> to qualify for cooler temp outliers.
Holding Time	Analyte/Method Specific	Method <sup>(1)</sup> NFG <sup>(2)</sup>	J (pos)/UJ (ND) if holding time exceeded	1	
<b>Instrument Performance</b>					
Initial Calibration (ICAL)	Where applicable to method r ≥ 0.995	Method <sup>(1)</sup> NFG <sup>(2)</sup>	J (pos)/UJ (ND) for r < 0.995	5A	Qualify all samples in run
Initial Calibration Verification (ICV)	Where applicable to method Independent source analyzed immediately after calibration %R method specific	Method <sup>(1)</sup> NFG <sup>(2)</sup>	J (pos)/UJ (ND) if %R < LCL J (pos) if %R > UCL	5A (H,L) <sup>3</sup>	Qualify all samples in run
Continuing Calibration Verification (CCV)	Where applicable to method Beginning of run, every ten samples, and end of run %R method specific	Method <sup>(1)</sup> NFG <sup>(2)</sup>	J(POS)/UJ(ND) if %R < LCL J(POS) if %R > UCL	5B (H,L) <sup>3</sup>	Qualify samples bracketed by CCV outliers
<b>Blank Contamination</b>					
Method Blank (MB)	One per matrix per batch of (of ≤ 20 samples) Blank conc < MDL	NFG <sup>(1)</sup> Method <sup>(2)</sup>	U (pos) if result is < 5X method blank concentration	7	Refer to <b>TM-02</b> for additional information. Blank Evaluation based on NFG 1994
Field Blank (FB)	Blank conc < MDL	EcoChem standard policy	U (pos) if result is < 5x action level, as per analyte.	6	Qualify in associated field samples only. Refer to <b>TM-02</b> for additional information.

**Conventional Methods by Colorimetric and Titrimetric Analyses (i.e., ammonia, cyanide, sulfide)  
 (Based on Inorganic NFG 2010 and EPA methods)**

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Precision and Accuracy</b>					
Laboratory Control Sample (LCS) If appropriate to method	One per matrix per batch (of ≤ 20 samples) method control limits	Method <sup>(1)</sup> NFG <sup>(2)</sup>	J (pos)/UJ (ND) if < LCL J (pos) if > UCL	10 (H,L) <sup>3</sup>	Qualify all samples in batch QAPP may have overriding accuracy limits.
Reference Material (RM, SRM, or CRM)	Result ±20% of the 95% confidence interval of the true value for analytes	EcoChem standard policy	J (pos)/UJ (ND) if < LCL J (pos) if > UCL	12 (H,L) <sup>3</sup>	QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits
Matrix Spike/ Matrix Spike Duplicate MS/MSD (recovery)	Where applicable to method, MSD may not be required: One per matrix per batch (of ≤ 20 samples) method control limits	Method <sup>(1)</sup> NFG <sup>(2)</sup>	J (pos)/UJ (ND) if < LCL J (pos) if > UCL	8 (H,L) <sup>3</sup>	No action if only one spike %R is outside criteria. NA if parent concentration >4x the amount spiked. Qualify all samples in batch. QAPP may have overriding accuracy limits.
Laboratory Duplicate (or MS/MSD)	One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL  Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL	Method <sup>(1)</sup> NFG <sup>(2)</sup>	J (pos)/UJ (ND) if RPD > 20% or difference > control limit	9	Qualify all samples in batch. QAPP may have overriding precision limits
Field Duplicate	Solids: RPD <50% (for results ≥ 5x RL) OR difference < 2X RL (for results < 5X RL)  Aqueous: RPD <35% (for results ≥ 5x RL) OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	Qualify only parent and field duplicate samples J (pos)/UJ (ND)	9	QAPP may have overriding precision limits. Client/QAPP may not require qualification based on field precision.

**Conventional Methods by Colorimetric and Titrimetric Analyses (i.e., ammonia, cyanide, sulfide)  
 (Based on Inorganic NFG 2010 and EPA methods)**

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Compound Quantitation</b>					
Linear Range	Sample concentrations must be less than the highest calibration standard	NFG <sup>(1)</sup> Method <sup>(2)</sup>	If result exceeds linear range & sample not diluted J (pos)	20	
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte per sample	EcoChem standard policy	Use "DNR" to flag results that will not be reported.	11	

<sup>1</sup> National Functional Guidelines for Inorganic Superfund Data Review, January 2010.

<sup>2</sup> SW846 or EPA Standard Methods

<sup>3</sup> "H" = high bias indicated; "L" = low bias indicated

(pos): Positive Result

(ND): Not Detected

**Conventional Analyses by Probe (i.e., pH, conductivity, dissolved oxygen)  
 (Based Inorganic NFG 2010 and EPA Methods)**

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Sample Handling</b>					
Cooler/Storage Temperature Preservation	Cooler temperature: 4°C±2°C Preservation: Analyte/Method Specific	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos)/UJ (ND) if preservation requirements not met	1	Use <b>PJ</b> to qualify for cooler temp outliers.
Holding Time	Analyte/Method Specific	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos)/UJ (ND) if holding time exceeded	1	
<b>Instrument Performance/Accuracy</b>					
Calibration	Where applicable to method probe calibrated according to manufacturer specifications	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos)/UJ (ND) if not calibrated	5A	
Calibration Verification/ Laboratory Control Sample	Where applicable to method check standard analyzed to verify calibration of probe	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J(D)/UJ(ND) if %R < LCL J(D) if %R > UCL	5B (H,L) <sup>3</sup>	H for high bias; L for low bias
<b>Precision</b>					
Laboratory Duplicate	One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL  Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL	Method <sup>(1)</sup> NFG <sup>(2)</sup>	J (pos)/UJ (ND) if RPD > 20% or difference > control limit	9	Qualify all samples in batch. QAPP may have overriding precision limits
Field Duplicate	Solids: RPD <50% (for results ≥ 5x RL) OR difference < 2X RL (for results < 5X RL)  Aqueous: RPD <35% (for results ≥ 5x RL) OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	Qualify only parent and field duplicate samples J (pos)/UJ (ND)	9	QAPP may have overriding precision limits. Client/QAPP may not require qualification based on field precision.

**Conventional Analyses by Probe (i.e., pH, conductivity, dissolved oxygen)  
 (Based Inorganic NFG 2010 and EPA Methods)**

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Compound Quantitation</b>					
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	EcoChem standard policy	Use "DNR" to flag results that will not be reported	11	na

<sup>1</sup> National Functional Guidelines for Inorganic Superfund Data Review, January 2010.

<sup>2</sup> SW846 or EPA Standard Methods

<sup>3</sup> "H" = high bias indicated; "L" = low bias indicated

(pos): Positive Result

(ND): Not Detected

**Conventional Methods by Gravimetric Analysis**  
**(i.e., Total Solids, Total Dissolved Solids, Total Suspended Solids, Grain Size)**  
**(Based on Inorganic NFG 2010 and EPA methods)**

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
<b>Sample Handling</b>					
Cooler/Storage Temperature Preservation	Cooler temperature: 4°C±2°C Preservation: Analyte/Method Specific	Method <sup>(1)</sup> NFG <sup>(2)</sup>	J (pos)/UJ (ND) if preservation requirements not met	1	Use <b>PJ</b> to qualify for cooler temp outliers.
Holding Time	Analyte/Method Specific	Method NFG <sup>(2)</sup>	J (pos)/UJ (ND) if holding time exceeded	1	
<b>Blank Contamination</b>					
Method Blank (MB)	If required by method, one per matrix per batch of (of ≤ 20 samples) Blank conc < MDL	NFG <sup>(1)</sup> Method <sup>(2)</sup>	U (pos) if result is < 5X method blank concentration	7	Refer to <b>TM-02</b> for additional information. Blank Evaluation based on NFG 1994
<b>Precision and Accuracy</b>					
LCS (If appropriate to method)	One per matrix per batch (of ≤ 20 samples) %R between 80-120%	Method <sup>(2)</sup>	J (pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R 50% - 79% J (pos) if %R > 120%	10 (H,L) <sup>3</sup>	Qualify all samples in batch QAPP may have overriding accuracy limits.
Reference Material (RM, SRM, or CRM)	Result ±20% of the 95% confidence interval of the true value for analytes	EcoChem standard policy	J (pos)/UJ (ND) if < LCL J (pos) if > UCL	12 (H,L) <sup>3</sup>	QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits

**Conventional Methods by Gravimetric Analysis  
 (i.e., Total Solids, Total Dissolved Solids, Total Suspended Solids, Grain Size)  
 (Based on Inorganic NFG 2010 and EPA methods)**

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
Laboratory Duplicate	One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL  Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL	NFG <sup>(1)</sup> Method <sup>(2)</sup>	J (pos)/UJ (ND) if RPD > 20% For Grain Size, no action if results for fraction are less than 5%	9	Qualify all samples in batch, except Grain Size - qualify parent only. QAPP may have overriding precision limits.
Field Duplicate	Solids: RPD < 50% (for results ≥ 5x RL) OR difference < 2X RL (for results < 5X RL)  Aqueous: RPD < 35% (for results ≥ 5x RL) OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	Qualify only parent and field duplicate samples J (pos)/UJ (ND)	9	QAPP may have overriding precision limits. Client/QAPP may not require qualification based on field precision.
<b>Compound Quantitation</b>					
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte per sample	EcoChem standard policy	Use "DNR" to flag results that will not be reported.	11	

<sup>1</sup> National Functional Guidelines for Inorganic Superfund Data Review, January 2010.

<sup>2</sup> SW846 or EPA Standard Methods

<sup>3</sup> "H" = high bias indicated; "L" = low bias indicated

(pos): Positive Result  
 (ND): Not Detected



**ECO-CHEM**  
Data Quality

## **APPENDIX B**

# **QUALIFIED DATA SUMMARY TABLE**



**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801018	SL0500	E1801018-001	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.706	ng/kg	JK	U	25
E1801018	SL0500	E1801018-001	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	12.5	ng/kg	K	U	25
E1801018	SL0500	E1801018-001	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	1.4	ng/kg	JK	U	25
E1801018	SL0500	E1801018-001	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	1.09	ng/kg	JK	U	25
E1801018	SL0500	E1801018-001	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.845	ng/kg	JK	U	25
E1801018	SL0500	E1801018-001	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.542	ng/kg	JK	U	25
E1801018	SL0501	E1801018-002	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1.55	ng/kg	K	U	25
E1801018	SL0501	E1801018-002	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.341	ng/kg	JK	U	25
E1801018	SL0501	E1801018-002	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	1.78	ng/kg	JK	U	25
E1801018	SL0501	E1801018-002	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.752	ng/kg	JK	U	25
E1801018	SL0501	E1801018-002	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.208	ng/kg	BJK	U	25
E1801018	SL0501	E1801018-002	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.486	ng/kg	JK	U	25
E1801018	SL0501	E1801018-002	EPA1613B	Octachlorodibenzofuran	5.19	ng/kg	JK	U	25
E1801018	SL0502	E1801018-003	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.804	ng/kg	JK	U	25
E1801018	SL0502	E1801018-003	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.504	ng/kg	JK	U	25
E1801018	SL0502	E1801018-003	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	1.81	ng/kg	K	U	25
E1801018	SL0503	E1801018-004	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.349	ng/kg	BJK	U	25
E1801018	SL0503	E1801018-004	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	2.81	ng/kg	K	U	25
E1801018	SL0503	E1801018-004	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.137	ng/kg	BJK	U	25
E1801018	SL0504	E1801018-005	EPA1613B	Octachlorodibenzofuran	2	ng/kg	BJK	U	25
E1801018	SL0504	E1801018-005	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.082	ng/kg	BJK	U	25
E1801018	SL0504	E1801018-005	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.286	ng/kg	BJK	U	25
E1801018	SL0505	E1801018-006	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.641	ng/kg	JK	U	25
E1801018	SL0505	E1801018-006	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	1.21	ng/kg	K	U	25
E1801018	SL0506	E1801018-007	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.125	ng/kg	BJK	U	25
E1801018	SL0506	E1801018-007	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.538	ng/kg	JK	U	25
E1801018	SL0506	E1801018-007	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.308	ng/kg	JK	U	25
E1801018	SL0506	E1801018-007	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.311	ng/kg	BJK	U	25
E1801018	SL0507	E1801018-008	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.0639	ng/kg	BJK	U	25
E1801018	SL0507	E1801018-008	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.324	ng/kg	BJK	U	25

**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801018	SL0507	E1801018-008	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.372	ng/kg	BJK	U	25
E1801018	SL0507	E1801018-008	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	0.644	ng/kg	K	U	25
E1801018	SL0508	E1801018-009	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.508	ng/kg	JK	U	25
E1801018	SL0508	E1801018-009	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.528	ng/kg	JK	U	25
E1801018	SL0508	E1801018-009	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.328	ng/kg	JK	U	25
E1801018	SL0508	E1801018-009	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.131	ng/kg	JK	U	25
E1801018	SL0508	E1801018-009	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	1.2	ng/kg	JK	U	25
E1801018	SL0508	E1801018-009	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.299	ng/kg	BJK	U	25
E1801018	SL0508	E1801018-009	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.708	ng/kg	BJK	U	25
E1801038	SL0519	E1801038-001	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.344	ng/kg	JK	U	25
E1801038	SL0519	E1801038-001	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.0928	ng/kg	BJK	U	25
E1801038	SL0519	E1801038-001	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.216	ng/kg	JK	U	25
E1801038	SL0519	E1801038-001	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.106	ng/kg	BJK	U	25
E1801038	SL0519	E1801038-001	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.279	ng/kg	JK	U	25
E1801038	SL0519	E1801038-001	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.0489	ng/kg	JK	U	25
E1801038	SL0519	E1801038-001	EPA1613B	Octachlorodibenzofuran	1.01	ng/kg	BJK	U	25
E1801038	SL0520	E1801038-002	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.0571	ng/kg	JK	U	25
E1801038	SL0520	E1801038-002	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1.35	ng/kg	K	UJ	13L,25
E1801038	SL0520	E1801038-002	EPA1613B	Octachlorodibenzofuran	0.646	ng/kg	BJ	J	9
E1801038	SL0520	E1801038-002	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.158	ng/kg	BJK	U	25
E1801038	SL0520	E1801038-002	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	3.27	ng/kg	K	UJ	13L,25
E1801038	SL0520	E1801038-002	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.0608	ng/kg	JK	U	25
E1801038	SL0521	E1801038-003	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.253	ng/kg	JK	U	25
E1801038	SL0521	E1801038-003	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.278	ng/kg	BJK	U	25
E1801038	SL0521	E1801038-003	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.178	ng/kg	BJK	U	25
E1801038	SL0521	E1801038-003	EPA1613B	Octachlorodibenzofuran	1.96	ng/kg	BJK	U	25
E1801038	SL0522	E1801038-004	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.11	ng/kg	JK	U	25
E1801038	SL0522	E1801038-004	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	2.49	ng/kg	K	U	25
E1801038	SL0522	E1801038-004	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.638	ng/kg	JK	U	25
E1801038	SL0522	E1801038-004	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.166	ng/kg	BJK	U	25

**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801038	SL0522	E1801038-004	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.184	ng/kg	JK	U	25
E1801038	SL0522	E1801038-004	EPA1613B	Octachlorodibenzofuran	2.73	ng/kg	JK	U	25
E1801038	SL0522	E1801038-004	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.393	ng/kg	JK	U	25
E1801038	SL0523	E1801038-005	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.131	ng/kg	JK	U	25
E1801038	SL0523	E1801038-005	EPA1613B	Octachlorodibenzofuran	18.8	ng/kg		J	9
E1801038	SL0523	E1801038-005	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.0639	ng/kg	JK	U	25
E1801038	SL0523	E1801038-005	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	ng/kg	JK	U	25
E1801038	SL0523	E1801038-005	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.152	ng/kg	JK	U	25
E1801038	SL0523	E1801038-005	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.303	ng/kg	BJK	U	25
E1801038	SL0523	E1801038-005	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.108	ng/kg	JK	U	25
E1801038	SL0524	E1801038-006	EPA1613B	Octachlorodibenzofuran	0.729	ng/kg	BJK	U	25
E1801038	SL0524	E1801038-006	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.116	ng/kg	JK	U	25
E1801038	SL0524	E1801038-006	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.79	ng/kg	K	U	25
E1801038	SL0524	E1801038-006	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.204	ng/kg	JK	U	25
E1801038	SL0524	E1801038-006	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.128	ng/kg	JK	U	25
E1801038	SL0524	E1801038-006	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.126	ng/kg	JK	U	25
E1801038	SL0524	E1801038-006	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.145	ng/kg	BJK	U	25
E1801038	SL0524	E1801038-006	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.199	ng/kg	JK	U	25
E1801038	SL0524	E1801038-006	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.185	ng/kg	BJK	U	25
E1801038	SL0524	E1801038-006	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.24	ng/kg	JK	U	25
E1801038	SL0525	E1801038-007	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	2.01	ng/kg	K	U	25
E1801038	SL0525	E1801038-007	EPA1613B	Octachlorodibenzofuran	0.441	ng/kg	BJK	U	25
E1801038	SL0525	E1801038-007	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.0537	ng/kg	JK	U	25
E1801038	SL0525	E1801038-007	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.227	ng/kg	JK	U	25
E1801038	SL0525	E1801038-007	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.0637	ng/kg	BJ	U	7
E1801038	SL0525	E1801038-007	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.071	ng/kg	JK	U	25
E1801038	SL0525	E1801038-007	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	3.48	ng/kg	K	U	25
E1801038	SL0525	E1801038-007	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.121	ng/kg	JK	U	25
E1801038	SL0526	E1801038-008	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.177	ng/kg	JK	U	25
E1801038	SL0526	E1801038-008	EPA1613B	Octachlorodibenzofuran	0.377	ng/kg	BJK	U	25

**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801038	SL0526	E1801038-008	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	1.97	ng/kg		J	13L
E1801038	SL0526	E1801038-008	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1.12	ng/kg		J	13L
E1801038	SL0526	E1801038-008	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.0427	ng/kg	JK	U	25
E1801038	SL0526	E1801038-008	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.278	ng/kg	JK	U	25
E1801038	SL0526	E1801038-008	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.0756	ng/kg	BJK	U	25
E1801038	SL0526	E1801038-008	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.114	ng/kg	JK	U	25
E1801038	SL0527	E1801038-009	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.0751	ng/kg	BJK	U	25
E1801038	SL0527	E1801038-009	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.032	ng/kg	BJK	U	25
E1801038	SL0527	E1801038-009	EPA1613B	Octachlorodibenzofuran	0.362	ng/kg	BJK	U	25
E1801038	SL0528	E1801038-010	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.108	ng/kg	JK	U	25
E1801038	SL0528	E1801038-010	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.847	ng/kg	K	U	25
E1801038	SL0528	E1801038-010	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.107	ng/kg	JK	U	25
E1801038	SL0528	E1801038-010	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.546	ng/kg	BJK	U	25
E1801038	SL0528	E1801038-010	EPA1613B	Octachlorodibenzofuran	12.1	ng/kg	K	U	25
E1801038	SL0529	E1801038-011	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.137	ng/kg	JK	U	25
E1801038	SL0529	E1801038-011	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.137	ng/kg	BJ	U	7
E1801038	SL0529	E1801038-011	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.239	ng/kg	JK	U	25
E1801038	SL0529	E1801038-011	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	2.72	ng/kg	K	UJ	13L,25
E1801038	SL0529	E1801038-011	EPA1613B	Octachlorodibenzofuran	0.564	ng/kg	BJK	U	25
E1801038	SL0530	E1801038-012	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.132	ng/kg	JK	U	25
E1801038	SL0530	E1801038-012	EPA1613B	Octachlorodibenzofuran	0.337	ng/kg	BJK	U	25
E1801038	SL0530	E1801038-012	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.104	ng/kg	BJK	U	25
E1801038	SL0530	E1801038-012	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.148	ng/kg	JK	U	25
E1801038	SL0531	E1801038-013	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.0955	ng/kg	BJK	U	25
E1801038	SL0531	E1801038-013	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.428	ng/kg	JK	U	25
E1801038	SL0531	E1801038-013	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.0834	ng/kg	JK	U	25
E1801038	SL0531	E1801038-013	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.778	ng/kg	K	U	25
E1801038	SL0531	E1801038-013	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	2.6	ng/kg		J	13L
E1801038	SL0531	E1801038-013	EPA1613B	Octachlorodibenzofuran	1.46	ng/kg	BJK	U	25
E1801038	SL0531	E1801038-013	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.166	ng/kg	JK	U	25

**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801038	SL0532	E1801038-014	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.166	ng/kg	JK	U	25
E1801038	SL0532	E1801038-014	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.511	ng/kg	JK	U	25
E1801038	SL0532	E1801038-014	EPA1613B	Octachlorodibenzofuran	1.18	ng/kg	BJK	U	25
E1801038	SL0533	E1801038-015	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.0894	ng/kg	BJ	U	7
E1801038	SL0533	E1801038-015	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1.07	ng/kg	K	U	25
E1801038	SL0533	E1801038-015	EPA1613B	Octachlorodibenzofuran	0.299	ng/kg	BJ	J	9
E1801038	SL0533	E1801038-015	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.0489	ng/kg	JK	U	25
E1801038	SL0533	E1801038-015	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	2.3	ng/kg	K	UJ	13L,25
E1801038	SL0534	E1801038-016	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.276	ng/kg	BJK	U	25
E1801038	SL0534	E1801038-016	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.0899	ng/kg	JK	U	25
E1801038	SL0534	E1801038-016	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	2.78	ng/kg	U	UJ	13L
E1801038	SL0534	E1801038-016	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.33	ng/kg	JK	U	25
E1801038	SL0534	E1801038-016	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.202	ng/kg	JK	U	25
E1801038	SL0534	E1801038-016	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1.49	ng/kg	K	U	25
E1801038	SL0534	E1801038-016	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	3.18	ng/kg		J	13L
E1801038	SL0534	E1801038-016	EPA1613B	Octachlorodibenzofuran	1.08	ng/kg	BJ	J	9
E1801038	SL0535	E1801038-017	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.195	ng/kg	JK	U	25
E1801038	SL0535	E1801038-017	EPA1613B	Octachlorodibenzofuran	0.789	ng/kg	BJ	J	9
E1801038	SL0535	E1801038-017	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.882	ng/kg	K	U	25
E1801038	SL0535	E1801038-017	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.144	ng/kg	JK	U	25
E1801038	SL0535	E1801038-017	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.147	ng/kg	BJ	U	7
E1801038	SL0535	E1801038-017	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.193	ng/kg	JK	U	25
E1801038	SL0536	E1801038-018	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.165	ng/kg	JK	U	25
E1801038	SL0536	E1801038-018	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.0912	ng/kg	JK	U	25
E1801038	SL0536	E1801038-018	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.0663	ng/kg	JK	U	25
E1801038	SL0536	E1801038-018	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.255	ng/kg	JK	U	25
E1801038	SL0536	E1801038-018	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.33	ng/kg	JK	U	25
E1801038	SL0536	E1801038-018	EPA1613B	Octachlorodibenzofuran	1.06	ng/kg	JK	U	25
E1801038	SL0537	E1801038-019	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.0844	ng/kg	JK	U	25
E1801038	SL0537	E1801038-019	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.0274	ng/kg	JK	U	25

**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801038	SL0537	E1801038-019	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.282	ng/kg	JK	U	25
E1801038	SL0537	E1801038-019	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.0462	ng/kg	JK	U	25
E1801038	SL0537	E1801038-019	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.0688	ng/kg	JK	U	25
E1801038	SL0537	E1801038-019	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.0961	ng/kg	JK	U	25
E1801038	SL0537	E1801038-019	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.0534	ng/kg	JK	U	25
E1801038	SL0515	E1801038-020	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.0743	ng/kg	JK	U	25
E1801038	SL0515	E1801038-020	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.163	ng/kg	JK	U	25
E1801038	SL0515	E1801038-020	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.12	ng/kg	JK	U	25
E1801038	SL0515	E1801038-020	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.0601	ng/kg	JK	U	25
E1801038	SL0515	E1801038-020	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.199	ng/kg	JK	U	25
E1801038	SL0515	E1801038-020	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.139	ng/kg	JK	U	25
E1801038	SL0515	E1801038-020	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.147	ng/kg	JK	U	25
E1801038	SL0515	E1801038-020	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.0841	ng/kg	JK	U	25
E1801038	SL0515	E1801038-020	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.0677	ng/kg	JK	U	25
E1801038	SL0516	E1801038-021	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.128	ng/kg	JK	U	25
E1801038	SL0516	E1801038-021	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	0.546	ng/kg	JK	U	25
E1801038	SL0516	E1801038-021	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.116	ng/kg	JK	U	25
E1801038	SL0516	E1801038-021	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.136	ng/kg	JK	U	25
E1801038	SL0516	E1801038-021	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.141	ng/kg	JK	U	25
E1801038	SL0516	E1801038-021	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.0986	ng/kg	JK	U	25
E1801038	SL0516	E1801038-021	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.131	ng/kg	JK	U	25
E1801038	SL0516	E1801038-021	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.105	ng/kg	JK	U	25
E1801038	SL0517	E1801038-022	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.16	ng/kg	JK	U	25
E1801038	SL0517	E1801038-022	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.374	ng/kg	JK	U	25
E1801038	SL0517	E1801038-022	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.0837	ng/kg	JK	U	25
E1801038	SL0517	E1801038-022	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.104	ng/kg	JK	U	25
E1801038	FW0050	E1801038-023	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	2.45	pg	JK	U	25
E1801038	FW0050	E1801038-023	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	7.42	pg	JK	U	25
E1801038	FW0050	E1801038-023	EPA1613B	Octachlorodibenzofuran	91.3	pg	BJ	U	7
E1801040	SL0509	E1801040-001	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.102	ng/kg	JK	U	25

**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801040	SL0509	E1801040-001	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.239	ng/kg	JK	U	25
E1801040	SL0509	E1801040-001	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.0948	ng/kg	JK	U	25
E1801040	SL0509	E1801040-001	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.071	ng/kg	JK	U	25
E1801040	SL0509	E1801040-001	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.125	ng/kg	JK	U	25
E1801040	SL0509	E1801040-001	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.292	ng/kg	JK	U	25
E1801040	SL0509	E1801040-001	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.285	ng/kg	JK	U	25
E1801040	SL0509	E1801040-001	EPA1613B	Octachlorodibenzo-p-dioxin	155	ng/kg		J	13L
E1801040	SL0509	E1801040-001	EPA1613B	Octachlorodibenzofuran	2.98	ng/kg	JK	UJ	13L,25
E1801040	SL0510	E1801040-002	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.125	ng/kg	JK	U	25
E1801040	SL0510	E1801040-002	EPA1613B	Octachlorodibenzofuran	1.17	ng/kg	JK	U	25
E1801040	SL0510	E1801040-002	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.161	ng/kg	JK	U	25
E1801040	SL0510	E1801040-002	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.431	ng/kg	JK	U	25
E1801040	SL0511	E1801040-003	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.0778	ng/kg	JK	U	25
E1801040	SL0511	E1801040-003	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.342	ng/kg	JK	U	25
E1801040	SL0511	E1801040-003	EPA1613B	Octachlorodibenzofuran	1.88	ng/kg	JK	U	25
E1801040	SL0512	E1801040-004	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.243	ng/kg	JK	U	25
E1801040	SL0512	E1801040-004	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.105	ng/kg	JK	U	25
E1801040	SL0512	E1801040-004	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.0583	ng/kg	JK	U	25
E1801040	SL0512	E1801040-004	EPA1613B	Octachlorodibenzofuran	1.84	ng/kg	JK	U	25
E1801040	SL0512	E1801040-004	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.0634	ng/kg	JK	U	25
E1801040	SL0513	E1801040-005	EPA1613B	Octachlorodibenzofuran	2.9	ng/kg	JK	U	25
E1801040	SL0513	E1801040-005	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	2.89	ng/kg	U	UJ	13L
E1801040	SL0513	E1801040-005	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.262	ng/kg	JK	U	25
E1801040	SL0513	E1801040-005	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.177	ng/kg	JK	U	25
E1801040	SL0513	E1801040-005	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.501	ng/kg	JK	U	25
E1801040	SL0513	E1801040-005	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	1.35	ng/kg	K	U	25
E1801040	SL0513	E1801040-005	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.449	ng/kg	JK	U	25
E1801040	SL0514	E1801040-006	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.07	ng/kg	JK	U	25
E1801040	SL0514	E1801040-006	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.188	ng/kg	JK	U	25
E1801040	SL0514	E1801040-006	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.152	ng/kg	JK	U	25

**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801040	SL0514	E1801040-006	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.449	ng/kg	JK	U	25
E1801040	SL0514	E1801040-006	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.143	ng/kg	JK	U	25
E1801040	SL0514	E1801040-006	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.213	ng/kg	JK	U	25
E1801040	SL0518	E1801040-007	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.144	ng/kg	JK	U	25
E1801040	SL0518	E1801040-007	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.104	ng/kg	JK	U	25
E1801040	SL0518	E1801040-007	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.0935	ng/kg	JK	U	25
E1801040	SL0518	E1801040-007	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.159	ng/kg	JK	U	25
E1801040	SL0518	E1801040-007	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.917	ng/kg	JK	U	25
E1801040	SL0518	E1801040-007	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.193	ng/kg	JK	U	25
E1801040	SL0518	E1801040-007	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.0789	ng/kg	JK	U	25
E1801046	SL0539	E1801046-001	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.258	ng/kg	JK	U	25
E1801046	SL0539	E1801046-001	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.728	ng/kg	JK	U	25
E1801046	SL0539	E1801046-001	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.487	ng/kg	JK	U	25
E1801046	SL0539	E1801046-001	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	3.5	ng/kg	K	U	25
E1801046	SL0540	E1801046-002	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	2.24	ng/kg	JK	U	25
E1801046	SL0540	E1801046-002	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	1.03	ng/kg	JK	U	25
E1801046	SL0541	E1801046-003	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.633	ng/kg	JK	U	25
E1801046	SL0541	E1801046-003	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	1.7	ng/kg	JK	U	25
E1801046	SL0542	E1801046-004	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.257	ng/kg	JK	U	25
E1801046	SL0542	E1801046-004	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.717	ng/kg	JK	U	25
E1801046	SL0542	E1801046-004	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.783	ng/kg	JK	U	25
E1801046	SL0542	E1801046-004	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	7.67	ng/kg	K	U	25
E1801046	SL0543	E1801046-005	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.238	ng/kg	JK	U	25
E1801046	SL0543	E1801046-005	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.975	ng/kg	JK	U	25
E1801046	SL0544	E1801046-006	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.179	ng/kg	JK	U	25
E1801046	SL0544	E1801046-006	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.05	ng/kg	JP	J	23
E1801046	SL0544	E1801046-006	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.743	ng/kg	JK	U	25
E1801046	SL0544	E1801046-006	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.102	ng/kg	JK	U	25
E1801046	SL0544	E1801046-006	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	1.14	ng/kg	JK	U	25
E1801046	SL0544	E1801046-006	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.113	ng/kg	JK	U	25



**Qualified Data Summary Table  
San Jacinto Waste Pits  
Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801046	FW0051	E1801046-007	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	1.03	pg	JK	U	25
E1801046	FW0051	E1801046-007	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	1.56	pg	JK	U	25
E1801046	FW0051	E1801046-007	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	12	pg	K	U	25
E1801055	SL0538	E1801055-001	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.58	ng/kg	JK	U	25
E1801055	SL0538	E1801055-001	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.805	ng/kg	JK	U	25
E1801055	SL0538	E1801055-001	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.785	ng/kg	JK	U	25
E1801055	SL0538	E1801055-001	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.821	ng/kg	JK	U	25
E1801055	SL0538	E1801055-001	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.192	ng/kg	JK	U	25
E1801055	SL0545	E1801055-002	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.187	ng/kg	JK	U	25
E1801055	SL0545	E1801055-002	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.109	ng/kg	JK	U	25
E1801055	SL0546	E1801055-003	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.361	ng/kg	JK	U	25
E1801055	SL0546	E1801055-003	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.145	ng/kg	JK	U	25
E1801055	SL0546	E1801055-003	EPA1613B	Octachlorodibenzofuran	0.583	ng/kg	JK	U	25
E1801055	SL0549	E1801055-004	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	4.45	ng/kg	K	U	25
E1801055	SL0549	E1801055-004	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.612	ng/kg	JK	U	25
E1801055	SL0550	E1801055-005	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.0895	ng/kg	JK	U	25
E1801055	SL0550	E1801055-005	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.274	ng/kg	JK	U	25
E1801055	SL0550	E1801055-005	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.174	ng/kg	JK	U	25
E1801055	SL0551	E1801055-006	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.445	ng/kg	BJKP	UJ	23,25
E1801055	SL0551	E1801055-006	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.77	ng/kg	JK	U	25
E1801055	SL0551	E1801055-006	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.259	ng/kg	JK	U	25
E1801055	SL0551	E1801055-006	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.444	ng/kg	JK	U	25
E1801055	SL0551	E1801055-006	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.0877	ng/kg	JK	U	25
E1801055	SL0551	E1801055-006	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.314	ng/kg	JK	U	25
E1801055	SL0552	E1801055-008	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.115	ng/kg	JK	U	25
E1801055	SL0552	E1801055-008	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.088	ng/kg	JK	U	25
E1801055	SL0552	E1801055-008	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.393	ng/kg	JK	U	25
E1801055	SL0552	E1801055-008	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.202	ng/kg	JK	U	25
E1801055	SL0552	E1801055-008	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.31	ng/kg	BJK	U	25
E1801055	SL0552	E1801055-008	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.155	ng/kg	JK	U	25

**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801057	SL0553	E1801057-001	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	2.12	ng/kg	JK	U	25
E1801057	SL0556	E1801057-004	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.494	ng/kg	JK	U	25
E1801057	SL0557	E1801057-005	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.139	ng/kg	JK	U	25
E1801057	SL0557	E1801057-005	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.141	ng/kg	JK	U	25
E1801057	SL0557	E1801057-005	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.428	ng/kg	JK	U	25
E1801057	SL0557	E1801057-005	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.123	ng/kg	JK	U	25
E1801057	SL0557	E1801057-005	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.0997	ng/kg	JK	U	25
E1801057	SL0557	E1801057-005	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.104	ng/kg	JK	U	25
E1801057	SL0557	E1801057-005	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.551	ng/kg	JK	U	25
E1801057	SL0557	E1801057-005	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.244	ng/kg	JK	U	25
E1801057	SL0558	E1801057-006	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.683	ng/kg	JK	U	25
E1801057	SL0558	E1801057-006	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.288	ng/kg	JK	U	25
E1801057	SL0558	E1801057-006	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	1.45	ng/kg	JK	U	25
E1801057	SL0558	E1801057-006	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	3.97	ng/kg	K	U	25
E1801057	SL0560	E1801057-008	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	3.05	ng/kg	K	U	25
E1801057	SL0560	E1801057-008	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.442	ng/kg	JK	U	25
E1801057	SL0560	E1801057-008	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.135	ng/kg	JK	U	25
E1801057	SL0560	E1801057-008	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	1.19	ng/kg	JK	U	25
E1801065	SL0580	E1801065-001	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	5.9	ng/kg	K	U	25
E1801065	SL0580	E1801065-001	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.933	ng/kg	JK	U	25
E1801065	SL0581	E1801065-002	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.352	ng/kg	JK	U	25
E1801065	SL0581	E1801065-002	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1.64	ng/kg	K	U	25
E1801065	SL0581	E1801065-002	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.094	ng/kg	JK	U	25
E1801065	SL0581	E1801065-002	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	1.08	ng/kg	JK	U	25
E1801065	SL0581	E1801065-002	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.144	ng/kg	BJK	U	25
E1801065	SL0581	E1801065-002	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.582	ng/kg	JK	U	25
E1801065	SL0582	E1801065-003	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.798	ng/kg	JK	U	25
E1801065	SL0582	E1801065-003	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	1.63	ng/kg	JK	U	25
E1801065	SL0582	E1801065-003	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.46	ng/kg	JK	U	25
E1801065	SL0582	E1801065-003	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	1.87	ng/kg	JK	U	25

**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801065	SL0582	E1801065-003	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.384	ng/kg	JK	U	25
E1801065	SL0582	E1801065-003	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.435	ng/kg	JK	U	25
E1801065	SL0582	E1801065-003	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	1.27	ng/kg	JK	U	25
E1801065	SL0582	E1801065-003	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	3.37	ng/kg	K	U	25
E1801065	SL0582	E1801065-003	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.94	ng/kg	JK	U	25
E1801065	SL0583	E1801065-004	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.181	ng/kg	JK	U	25
E1801065	SL0583	E1801065-004	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.33	ng/kg	JK	U	25
E1801065	SL0583	E1801065-004	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.259	ng/kg	JK	U	25
E1801065	SL0583	E1801065-004	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.203	ng/kg	JK	U	25
E1801065	SL0583	E1801065-004	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.39	ng/kg	JK	U	25
E1801065	SL0583	E1801065-004	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.397	ng/kg	JK	U	25
E1801065	SL0584	E1801065-005	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.358	ng/kg	JK	U	25
E1801065	SL0584	E1801065-005	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.112	ng/kg	JK	U	25
E1801065	SL0584	E1801065-005	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.495	ng/kg	JK	U	25
E1801065	SL0584	E1801065-005	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.214	ng/kg	JK	U	25
E1801065	SL0584	E1801065-005	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.993	ng/kg	JK	U	25
E1801065	SL0585	E1801065-006	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.183	ng/kg	BJK	U	25
E1801065	SL0585	E1801065-006	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.177	ng/kg	JK	U	25
E1801065	SL0585	E1801065-006	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.164	ng/kg	JK	U	25
E1801065	SL0585	E1801065-006	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.075	ng/kg	JK	U	25
E1801065	SL0585	E1801065-006	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.0887	ng/kg	JK	U	25
E1801065	SL0585	E1801065-006	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.399	ng/kg	JK	U	25
E1801065	SL0585	E1801065-006	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.288	ng/kg	JK	U	25
E1801065	SL0586	E1801065-007	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.0823	ng/kg	JK	U	25
E1801065	SL0586	E1801065-007	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.243	ng/kg	BJK	U	25
E1801065	SL0586	E1801065-007	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.766	ng/kg	JK	U	25
E1801065	SL0586	E1801065-007	EPA1613B	Octachlorodibenzofuran	1.34	ng/kg	JK	U	25
E1801065	SL0586	E1801065-007	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.439	ng/kg	JK	U	25
E1801065	SL0586	E1801065-007	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	2.4	ng/kg	K	UJ	13L,25
E1801065	SL0586	E1801065-007	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.26	ng/kg	BJK	U	25

**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801065	SL0586	E1801065-007	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.284	ng/kg	JK	U	25
E1801065	SL0587	E1801065-008	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.0543	ng/kg	JK	U	25
E1801065	SL0587	E1801065-008	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.262	ng/kg	JK	U	25
E1801065	SL0587	E1801065-008	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.192	ng/kg	JK	U	25
E1801065	SL0587	E1801065-008	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.333	ng/kg	JK	U	25
E1801065	SL0587	E1801065-008	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.0787	ng/kg	BJK	U	25
E1801065	SL0587	E1801065-008	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	2.16	ng/kg	K	U	25
E1801065	SL0587	E1801065-008	EPA1613B	Octachlorodibenzofuran	1.2	ng/kg	JK	U	25
E1801065	SL0587	E1801065-008	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.179	ng/kg	JK	U	25
E1801065	SL0588	E1801065-009	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.072	ng/kg	JK	U	25
E1801065	SL0588	E1801065-009	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.582	ng/kg	JK	U	25
E1801065	SL0588	E1801065-009	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.153	ng/kg	BJK	U	25
E1801065	SL0588	E1801065-009	EPA1613B	Octachlorodibenzofuran	0.349	ng/kg	JK	U	25
E1801065	SL0588	E1801065-009	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.674	ng/kg	JK	U	25
E1801065	SL0589	E1801065-010	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.261	ng/kg	JK	U	25
E1801065	SL0589	E1801065-010	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.605	ng/kg	JK	U	25
E1801065	SL0589	E1801065-010	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	1.71	ng/kg	JK	U	25
E1801065	SL0589	E1801065-010	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	1.2	ng/kg	JK	U	25
E1801065	SL0589	E1801065-010	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	1.17	ng/kg	JK	U	25
E1801065	SL0589	E1801065-010	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.229	ng/kg	BJK	U	25
E1801065	SL0589	E1801065-010	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.0976	ng/kg	JK	U	25
E1801065	SL0589	E1801065-010	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	2.1	ng/kg	JK	U	25
E1801065	SL0570	E1801065-011	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.578	ng/kg	JK	U	25
E1801065	SL0561	E1801065-012	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.813	ng/kg	JK	U	25
E1801065	SL0562	E1801065-013	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	1.25	ng/kg	JK	U	25
E1801065	SL0563	E1801065-014	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	2.86	ng/kg	U	UJ	13L
E1801065	SL0563	E1801065-014	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.701	ng/kg	JK	U	25
E1801065	SL0563	E1801065-014	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	2650	ng/kg		J	13L
E1801065	SL0564	E1801065-015	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.418	ng/kg	JK	U	25
E1801065	SL0564	E1801065-015	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.267	ng/kg	JK	U	25

**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801065	SL0564	E1801065-015	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.174	ng/kg	BJ	U	7
E1801065	SL0564	E1801065-015	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.36	ng/kg	JK	U	25
E1801065	SL0564	E1801065-015	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.151	ng/kg	JK	U	25
E1801065	SL0564	E1801065-015	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	ng/kg	JK	U	25
E1801065	SL0564	E1801065-015	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.0833	ng/kg	JK	U	25
E1801065	SL0565	E1801065-016	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.391	ng/kg	JK	U	25
E1801065	SL0565	E1801065-016	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.513	ng/kg	JK	U	25
E1801065	SL0566	E1801065-017	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.722	ng/kg	JK	U	25
E1801065	SL0566	E1801065-017	EPA1613B	Octachlorodibenzofuran	0.521	ng/kg	JK	U	25
E1801065	SL0566	E1801065-017	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.239	ng/kg	BJ	U	7
E1801065	SL0566	E1801065-017	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.203	ng/kg	JK	U	25
E1801065	SL0566	E1801065-017	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.101	ng/kg	JK	U	25
E1801065	SL0566	E1801065-017	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	1.95	ng/kg	JK	U	25
E1801065	SL0566	E1801065-017	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.106	ng/kg	JK	U	25
E1801065	SL0567	E1801065-018	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.156	ng/kg	BJ	U	7
E1801065	SL0567	E1801065-018	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.731	ng/kg	JK	U	25
E1801065	SL0567	E1801065-018	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.0505	ng/kg	JK	U	25
E1801065	SL0567	E1801065-018	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.111	ng/kg	JK	U	25
E1801065	SL0567	E1801065-018	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.0632	ng/kg	JK	U	25
E1801065	SL0567	E1801065-018	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.0782	ng/kg	JK	U	25
E1801065	SL0567	E1801065-018	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.0691	ng/kg	JK	U	25
E1801065	SL0568	E1801065-019	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.0388	ng/kg	JK	U	25
E1801065	SL0568	E1801065-019	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.159	ng/kg	JK	U	25
E1801065	SL0568	E1801065-019	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.201	ng/kg	JK	U	25
E1801065	SL0568	E1801065-019	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.133	ng/kg	BJK	U	25
E1801065	SL0569	E1801065-020	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.0667	ng/kg	JK	U	25
E1801065	SL0569	E1801065-020	EPA1613B	Octachlorodibenzofuran	0.77	ng/kg	JK	U	25
E1801065	SL0569	E1801065-020	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	10.2	ng/kg		J	13L
E1801065	SL0569	E1801065-020	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.512	ng/kg	JK	U	25
E1801065	SL0569	E1801065-020	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.17	ng/kg	BJK	U	25

**Qualified Data Summary Table  
San Jacinto Waste Pits  
Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801065	SL0569	E1801065-020	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.295	ng/kg	JK	U	25
E1801065	SL0569	E1801065-020	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.133	ng/kg	JK	U	25
E1801065	SL0569	E1801065-020	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.322	ng/kg	JK	U	25
E1801065	SL0569	E1801065-020	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.522	ng/kg	JK	U	25
E1801065	SL0571	E1801065-021	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.261	ng/kg	JK	U	25
E1801065	SL0571	E1801065-021	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.178	ng/kg	JK	U	25
E1801065	SL0571	E1801065-021	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.269	ng/kg	BJK	U	25
E1801065	SL0571	E1801065-021	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	4.01	ng/kg	K	U	25
E1801065	SL0572	E1801065-022	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.119	ng/kg	JK	U	25
E1801065	SL0572	E1801065-022	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.184	ng/kg	BJK	U	25
E1801065	SL0572	E1801065-022	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	1.23	ng/kg	JK	U	25
E1801065	SL0572	E1801065-022	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.202	ng/kg	JK	U	25
E1801065	SL0572	E1801065-022	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.13	ng/kg	JK	U	25
E1801065	SL0572	E1801065-022	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.867	ng/kg	K	U	25
E1801065	SL0572	E1801065-022	EPA1613B	Octachlorodibenzofuran	2.84	ng/kg	JK	U	25
E1801065	SL0572	E1801065-022	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.23	ng/kg	JK	U	25
E1801065	SL0572	E1801065-022	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.0854	ng/kg	JK	U	25
E1801065	SL0573	E1801065-023	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.257	ng/kg	JK	U	25
E1801065	SL0573	E1801065-023	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.0353	ng/kg	JK	U	25
E1801065	SL0573	E1801065-023	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.0429	ng/kg	JK	U	25
E1801065	SL0573	E1801065-023	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.0628	ng/kg	JK	U	25
E1801065	SL0573	E1801065-023	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.154	ng/kg	JK	U	25
E1801065	SL0573	E1801065-023	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.0674	ng/kg	JK	U	25
E1801065	SL0574	E1801065-024	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.14	ng/kg	JK	U	25
E1801065	SL0574	E1801065-024	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	2.06	ng/kg	JP	J	23
E1801065	SL0574	E1801065-024	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.171	ng/kg	JK	U	25
E1801065	SL0574	E1801065-024	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.424	ng/kg	JK	U	25
E1801065	SL0574	E1801065-024	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.124	ng/kg	JK	U	25
E1801065	SL0574	E1801065-024	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.135	ng/kg	JK	U	25
E1801065	SL0574	E1801065-024	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.188	ng/kg	BJK	U	25

**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801065	SL0574	E1801065-024	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.193	ng/kg	JK	U	25
E1801065	SL0575	E1801065-025	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.0181	ng/kg	JK	U	25
E1801065	SL0575	E1801065-025	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.134	ng/kg	JK	U	25
E1801065	SL0575	E1801065-025	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.0231	ng/kg	JK	U	25
E1801065	SL0575	E1801065-025	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.0215	ng/kg	JK	U	25
E1801065	SL0575	E1801065-025	EPA1613B	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.453	ng/kg	JK	U	25
E1801065	SL0575	E1801065-025	EPA1613B	2,3,7,8-Tetrachlorodibenzofuran	0.966	ng/kg	K	U	25
E1801065	SL0575	E1801065-025	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.0432	ng/kg	JK	U	25
E1801065	SL0576	E1801065-026	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.044	ng/kg	JK	U	25
E1801065	SL0576	E1801065-026	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzofuran	0.03	ng/kg	JK	U	25
E1801065	SL0576	E1801065-026	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.0299	ng/kg	JK	U	25
E1801065	SL0577	E1801065-027	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.0872	ng/kg	JK	U	25
E1801065	SL0577	E1801065-027	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.128	ng/kg	JK	U	25
E1801065	SL0577	E1801065-027	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.2	ng/kg	BJ	U	7
E1801065	SL0577	E1801065-027	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.124	ng/kg	BJ	U	7
E1801065	SL0577	E1801065-027	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.113	ng/kg	JK	U	25
E1801065	SL0578	E1801065-028	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.372	ng/kg	BJK	U	25
E1801065	SL0578	E1801065-028	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.13	ng/kg	JK	U	25
E1801065	SL0578	E1801065-028	EPA1613B	Octachlorodibenzofuran	0.976	ng/kg	BJK	U	25
E1801065	SL0578	E1801065-028	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.3	ng/kg	BJK	U	25
E1801065	SL0578	E1801065-028	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.176	ng/kg	BJK	U	25
E1801065	SL0579	E1801065-029	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.545	ng/kg	JK	U	25
E1801065	SL0579	E1801065-029	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.0813	ng/kg	JK	U	25
E1801065	SL0579	E1801065-029	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.303	ng/kg	BJK	U	25
E1801065	SL0579	E1801065-029	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.0909	ng/kg	JK	U	25
E1801065	SL0579	E1801065-029	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.201	ng/kg	JK	U	25
E1801065	SL0579	E1801065-029	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.109	ng/kg	JK	U	25
E1801065	FW0052	E1801065-030	EPA1613B	Octachlorodibenzo-p-dioxin	13.2	pg	BJK	U	25
E1801065	FW0053	E1801065-031	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	2	pg	BJK	U	25
E1801065	FW0053	E1801065-031	EPA1613B	Octachlorodibenzo-p-dioxin	56.6	pg	BJK	U	25

**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
E1801105	SL0590	E1801105-001	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	2.6	ng/kg	JK	U	25
E1801105	SL0590	E1801105-001	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	9.86	ng/kg	K	U	25
E1801105	SL0591	E1801105-002	EPA1613B	Octachlorodibenzofuran	2.56	ng/kg	BJK	U	25
E1801105	SL0591	E1801105-002	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.692	ng/kg	JK	U	25
E1801105	SL0591	E1801105-002	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	1.18	ng/kg	JK	U	25
E1801105	SL0591	E1801105-002	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	1.63	ng/kg	JK	U	25
E1801105	SL0592	E1801105-003	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.538	ng/kg	JK	U	25
E1801105	SL0592	E1801105-003	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1.36	ng/kg	JK	U	25
E1801105	SL0592	E1801105-003	EPA1613B	Octachlorodibenzofuran	2.13	ng/kg	BJ	U	7
E1801105	SL0593	E1801105-004	EPA1613B	Octachlorodibenzofuran	1.63	ng/kg	BJK	U	25
E1801105	SL0593	E1801105-004	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.123	ng/kg	JK	U	25
E1801105	SL0593	E1801105-004	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.124	ng/kg	JK	U	25
E1801105	SL0593	E1801105-004	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.668	ng/kg	JK	U	25
E1801105	SL0593	E1801105-004	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.408	ng/kg	JK	U	25
E1801105	SL0593	E1801105-004	EPA1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.133	ng/kg	BJK	U	25
E1900031	SL0556	E1900031-001	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.197	ng/kg	BJK	U	25
E1900031	SL0556	E1900031-001	EPA1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.0911	ng/kg	BJK	U	25
E1900031	SL0557	E1900031-002	EPA1613B	Octachlorodibenzofuran	0.523	ng/kg	BJK	U	25
E1900031	SL0557	E1900031-002	EPA1613B	2,3,4,7,8-Pentachlorodibenzofuran	0.37	ng/kg	BJ	U	7
E1900031	SL0557	E1900031-002	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzofuran	0.141	ng/kg	BJK	U	25
E1900031	SL0557	E1900031-002	EPA1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.11	ng/kg	JK	U	25
E1900031	SL0557	E1900031-002	EPA1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.35	ng/kg	BJK	U	25
E1900031	SL0557	E1900031-002	EPA1613B	1,2,3,7,8-Pentachlorodibenzofuran	0.212	ng/kg	JK	U	25
E1900031	SL0558	E1900031-003	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.137	ng/kg	BJK	U	25
E1900031	SL0558	E1900031-003	EPA1613B	1,2,3,7,8,9-Hexachlorodibenzofuran	0.307	ng/kg	BJK	U	25
E1900031	SL0558	E1900031-003	EPA1613B	2,3,4,6,7,8-Hexachlorodibenzofuran	0.134	ng/kg	BJK	U	25
E1900031	SL0558	E1900031-003	EPA1613B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.0911	ng/kg	BJK	U	25
E1900031	SL0558	E1900031-003	EPA1613B	Octachlorodibenzofuran	0.881	ng/kg	BJK	U	25
K1811438	SL0547	K1811438-001	SW8270D13113510	Hexachlorobenzene	0.014	mg/L	U	UJ	1
K1811438	SL0547	K1811438-001	SW8270D13113510	2,4-Dinitrotoluene	0.02	mg/L	U	UJ	1



**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

SDG	Sample ID	Lab Sample ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason
K1811438	SL0547	K1811438-001	SW8270D13113510	2-Methylphenol	0.013	mg/L	U	UJ	1
K1811438	SL0547	K1811438-001	SW8270D13113510	Hexachloroethane	0.0071	mg/L	U	UJ	1
K1811438	SL0547	K1811438-001	SW8270D13113510	Hexachlorobutadiene	0.0095	mg/L	U	UJ	1
K1811438	SL0547	K1811438-001	SW8270D13113510	Pyridine	0.38	mg/L	U	UJ	1
K1811438	SL0547	K1811438-001	SW8270D13113510	Pentachlorophenol	0.016	mg/L	U	UJ	1
K1811438	SL0547	K1811438-001	SW8270D13113510	2,4,5-Trichlorophenol	0.013	mg/L	U	UJ	1
K1811438	SL0547	K1811438-001	SW8270D13113510	4-Methylphenol	0.007	mg/L	U	UJ	1
K1811438	SL0547	K1811438-001	SW8260C13115035	2-Butanone	0.76	mg/L	U	UJ	10L
K1811438	SL0547	K1811438-001	EPA_160.3	Solids	67.1	percent		J	1
K1811438	SL0547	K1811438-001	SW6010C13113010	Silver	0.004	mg/L	U	UJ	7L
K1811438	SL0547	K1811438-001	SW9034M	Sulfide	48	mg/kg	U	UJ	1
K1811438	SL0547	K1811438-001	SW8270D13113510	Nitrobenzene	0.012	mg/L	U	UJ	1
K1811438	SL0547	K1811438-001	SW9045D	pH	8.09	SU	H	J	1
K1811438	SL0547	K1811438-001	SW8270D13113510	2,4,6-Trichlorophenol	0.011	mg/L	U	UJ	1
K1811438	SL0554	K1811438-002	SW8270D13113510	Pyridine	0.36	mg/L	U	UJ	1
K1811438	SL0554	K1811438-002	SW6010C13113010	Silver	0.004	mg/L	U	UJ	7L
K1811438	SL0554	K1811438-002	SW8270D13113510	2,4,5-Trichlorophenol	0.013	mg/L	U	UJ	1
K1811438	SL0554	K1811438-002	SW8270D13113510	2,4,6-Trichlorophenol	0.0099	mg/L	U	UJ	1
K1811438	SL0554	K1811438-002	SW8270D13113510	2,4-Dinitrotoluene	0.019	mg/L	U	UJ	1
K1811438	SL0554	K1811438-002	SW8270D13113510	2-Methylphenol	0.013	mg/L	U	UJ	1
K1811438	SL0554	K1811438-002	SW8270D13113510	4-Methylphenol	0.0067	mg/L	U	UJ	1
K1811438	SL0554	K1811438-002	SW8270D13113510	Hexachloroethane	0.0068	mg/L	U	UJ	1
K1811438	SL0554	K1811438-002	SW8270D13113510	Hexachlorobenzene	0.014	mg/L	U	UJ	1
K1811438	SL0554	K1811438-002	SW8270D13113510	Hexachlorobutadiene	0.0091	mg/L	U	UJ	1
K1811438	SL0554	K1811438-002	SW8270D13113510	Pentachlorophenol	0.016	mg/L	U	UJ	1
K1811438	SL0554	K1811438-002	SW8260C13115035	2-Butanone	0.76	mg/L	U	UJ	10L
K1811438	SL0554	K1811438-002	EPA_160.3	Solids	70	percent		J	1
K1811438	SL0554	K1811438-002	SW9045D	pH	8.54	SU	H	J	1
K1811438	SL0554	K1811438-002	SW8270D13113510	Nitrobenzene	0.012	mg/L	U	UJ	1
K1812382	SL0594	K1812382-001	EPA_160.3	Solids	45.9	percent		J	1

**Qualified Data Summary Table**  
**San Jacinto Waste Pits**  
**Rush Dioxins Sampling**

<b>SDG</b>	<b>Sample ID</b>	<b>Lab Sample ID</b>	<b>Method</b>	<b>Analyte</b>	<b>Result</b>	<b>Units</b>	<b>Lab Flag</b>	<b>DV Qualifier</b>	<b>DV Reason</b>
K1812382	SL0594	K1812382-001	SW9045D	pH	7.84	SU	H	J	1

**Appendix A-3**  
**First Phase Pre-Design Investigation**  
**Aquifer Testing Results**

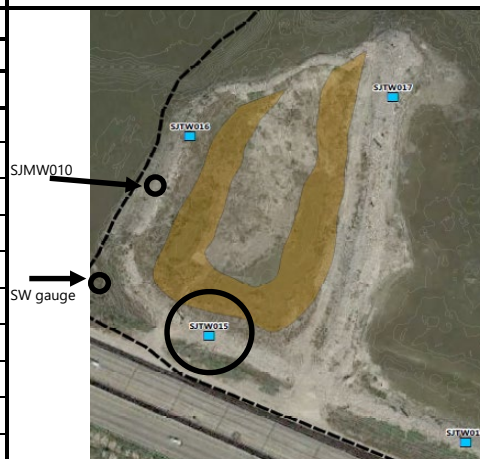




**PUMPING TEST RECORD**

CLIENT/PROJECT NAME: IPC/MIMC - SJRWP PDI-1	SHEET 1 OF 2	
PROJECT NUMBER: 180557-01.01 Task 03	PUMP START DATE/TIME	12/4/2018 9:45 am
PERSONNEL: Torell, Coupe	PUMP STOP DATE/TIME	12/4/2018 12:51 pm
SUBCONTRACTOR: None	WATER DISPOSITION	5,000 gallon vacuum box
PUMP TYPE/HP/SIZE: 4" Rediflo submersible pump	Map	
TARGET PUMPING RATE (define units): 25 gpm		
WEATHER: Sunny 50°F		

Define units (feet unless noted)	Pumping Well	Observation Well	Observation Well	Observation Well	Observation Well	Surface Water Gauge
Name/Number	SJTW015	SJTW014	SJTW016	SJTW017	SJMW010	no name
TOC Elevation	9.4	8.9	9.5	11.1	4.8	—
TOC to GS	2.9	2.3	3.5	3.2	3.2	—
GS Elevation (Est)	6.5	6.6	6	7.9	1.6	—
Transducer ID/PSIG	446166 / 15	445746 / 15	456899 / 15	549002 / 15	448401 / 15	—
Total Depth TOC	-39.7	-37.4	-37.3	-36.7	-9.9	—
Screen Interval TOC	-5 to -36.2	-7 to -38.2	-8 to -39.2	-9 to -40.2	-5.2 to -10.2	—
Transducer Depth TOC	-28	-30	-20	-20	-8	—
Screen ID	4"				2"	—
Filter Pack OD	8"				6"	—



Time <sup>a</sup>	Pumping Data (gallons, minutes)			Water Level Data TOC (feet)						Misc. Observations	
	Rate <sup>b</sup>	Interval Volume	Cumulative Volume <sup>c</sup>	Pumping Well	Observation Well	Observation Well	Observation Well	Observation Well	Surface Water Gauge	Rainfall	Barometric Pressure
				SJTW015 <sup>d</sup>	SJTW014	SJTW016	SJTW017	SJMW010	no name		
8:30:00 AM				8.5	7.85	8.8	10.3	3.45	2.2		
9:46:00 AM	25.1	0	0	8.6							
9:48:00 AM	25.89	75.3	75.3								
9:50:00 AM	26.6	51.8	127.1								
9:53:00 AM	26.84	79.8	206.9	15.65							
9:57:00 AM	26.81	107.4	314.2	15.78							
10:00:00 AM	26.84	80.4	394.7	15.86							
10:05:00 AM	26.72	134.2	528.9	15.96	7.89						
10:08:00 AM	26.72	80.2	609.0	16			10.45				
10:14:00 AM	26.72	160.3	769.4	16.13		9.0			1.7		
10:20:00 AM	26.72	160.3	929.7	16.19				3.5			
10:28:00 AM	26.72	213.8	1143.4	16.25							
10:38:00 AM	26.48	267.2	1410.6	16.3							
10:45:00 AM	26.48	185.4	1596.0	16.34							
10:56:00 AM	26.38	291.3	1887.3	16.38						None	Not relevant <sup>e</sup>
11:03:00 AM	26.24	184.7	2071.9	16.41	7.93						
11:09:00 AM	26.24	157.4	2229.4	16.42		9.28	10.78				
11:21:00 AM	26.12	314.9	2544.3	16.46				3.5	1.58		
11:32:00 AM	26.01	287.32	2831.57	16.48							
11:38:00 AM	25.89	156.06	2987.63	16.48							
11:50:00 AM	25.77	310.68	3298.31	16.5							
11:58:00 AM	25.65	206.16	3504.47	16.49							
12:06:00 PM	26.01	205.2	3709.67	16.61	7.98		11.02				
12:16:00 PM	25.77	260.1	3969.77	16.62		9.44		3.53	1.5		
12:28:00 PM	25.65	309.24	4279.01	16.61							
12:32:00 PM	25.65	102.6	4381.61	16.6							
12:39:00 PM	25.65	179.55	4561.16	16.61							
12:46:00 PM	25.53	179.55	4740.71	16.61							
12:51:00 PM	25.53	127.65	4868.36	16.61							
Pump off, recovery period											
12:52:00 PM	0			13.85						None	Not relevant <sup>e</sup>
12:53:00 PM	0			10.82							

Notes:

- a. Subtract 1 hour from SJTW015 transducer data file increment readings.
- b. Measured with FlowMec inline TM200-N flowmeter.
- c. Calculated. Volume observed in tank was approximately 5,000 gallons.
- d. Water level indicator will not go past transducer cables and discharge line. All readings below 8.6 TOC are transducer readouts in WinSitu 5 interface during test.
- e. Barometric pressure produces only small water table fluctuations in unconfined aquifers. At this site, water table changes due to tides in the San Jacinto River would be assumed to obscure any small water table fluctuations due to barometric pressure changes.





CLIENT/PROJECT NAME: IPC/MIMC - SJRWP PDI-1

SHEET 1 OF 2

PROJECT NUMBER: 180557-01.01 Task 03

PUMP START DATE/TIME 12/6/2018 8:47 am

PERSONNEL Torell, Coupe

PUMP STOP DATE/TIME 12/6/2018 12:03 pm

SUBCONTRACTOR None

WATER DISPOSITION 5,000 gallon vacuum box

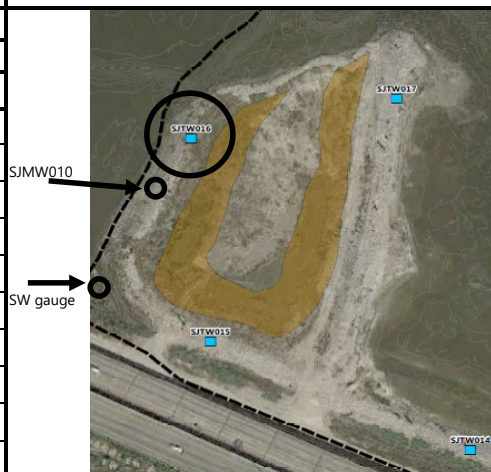
PUMP TYPE/HP/SIZE 4" Rediflo submersible pump

Map

TARGET PUMPING RATE (define units) 25 gpm

WEATHER Overcast 60°F

**PUMPING TEST RECORD**



Define units (feet unless noted)	Pumping Well	Observation Well	Observation Well	Observation Well	Observation Well	Surface Water Gauge
Name/Number	SJTW016	SJTW014	SJTW015	SJTW017	SJMW010	no name
TOC Elevation	9.5	8.9	9.4	11.1	4.8	—
TOC to GS	3.5	2.3	2.9	3.2	3.2	—
GS Elevation (Est)	6	6.6	6.5	7.9	1.6	—
Transducer ID/PSIG	456899 / 15	none	446166 / 15	445746 / 15	448401 / 15	—
Total Depth TOC	-37.3	-37.4	-39.7	-36.7	-9.9	—
Screen Interval TOC	-8 to -39.2	-7 to -38.2	-5 to -36.2	-9 to -40.2	-5.2 to -10.2	—
Transducer Depth TOC	-18	--	-20	-19	-8	—
Screen ID	4"				2"	—
Filter Pack OD	8"				6"	—

Time	Pumping Data (gallons, minutes)			Water Level Data TOC (feet)						Misc. Observations	
	Rate <sup>a</sup>	Interval Volume	Cumulative Volume <sup>b</sup>	Pumping Well SJTW016	Observation Well SJTW014	Observation Well SJTW015	Observation Well SJTW017	Observation Well SJMW010	Surface Water Gauge no name	Rainfall	Barometric Pressure
8:30:00 AM	0.0		0	7.85							
8:47:00 AM	21.9	0	0	7.85							
8:48:00 AM	20.6	22	22	14.6							
8:49:00 AM	21.4	21	43	14.8							
8:51:00 AM	21.4	43	85	14.53							
9:05:00 AM	21.4	342	428	15.1							
9:12:00 AM	16.5	150	578	15.2							
9:15:00 AM	16.9	50	627	15.24							
9:22:00 AM	16.6	118	745	15.31							
9:25:00 AM	17.2	50	795	15.4							
9:28:00 AM	17.1	52	847	15.57				3.3	2.78		
9:34:00 AM	23.2	103	949	16.6		8.1					
9:37:00 AM	13.6	70	1019	—	7.66		9.91				
9:50:00 AM	15.7	177	1196	16.88							
9:57:00 AM	15.7	110	1306	17.05							
10:01:00 AM	15.7	63	1368	17.23							
10:05:00 AM	15.7	63	1431	17.4							
10:12:00 AM	15.7	110	1541	17.62							
10:16:00 AM	17.6	63	1604	17.7							
10:22:00 AM	17.6	106	1710	18.14							
10:28:00 AM	17.6	106	1815	18.15				2.23	2.58		
10:33:00 AM	17.6	88	1903	17.97		8.2					
10:38:00 AM	20.0	88	1991	19.8	7.61						
10:42:00 AM	20.0	80	2071	18.85			10.1				
10:47:00 AM	20.0	100	2171	18.81							
11:00:00 AM	20.0	60	2231	18.84							
11:12:00 AM	20.0	240	2471	18.81							
11:26:00 AM	20.0	280	2751	18.66							
11:32:00 AM	17.6	120	2871	18.76				3.25			
11:44:00 AM	17.6	211	3082	18.96	7.68	8.42			2.27		
11:52:00 AM	20.0	141	3223	19.08							
12:03:00 PM	20.0	220	3443	18.9			10.4				

Notes:  
 a. Measured with FlowMec inline TM200-N flowmeter or, during flowmeter malfunction periods, a stopwatch and 5 gallon bucket.  
 b. Calculated. Volume observed in tank was approximately 2,800 gallons.  
 c. Barometric pressure produces only small water table fluctuations in unconfined aquifers. At this site, water table changes due to tides in the San Jacinto River would be assumed to obscure any small water table fluctuations due to barometric pressure changes.



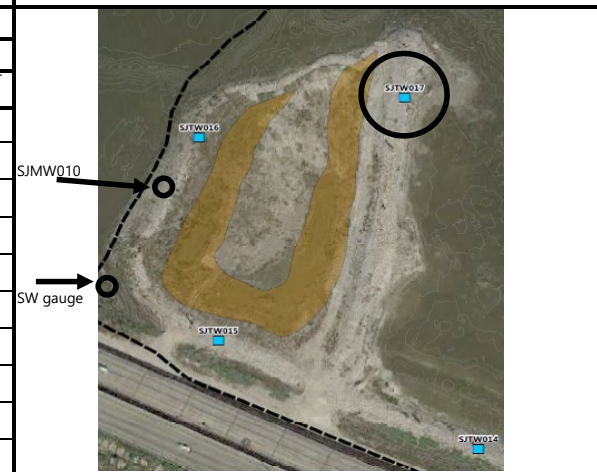




CLIENT/PROJECT NAME: IPC/MIMC - SJRWP PDI-1	SHEET 1 OF 2
PROJECT NUMBER: 180557-01.01 Task 03	PUMP START DATE/TIME 12/5/2018 11:00 am
PERSONNEL Torell, Coupe	PUMP STOP DATE/TIME 12/5/2018 1:59 pm
SUBCONTRACTOR None	WATER DISPOSITION 5,000 gallon vacuum tank
PUMP TYPE/HP/SIZE 4" Rediflo submersible pump	Map
TARGET PUMPING RATE (define units) 25 gpm	
WEATHER Overcast 60°F	

**PUMPING TEST RECORD**

Define units (feet unless noted)	Pumping Well	Observation Well	Observation Well	Observation Well	Observation Well	Surface Water Gauge
Name/Number	SJTW017	SJTW014	SJTW015	SJTW016	SJMW010	no name
TOC Elevation	11.1	8.9	9.4	9.5	4.8	—
TOC to GS	3.2	2.3	2.9	3.5	3.2	—
GS Elevation (Est)	7.9	6.6	6.5	6	1.6	—
Transducer ID/PSIG	456899 / 15	445746 / 15	446166 / 15	456899 / 15	448401 / 15	—
Total Depth TOC	-36.7	-37.4	-39.7	-37.3	-9.9	—
Screen Interval TOC	-9 to -40.2	-7 to -38.2	-5 to -36.2	-8 to -39.2	-5.2 to -10.2	—
Transducer Depth TOC	-18	-20	-20	-19	-8	—
Screen ID	4"				2"	—
Filter Pack OD	8"				6"	—



Time	Pumping Data (gallons, minutes)			Water Level Data TOC (feet)						Misc. Observations	
	Rate <sup>a</sup>	Interval Volume	Cumulative Volume <sup>b</sup>	Pumping Well SJTW017	Observation Well SJTW014	Observation Well SJTW015	Observation Well SJTW016	Observation Well SJMW010	Surface Water Gauge no name	Rainfall	Barometric Pressure
11:00:00 AM	18.5	0	0	10.8							
11:01:00 AM	17.8	19	19	14.4							
11:07:00 AM	16.8	107	125	15.3							
11:09:00 AM	15.3	34	159	15.4							
11:11:00 AM	15.6	31	190	15.5							
11:15:00 AM	16.8	62	252	16.0							
11:17:00 AM	16.5	34	286	15.9							
11:21:00 AM	16.7	66	352	16.4							
11:26:00 AM	16.6	84	435	16.6							
11:31:00 AM	16.8	83	518	16.7							
11:38:00 AM	17.1	118	636	16.8							
11:46:00 AM	17.2	137	772	17.0							
11:57:00 AM	17.2	155	927	17.1							
12:03:00 PM	17.3	103	1030	17.2							
12:10:00 PM	17.2	121	1152	17.3							
12:19:00 PM	17.5	155	1306	17.4	8.0	9.0					
12:26:00 PM	17.6	123	1429	17.5				3.7	1.6		
12:32:00 PM	17.6	106	1534	17.5			9.4				
12:41:00 PM	17.2	158	1693	17.5							
12:53:00 PM	17.6	206	1899	17.6							
1:01:00 PM	17.2	141	2040	17.7							
1:13:00 PM	17.6	206	2246	17.7							
1:20:00 PM	17.6	123	2370	17.8							
1:26:00 PM	17.7	106	2475	17.8	8.1						
1:33:00 PM	17.6	124	2599	17.8		9.2			1.3		
1:41:00 PM	17.4	141	2740	17.9			9.6	3.7			
1:51:00 PM	17.4	139	2879	17.9							
1:59:00 PM	17.2	139	3018	17.9							
Pump off, recovery period											
2:00:20 PM	0.0			15.5							
2:00:35 PM	0.0			14.1						None	Not relevant <sup>c</sup>
2:01:00 PM	0.0			13.6							

Notes:  
a. Measured with FlowMec inline TM200-N flowmeter or, during flowmeter malfunction periods, a stopwatch and 5 gallon bucket.  
b. Calculated. Volume observed in tank was approximately 3,500 gallons.  
c. Barometric pressure produces only small water table fluctuations in unconfined aquifers. At this site, water table changes due to tides in the San Jacinto River would be assumed to obscure any small water table fluctuations due to barometric pressure changes.



**Appendix A-4**  
**First Phase Pre-Design Investigation**  
**Photographic Log**



Photo 1 - Geotechnical Sample SJGB018 (10-12)



Photo 2 - Geotechnical Sample SJGB018 (16-18)





Photo 3 - Geotechnical Sample SJSB019 (20-22)



Photo 4 - Geotechnical Sample SJSB019 (30-32)



Photo 5 - Geotechnical Sample SJSB020 (20-22)



Photo 6 - Geotechnical Sample SJSB020 (30-32)





Photo 7 - Geotechnical Sample SJSB021 (14-16)



Photo 8 - Geotechnical Sample SJSB021 (44-46)



Photo 9 - Geotechnical Sample SJGB022 (10-12)



Photo 10 - Geotechnical Sample SJGB022 (20-22)





Photo 11 - Geotechnical Sample SJGB023 (12-14)



Photo 12 - Geotechnical Sample SJGB023 (38-40)



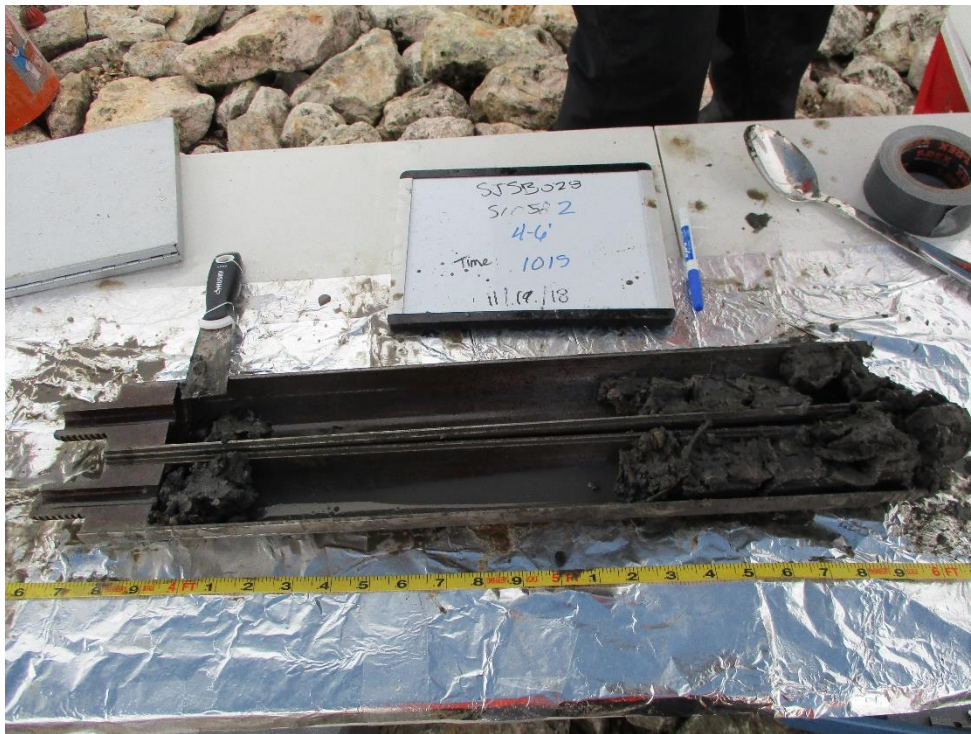


Photo 13 - Chemical Sample SJSB028 (4-6)

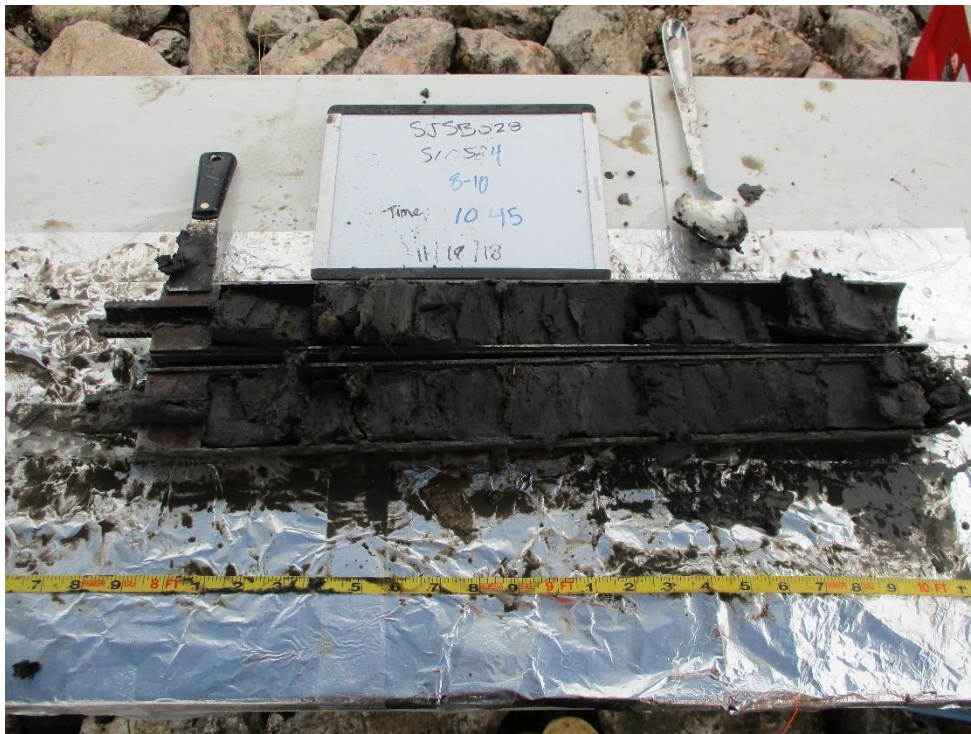


Photo 14 - Chemical Sample SJSB028 (8-10)





Photo 15 - Geotechnical Sample SJSB028 (30-32)



Photo 16 - Chemical Sample SJSB028 (35-37)





Photo 17 - Chemical Sample SJSB029 (4-6)



Photo 18 - Chemical Sample SJSB029 (10-12)





Photo 19 - Chemical Sample SJSB029 (35-37.5)



Photo 20 - Chemical Sample SJSB029 (37.5-40)





Photo 21 - Chemical Sample SJSB030 (8-10)



Photo 22 - Chemical Sample SJSB030 (12-14)



Photo 23 - Geotechnical Sample SJSB030 (25-27)



Photo 24 - Geotechnical Sample SJSB030 (35-37)



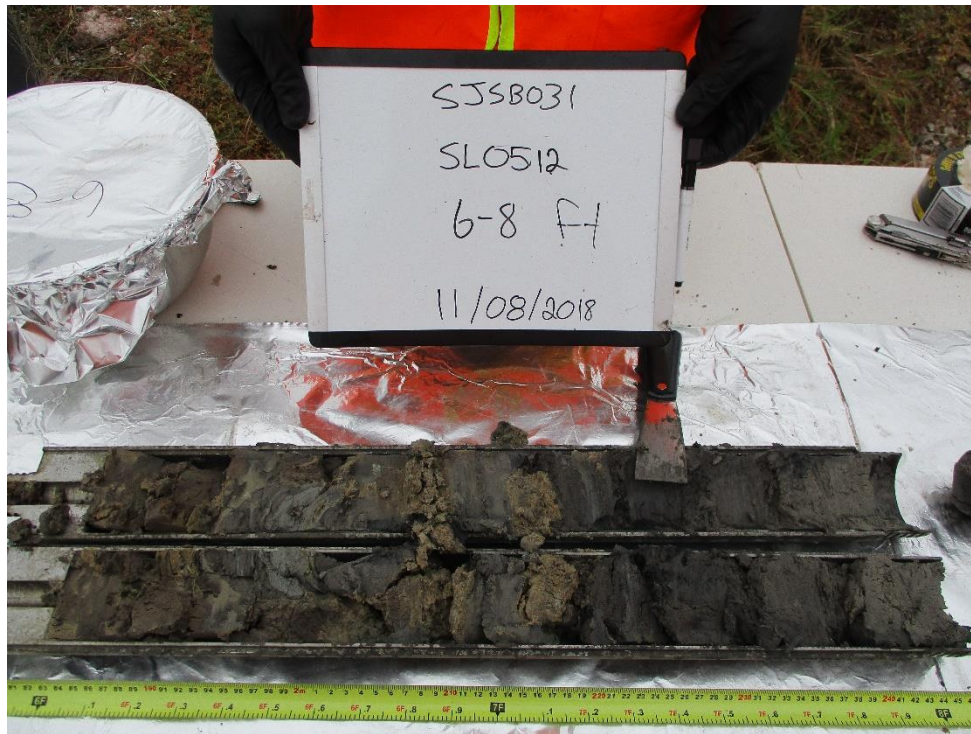


Photo 25 - Chemical Sample SJSB031 (6-8)

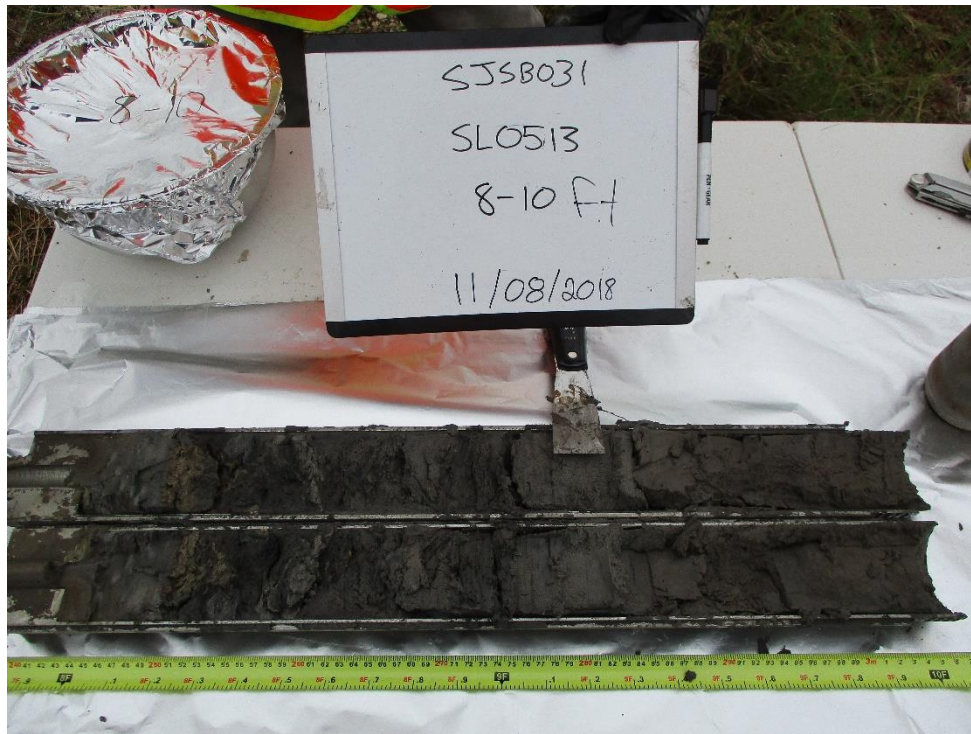


Photo 26 - Chemical Sample SJSB031 (8-10)





Photo 27 - Geotechnical Sample SJSB031 (25-27)



Photo 28 - Geotechnical Sample SJSB031 (35-37)





Photo 29 - Chemical Sample SJSB032 (10-12)

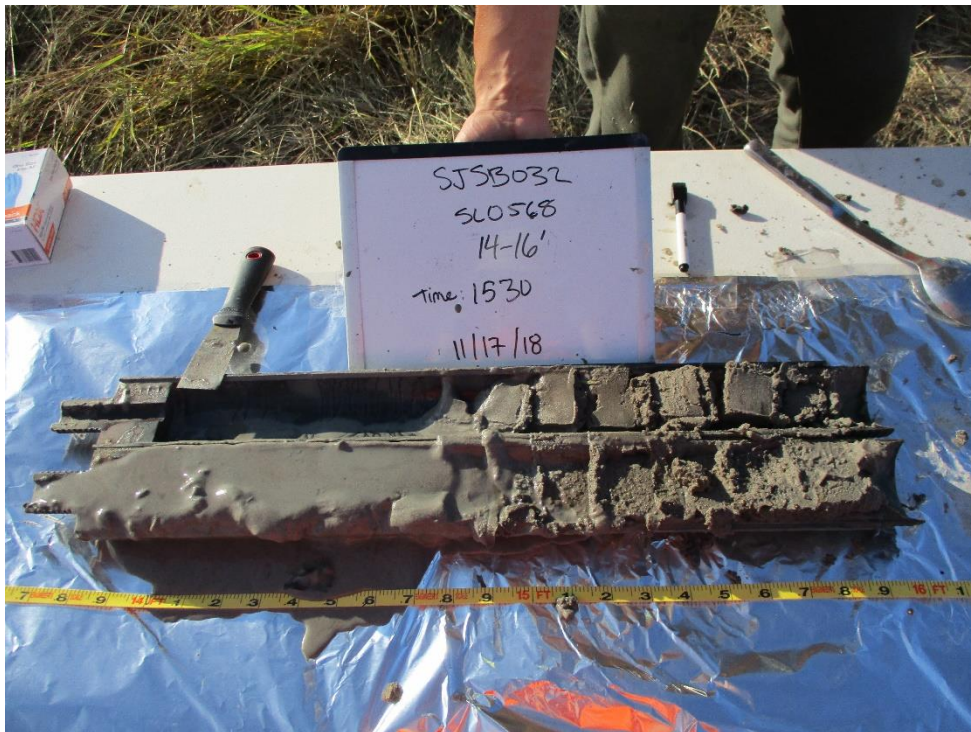


Photo 30 - Chemical Sample SJSB032 (14-16)





Photo 31 - Geotechnical Sample SJSB0232 (30-32)



Photo 32 - Geotechnical Sample SJSB032 (40-42)



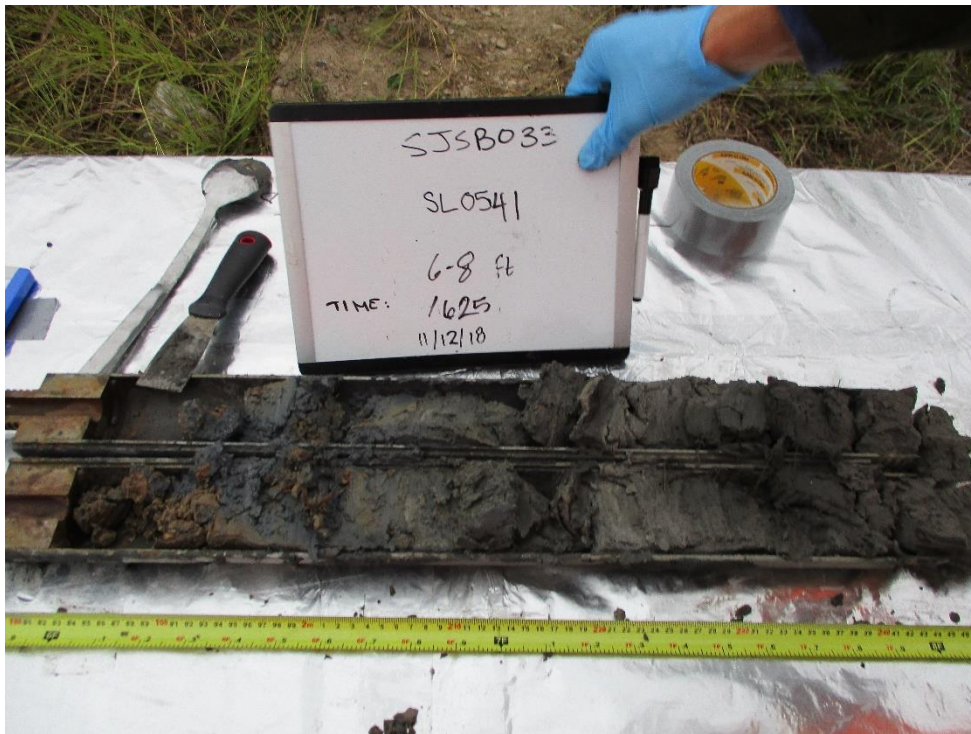


Photo 33 - Chemical Sample SJSB033 (6-8)



Photo 34 - Chemical Sample SJSB033 (12-14)





Photo 35 - Geotechnical Sample SJSB033 (30-32)



Photo 36 - Geotechnical Sample SJSB033 (37-40)



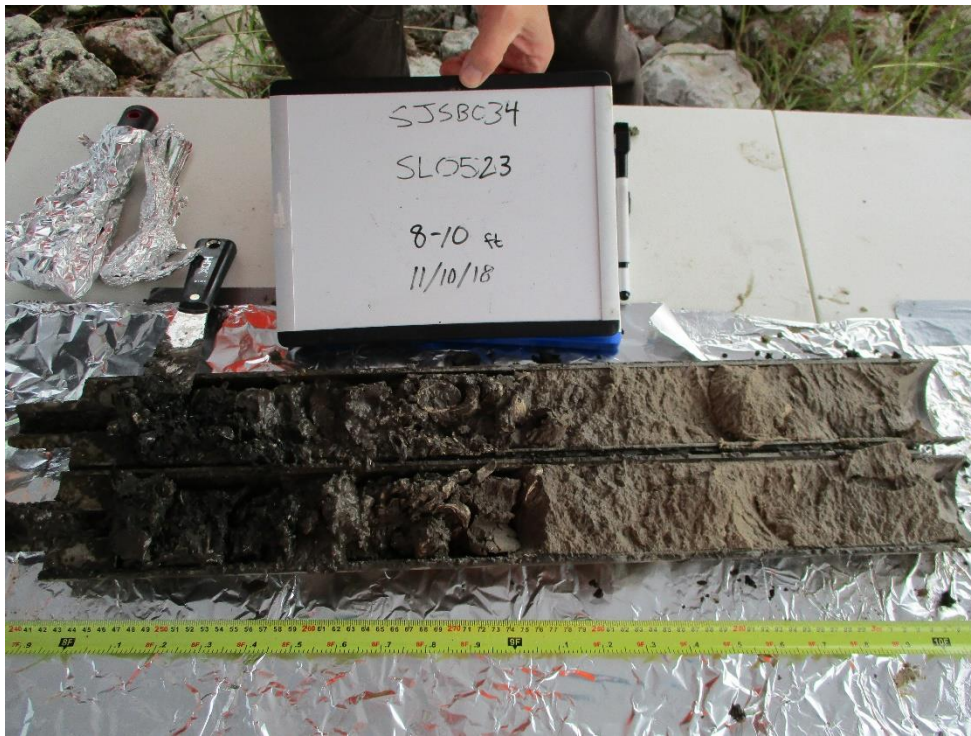


Photo 37 - Chemical Sample SJSB034 (8-10)



Photo 38 - Chemical Sample SJSB034 (12-14)





Photo 39 - Geotechnical Sample SJSB034 (20-22)



Photo 40 - Geotechnical Sample SJSB034 (25-27)

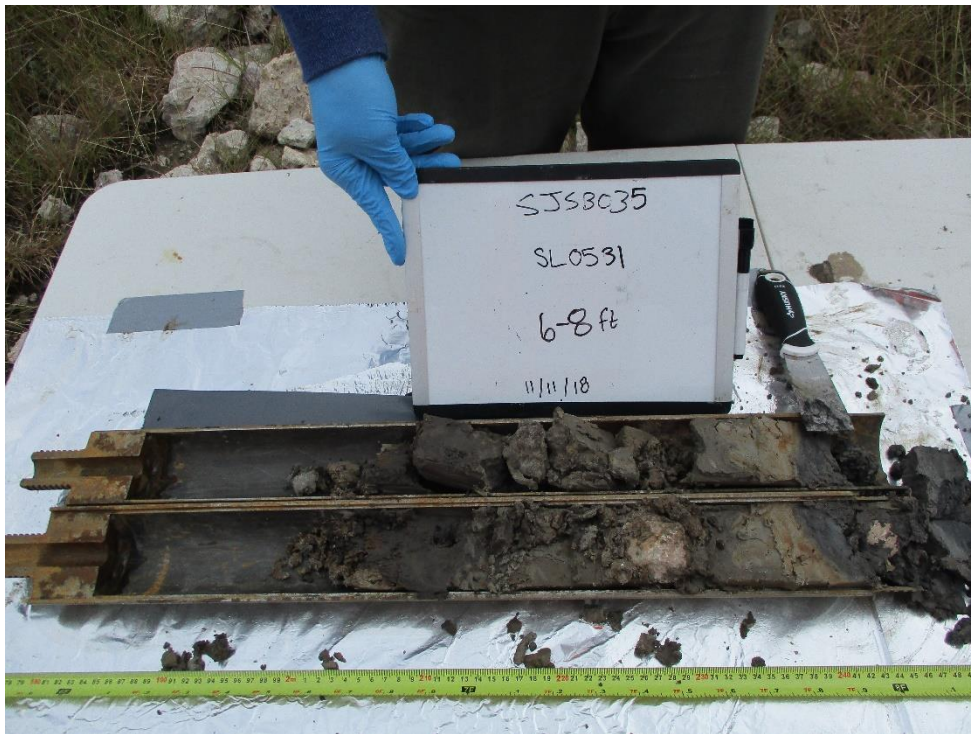


Photo 41 - Chemical Sample SJSB035 (6-8)



Photo 42 - Chemical Sample SJSB035 (14-16)





Photo 43 - Geotechnical Sample SJSB035 (30-32)



Photo 44 - Geotechnical Sample SJSB035 (40-42)





Photo 45 - Chemical Sample SJSB036 (4-6)



Photo 46 - Chemical Sample SJSB036 (8-10)





Photo 47 - Geotechnical Sample SJSB036 (20-22)



Photo 48 - Geotechnical Sample SJSB036 (25-27)

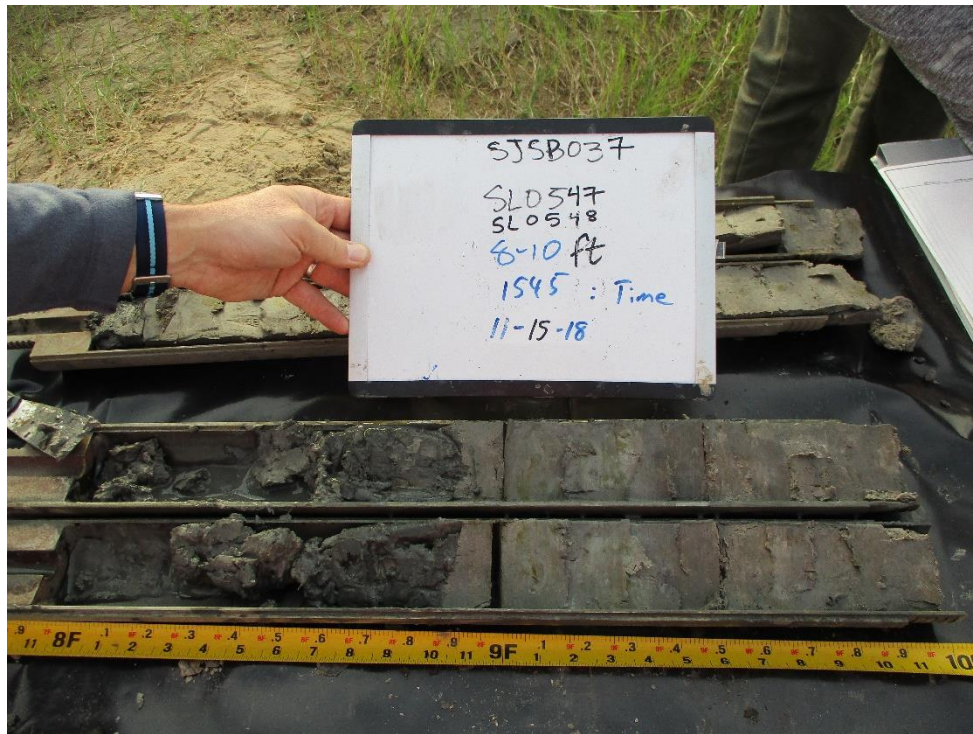


Photo 49 - Chemical Sample SJSB037 (8-10)



Photo 50 - Chemical Sample SJSB037 (12-14)





Photo 51 - Geotechnical Sample SJSB037 (20-22)



Photo 52 - Geotechnical Sample SJSB037 (30-32)



Photo 53 - Chemical Sample SJSB038 (8-10)



Photo 54 - Chemical Sample SJSB038 (12-14)

**Appendix A-5**  
**Second Phase Pre-Design Investigation**  
**Lab Reports**

**Appendix A-6**  
**Second Phase Pre-Design Investigation**  
**Data Validation Memo**





# Memorandum

February 19, 2020

Revised: May 18, 2020

To: Charles Munce Ref. No.: 11187072

*DAB*

From: Deborah Brennan/cs/2-NF Tel: 513-285-1104

CC: Janie Smith  
Stefanie Castracane

**Subject: Analytical Results and Validation - High Resolution  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event – Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

## 1. Introduction

This document details a validation of analytical results for soil boring samples collected in support of the Predisign Investigation Sampling Event – Northern Impoundment Area at the San Jacinto River Waste Pits Superfund Site from September through December 2019. Samples were submitted to Eurofins TestAmerica, Inc. at locations in Sacramento, California, and Knoxville, Tennessee. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Full Contract Laboratory Program (CLP) equivalent raw data deliverables were provided by the laboratory. The sample delivery groups covered in the report are identified in Table 1. Evaluation of the data was based on information obtained from the finished data sheets, raw data, chain of custody forms, calibration data, blank data, recovery data from surrogate spikes/laboratory control samples (LCS), matrix spikes (MS) and field Quality Assurance/Quality Control (QA/QC) samples. The assessment of analytical and in-house data included checks for: data consistency (by observing comparability of duplicate analyses), adherence to accuracy and precision criteria, and transmittal errors.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

- i) "Quality Assurance Project Plan, Final Second Phase Pre-Design Investigation", San Jacinto River Waste Pits Site, Harris County, Texas, Report No 6, June 3 2019
- ii) "National Functional Guidelines for High Resolution Superfund Methods Data Review", OLEM 9200.3-115, EPA 542-B-16-001, April 2016



Item ii) will subsequently be referred to as the "Guidelines" in this Memorandum.

## **2. Sample Holding Time and Preservation**

The sample holding time criterion for the analyses are summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were delivered on ice and stored by the laboratory at the required temperature (0-6°C).

## **3. Gas Chromatography/Mass Spectrometry (GC/MS) – Tuning and Mass Calibration (Instrument Performance Check)**

Prior to dioxin/furans analyses, GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, the method requires the analysis of the specific tuning compound perfluorokerosene (PFK). The resulting spectra must meet the criteria cited in the method before analysis is initiated. Analysis of the tuning compound must then be repeated every 12 hours throughout sample analysis to ensure the continued optimization of the instrument.

Tuning compounds were analyzed at the required frequency throughout the analysis period. All tuning criteria were met, indicating that proper optimization of the instrumentation was achieved.

## **4. Initial Calibration**

To quantify dioxin/furans of interest in samples, calibration of the GC/MS over a specific concentration range must be performed. Initially, a minimum of a five-point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific concentration range. Linearity of the calibration curve and instrument sensitivity are evaluated against the criteria cited in the methods.

The initial calibration data were reviewed. All compounds met the method criteria for sensitivity and linearity.

## **5. Continuing Calibration**

To ensure that instrument calibration for the analyses is acceptable throughout the sample analysis period, continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours.

Calibration standards were analyzed at the required frequency, and all results met the method criteria for instrument sensitivity and stability with the exception of those presented in Table 4.



## **6. Laboratory Blank Analyses**

Method blanks are prepared from a purified matrix and analyzed with the investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of one per analytical batch.

Several method blank results had low-level detections. Those investigative results of similar concentrations to those found in the method blanks were qualified as non-detect (U) as shown in Table 5.

## **7. Spiked C-13 Labeled PCDD/PCDF**

In accordance with the method employed, all samples, blanks, and QC samples analyzed for Polychlorinated Dibenzodioxins/Polychlorinated Dibenzo-p-furan (PCDD/PCDF) are spiked with labeled congeners prior to extraction to be an internal standard for the quantitation of native congeners, and to serve as surrogates for the assessment of method performance in the sample matrix.

All samples submitted for PCDD/PCDF determinations were spiked with the appropriate number of labeled compounds prior to sample extraction and analysis.

Labeled congener recoveries and ion abundance ratios were assessed against method control limits. All Dioxin/Furan recoveries were within the method acceptance ranges. However, a few ion abundance ratios were outside of the acceptable limits, and the associated sample results were qualified as estimated as shown in Table 6.

## **8. Cleanup Standard Recoveries**

C-37 labeled cleanup standards are added to all samples, blanks, and QC samples subsequent to extraction, but prior to the cleanup procedures to assess the efficiency of the cleanup procedures.

Cleanup standards were added to all samples, blanks, and QC samples prior to cleanup. All Dioxin/Furan recoveries were within the method acceptance ranges.

## **9. Laboratory Control Sample Analyses**

LCS and/or LCS/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS or LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS and/or LCS/LCSD contained all compounds of interest. All LCS recoveries and RPDs were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.



## **10. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses**

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed. If only the MS or MSD recovery was outside of control limits, no qualification of the data was performed based on the acceptable recovery of the companion spike and the acceptable RPD.

MS/MSD analyses was performed as specified in Table 1. The laboratory performed additional site-specific MS/MSD analyses internally.

The MS/MSD samples were spiked with all compounds of interest. All percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision with the exception of those shown in Table 7.

## **11. Field QA/QC Samples**

The field QA/QC consisted of nine field duplicate sample sets.

To assess the analytical and sampling protocol precision, nine field duplicate sample sets were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with this duplicate sample were assessed per the Guidelines.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision with the exception of those shown in Table 8 that showed elevated variability.

## **12. Analyte Reporting**

The laboratory reported detected results down to the laboratory's estimated detection limit (EDL) for each analyte. Positive analyte detections less than the reporting limit (RL) but greater than the EDL were reported as estimated (J) in Table 2 unless otherwise qualified in the Memorandum. Non-detect results were presented as non-detect at the estimated detection limit (EDL) in Table 2.

All results were reported on a dry weight basis.

Those sample results that exceeded the range of the calibration curve were qualified as estimated (J) as shown in Table 9.

Diphenyl ether interferences were observed at the exact retention time and mass channel for several furans. All associated sample results were qualified as estimated as shown in Table 10.



### **13. Target Compound Identification/Sample Quantitation**

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time, ion abundance ratio, and chromatography were evaluated according to the identification criteria established by the methods. An erroneous identification can be either a false-positive (reporting a target compound when it is not present in the sample) or false-negative (not reporting a compound that is present in the sample).

The samples identified in Table 1 were reviewed. Most congeners reported adhered to the specified identification criteria.

Some sample results were reported as positive hits although the ion abundance ratio was not met. The associated results were qualified as the estimated maximum possible concentration. A summary of these qualified data is presented in Table 11.

### **14. Conclusion**

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications noted herein.

Table 1

**Sample Collection and Analysis Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs)	Final Sample Depth (ft. bgs)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters		Comments
								Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)		
320-54101-1	11187072-090719-SS-SJSB045-S- (8-10)	SJSB045	Soil	8	10	09/07/2019	13:25	X		
	11187072-090719-SS-SJSB045-S- (10-12)	SJSB045	Soil	10	12	09/07/2019	13:30	X		
	11187072-090719-SS-SJSB045-S- (12-14)	SJSB045	Soil	12	14	09/07/2019	13:35	X		
	11187072-090719-SS-SJSB045-S- (14-16)	SJSB045	Soil	14	16	09/07/2019	13:40	X		
	11187072-090719-SS-SJSB045-S- (16-18)	SJSB045	Soil	16	18	09/07/2019	13:45	X		
320-54236-1	11187072-091119-SS-SJSB045-S (2-4)	SJSB045	Soil	2	4	09/11/2019	15:35	X		
	11187072-091119-SS-DUP-2	SJSB045	Soil	2	4	09/11/2019	-	X		Field Duplicate for 11187072-091119-SS-SJSB045-S (2-4)
	11187072-091119-SS-SJSB045-S (4-6)	SJSB045	Soil	4	6	09/11/2019	15:40	X		
	11187072-091119-SS-SJSB045-S (6-8)	SJSB045	Soil	6	8	09/11/2019	15:45	X		
	11187072-091119-SS-DUP-3	SJSB045	Soil	6	8	09/11/2019	-	X		Field Duplicate for 11187072-091119-SS-SJSB045-S (6-8)
	11187072-091119-SS-SJSB045-S (0-2)	SJSB045	Soil	0	2	09/11/2019	15:30	X		
140-17310-1	11187072-11719-KW-SJSB045-C1-S (2-4)	SJSB045-C1	Soil	2	4	11/09/2019	10:35	X		
	11187072-11719-KW-SJSB045-C1-S (4-6)	SJSB045-C1	Soil	4	6	11/09/2019	10:40	X		
	11187072-11719-KW-SJSB045-C1-S (6-8)	SJSB045-C1	Soil	6	8	11/09/2019	10:45	X		
	11187072-11719-KW-SJSB045-C1-S (8-10)	SJSB045-C1	Soil	8	10	11/09/2019	11:00	X		
	11187072-11719-KW-SJSB045-C1-S (10-12)	SJSB045-C1	Soil	10	12	11/09/2019	11:05	X		
	11187072-11719-KW-SJSB045-C1-S (12-14)	SJSB045-C1	Soil	12	14	11/09/2019	11:10	X		
	11187072-11719-KW-SJSB045-C1-S (14-16)	SJSB045-C1	Soil	14	16	11/09/2019	11:15	X		
	11187072-11719-KW-SJSB045-C1-S (16-18)	SJSB045-C1	Soil	16	18	11/09/2019	11:20	X		
	11187072-11719-KW-SJSB045-C1-S (0-2)	SJSB045-C1	Soil	0	2	11/09/2019	10:30	X		
	11187072-11719-KW-SJSB048-C1-S (2-4)	SJSB048-C1	Soil	2	4	11/07/2019	10:50	X		
	11187072-11719-KW-SJSB048-C1-S (4-6)	SJSB048-C1	Soil	4	6	11/07/2019	11:00	X		
	11187072-11719-KW-SJSB048-C1-S (6-8)	SJSB048-C1	Soil	6	8	11/07/2019	11:05	X		
	11187072-11719-KW-SJSB048-C1-S (8-10)	SJSB048-C1	Soil	8	10	11/07/2019	11:10	X		
	11187072-11719-KW-SJSB048-C1-S (10-12)	SJSB048-C1	Soil	10	12	11/07/2019	11:15	X		
	11187072-11719-KW-SJSB048-C1-S (12-14)	SJSB048-C1	Soil	12	14	11/07/2019	11:20	X		
	11187072-11719-KW-SJSB048-C1-S (14-16)	SJSB048-C1	Soil	14	16	11/07/2019	11:25	X		
	11187072-11719-KW-SJSB048-C1-S (16-18)	SJSB048-C1	Soil	16	18	11/07/2019	11:30	X		
	11187072-11719-KW-SJSB048-C1-S (0-2)	SJSB048-C1	Soil	0	2	11/07/2019	10:45	X		



Table 1

**Sample Collection and Analysis Summary  
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								Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)	
320-55090-2	11187072-100719-SS-SJSB046 (2-4)	SJSB046	Soil	2	4	10/07/2019	15:35	X	
	11187072-100719-SS-SJSB046 (4-6)	SJSB046	Soil	4	6	10/07/2019	15:40	X	
	11187072-100719-SS-SJSB046 (6-8)	SJSB046	Soil	6	8	10/07/2019	15:45	X	
	11187072-100719-SS-SJSB046 (8-10)	SJSB046	Soil	8	10	10/07/2019	15:50	X	
	11187072-100719-SS-SJSB046 (10-12)	SJSB046	Soil	10	12	10/07/2019	15:55	X	
	11187072-100719-SS-SJSB046 (12-14)	SJSB046	Soil	12	14	10/07/2019	16:00	X	
	11187072-100719-DUP-6	SJSB046	Soil	12	14	10/07/2019	-	X	Field Duplicate for 11187072-100719-SS-SJSB046 (12-14)
	11187072-100719-SS-SJSB046 (14-16)	SJSB046	Soil	14	16	10/07/2019	16:05	X	
	11187072-100719-SS-SJSB046 (16-18)	SJSB046	Soil	16	18	10/07/2019	16:10	X	
	11187072-100719-SS-SJSB046 (0-2)	SJSB046	Soil	0	2	10/07/2019	15:30	X	
320-56257-1	11187072-111119-KW-SJSB046-S(18-20)	SJSB046	Soil	18	20	11/11/2019	13:40	X	
	11187072-111219-SS-SJSB058 (18-20)	SJSB058	Soil	18	20	11/12/2019	16:00	X	
	11187072-111219-SS-SJSB070 (2-4)	SJSB070	Soil	2	4	11/12/2019	14:05	X	
	11187072-111219-SS-SJSB070 (4-6)	SJSB070	Soil	4	6	11/12/2019	14:10	X	
	11187072-111219-SS-SJSB070 (6-8)	SJSB070	Soil	6	8	11/12/2019	14:15	X	
	11187072-111219-SS-SJSB070 (8-10)	SJSB070	Soil	8	10	11/12/2019	14:20	X	
	11187072-111219-SS-SJSB070 (10-12)	SJSB070	Soil	10	12	11/12/2019	14:25	X	
	11187072-111219-SS-SJSB070 (12-14)	SJSB070	Soil	12	14	11/12/2019	14:30	X	
	11187072-111219-SS-SJSB070 (14-16)	SJSB070	Soil	14	16	11/12/2019	14:35	X	
	11187072-111219-SS-SJSB070 (16-18)	SJSB070	Soil	16	18	11/12/2019	14:40	X	
	11187072-111219-SS-SJSB070 (0-2)	SJSB070	Soil	0	2	11/12/2019	14:00	X	
	11187072-111219-SS-SJSB071 (2-4)	SJSB071	Soil	2	4	11/12/2019	14:50	X	
	11187072-111219-SS-SJSB071 (4-6)	SJSB071	Soil	4	6	11/12/2019	14:55	X	
	11187072-111219-SS-SJSB071 (6-8)	SJSB071	Soil	6	8	11/12/2019	15:00	X	
	11187072-111219-SS-SJSB071 (8-10)	SJSB071	Soil	8	10	11/12/2019	15:05	X	
	11187072-111219-SS-SJSB071 (10-12)	SJSB071	Soil	10	12	11/12/2019	15:10	X	
	11187072-111219-SS-SJSB071 (12-14)	SJSB071	Soil	12	14	11/12/2019	15:15	X	
	11187072-111219-SS-SJSB071 (14-16)	SJSB071	Soil	14	16	11/12/2019	15:20	X	
	11187072-111219-SS-SJSB071 (16-18)	SJSB071	Soil	16	18	11/12/2019	15:25	X	
	11187072-111219-SS-SJSB071 (0-2)	SJSB071	Soil	0	2	11/12/2019	14:45	X	

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								Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)		
320-56905-1	11187072-120919-BN-SJSB046-C1(2-4)	SJSB046-C1	Soil	2	4	12/09/2019	07:05	X		
	11187072-120919-BN-SJSB046-C1(4-6)	SJSB046-C1	Soil	4	6	12/09/2019	07:10	X		
	11187072-120919-BN-SJSB046-C1(6-8)	SJSB046-C1	Soil	6	8	12/09/2019	07:15	X		
	11187072-120919-BN-SJSB046-C1(8-10)	SJSB046-C1	Soil	8	10	12/09/2019	07:20	X		
	11187072-120919-BN-SJSB046-C1(10-12)	SJSB046-C1	Soil	10	12	12/09/2019	07:25	X		
	11187072-120919-BN-SJSB046-C1(12-14)	SJSB046-C1	Soil	12	14	12/09/2019	07:30	X		
	11187072-120919-BN-SJSB046-C1(14-16)	SJSB046-C1	Soil	14	16	12/09/2019	07:35	X		
	11187072-120919-BN-SJSB046-C1(16-18)	SJSB046-C1	Soil	16	18	12/09/2019	07:40	X		
	11187072-120919-BN-DUP3	SJSB046-C1	Soil	16	18	12/09/2019	-	X	Field Duplicate for 11187072-120919-BN-SJSB046-C1(16-18)	
11187072-120919-BN-SJSB046-C1(0-2)	SJSB046-C1	Soil	0	2	12/09/2019	07:00	X			
320-55246-2	11187072-100919-SS-SJSB047(8-10)	SJSB047	Soil	8	10	10/09/2019	15:30	X		
	11187072-100919-SS-SJSB047(10-12)	SJSB047	Soil	10	12	10/09/2019	15:35	X		
	11187072-100919-SS-SJSB047(12-14)	SJSB047	Soil	12	14	10/09/2019	15:40	X		
	11187072-100919-SS-SJSB047(14-16)	SJSB047	Soil	14	16	10/09/2019	15:45	X		
	11187072-100919-SS-SJSB047(16-18)	SJSB047	Soil	16	18	10/09/2019	15:50	X		
	11187072-100919-SS-SJSB050C1(2-4)	SJSB050-C1	Soil	2	4	10/10/2019	10:05	X		
	11187072-100919-SS-SJSB050C1(4-6)	SJSB050-C1	Soil	4	6	10/10/2019	10:10	X		
	11187072-100919-SS-SJSB050C1(6-8)	SJSB050-C1	Soil	6	8	10/10/2019	10:15	X		
	11187072-100919-SS-SJSB050C1(8-10)	SJSB050-C1	Soil	8	10	10/10/2019	10:20	X		
	11187072-100919-SS-SJSB050C1(10-12)	SJSB050-C1	Soil	10	12	10/10/2019	10:25	X		
	11187072-100919-SS-SJSB050C1(12-14)	SJSB050-C1	Soil	12	14	10/10/2019	10:30	X		
	11187072-100919-SS-SJSB050C1(14-16)	SJSB050-C1	Soil	14	16	10/10/2019	10:35	X		
	11187072-100919-SS-SJSB050C1(16-18)	SJSB050-C1	Soil	16	18	10/10/2019	10:40	X		
	11187072-101019-SS-DUP-7	SJSB050-C1	Soil	16	18	10/10/2019	-	X	Field Duplicate for 11187072-100919-SS-SJSB050C1(16-18)	
11187072-100919-SS-SJSB050C1(0-2)	SJSB050-C1	Soil	0	2	10/10/2019	10:00	X			
180-97296-1	11187072-101019-SS-SJSB047(2-4)	SJSB047	Soil	2	4	10/10/2019	14:25	X		
	11187072-101019-SS-SJSB047(4-6)	SJSB047	Soil	4	6	10/10/2019	14:30	X		
	11187072-101019-SS-SJSB047(6-8)	SJSB047	Soil	6	8	10/10/2019	14:35	X		
	11187072-101019-SS-SJSB047(0-2)	SJSB047	Soil	0	2	10/10/2019	14:20	X		

Table 1

**Sample Collection and Analysis Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Pre-design Investigation Sampling Event - Northern Impoundment Area**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs)	Final Sample Depth (ft. bgs)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters	Comments
								Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)	
320-55629-1	11187072-101719-SS-SJSB047-C1-(2-4)	SJSB047-C1	Soil	2	4	10/17/2019	14:45	X	
	11187072-101719-SS-SJSB047-C1-(4-6)	SJSB047-C1	Soil	4	6	10/17/2019	14:50	X	
	11187072-101719-SS-SJSB047-C1-(6-8)	SJSB047-C1	Soil	6	8	10/17/2019	14:55	X	
	11187072-101719-SS-SJSB047-C1-(8-10)	SJSB047-C1	Soil	8	10	10/17/2019	15:00	X	
	11187072-101719-SS-SJSB047-C1-(10-12)	SJSB047-C1	Soil	10	12	10/17/2019	15:05	X	
	11187072-101719-SS-SJSB047-C1-(12-14)	SJSB047-C1	Soil	12	14	10/17/2019	15:10	X	
	11187072-101719-SS-SJSB047-C1-(14-16)	SJSB047-C1	Soil	14	16	10/17/2019	15:15	X	
	11187072-101719-SS-SJSB047-C1-(16-18)	SJSB047-C1	Soil	16	18	10/17/2019	15:20	X	
	11187072-101719-SS-SJSB047-C1-(0-2)	SJSB047-C1	Soil	0	2	10/17/2019	14:40	X	
320-54101-2	11187072-090819-SS-SJSB048-S- (2-4)	SJSB048	Soil	2	4	09/08/2019	15:15	X	
	11187072-090819-SS-SJSB048-S- (4-6)	SJSB048	Soil	4	6	09/08/2019	15:20	X	
	11187072-090819-SS-SJSB048-S- (6-8)	SJSB048	Soil	6	8	09/08/2019	15:25	X	
	11187072-090819-SS-SJSB048-S- (8-10)	SJSB048	Soil	8	10	09/08/2019	15:30	X	
	11187072-090819-SS-SJSB048-S- (10-12)	SJSB048	Soil	10	12	09/08/2019	15:35	X	
	11187072-090819-SS-SJSB048-S- (12-14)	SJSB048	Soil	12	14	09/08/2019	15:40	X	
	11187072-090819-SS-SJSB048-S- (14-16)	SJSB048	Soil	14	16	09/08/2019	15:45	X	
	11187072-090819-SS-SJSB048-S- (16-18)	SJSB048	Soil	106	18	09/08/2019	15:50	X	
	11187072-090819-SS-SJSB048-S- (0-2)	SJSB048	Soil	0	2	09/08/2019	15:10	X	
320-56829-1	1187072-120519-SS-SJSB048-C1(18-20)	SJSB048-C1	Soil	18	20	12/05/2019	12:40	X	
	1187072-120519-SS-DUP-1	SJSB048-C1	Soil	20	22	12/05/2019	00:00	X	
320-54239-1	11187072-091119-SS-SJSB049-S (2-4)	SJSB049	Soil	2	4	09/11/2019	16:05	X	
	11187072-091119-SS-SJSB049-S (4-6)	SJSB049	Soil	4	6	09/11/2019	16:10	X	
	11187072-091119-SS-SJSB049-S (6-8)	SJSB049	Soil	6	8	09/11/2019	16:15	X	
	11187072-091119-SS-SJSB049-S (8-10)	SJSB049	Soil	8	10	09/11/2019	16:20	X	
	11187072-091119-SS-SJSB049-S (10-12)	SJSB049	Soil	10	12	09/11/2019	16:25	X	
	11187072-091119-SS-SJSB049-S (12-14)	SJSB049	Soil	12	14	09/11/2019	16:30	X	
	11187072-091119-SS-SJSB049-S (14-16)	SJSB049	Soil	14	16	09/11/2019	16:35	X	
	11187072-091119-SS-SJSB049-S (16-18)	SJSB049	Soil	16	18	09/11/2019	16:40	X	
	11187072-091119-SS-SJSB049-S (0-2)	SJSB049	Soil	0	2	09/11/2019	16:00	X	

Table 1

**Sample Collection and Analysis Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs)	Final Sample Depth (ft. bgs)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters	Comments
								Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)	
320-54459-1	11187072-091619-SS-SJSB050-(2-4)	SJSB050	Soil	2	4	09/16/2019	14:05	X	Field Duplicate for 11187072-091619-SS-SJSB050-(2-4)
	11187072-091619-SS-DUP-5	SJSB050	Soil	2	4	09/16/2019	-	X	
	11187072-091619-SS-SJSB050-(4-6)	SJSB050	Soil	4	6	09/16/2019	14:10	X	
	11187072-091619-SS-SJSB050-(6-8)	SJSB050	Soil	6	8	09/16/2019	14:15	X	
	11187072-091619-SS-SJSB050-(8-10)	SJSB050	Soil	8	10	09/16/2019	14:20	X	
	11187072-091619-SS-SJSB050-(10-12)	SJSB050	Soil	10	12	09/16/2019	14:25	X	
	11187072-091619-SS-SJSB050-(12-14)	SJSB050	Soil	12	14	09/16/2019	14:30	X	
	11187072-091619-SS-SJSB050-(14-16)	SJSB050	Soil	14	16	09/16/2019	14:35	X	
	11187072-091619-SS-SJSB050-(16-18)	SJSB050	Soil	16	18	09/16/2019	14:40	X	
11187072-091619-SS-SJSB050-(0-2)	SJSB050	Soil	0	2	09/16/2019	14:00	X		
320-54154-1	11187072-091019-SS-SJSB051-S (2-4)	SJSB051	Soil	2	4	09/10/2019	11:35	X	
	11187072-091019-SS-SJSB051-S (4-6)	SJSB051	Soil	4	6	09/10/2019	11:40	X	
	11187072-091019-SS-SJSB051-S (6-8)	SJSB051	Soil	6	8	09/10/2019	11:45	X	
	11187072-091019-SS-SJSB051-S (8-10)	SJSB051	Soil	8	10	09/10/2019	11:50	X	
	11187072-091019-SS-SJSB051-S (10-12)	SJSB051	Soil	10	12	09/10/2019	11:55	X	
	11187072-091019-SS-SJSB051-S (12-14)	SJSB051	Soil	12	14	09/10/2019	12:00	X	
	11187072-091019-SS-SJSB051-S (14-16)	SJSB051	Soil	14	16	09/10/2019	12:05	X	
	11187072-091019-SS-SJSB051-S (16-18)	SJSB051	Soil	16	18	09/10/2019	12:10	X	
	11187072-091019-SS-SJSB051-S (0-2)	SJSB051	Soil	0	2	09/10/2019	11:30	X	
320-54158-1	11187072-091019-SS-DUP-1	SJSB051	Soil	16	18	09/10/2019	-	X	Field Duplicate for 11187072-091019-SS-SJSB051-S (16-18)
	11187072-091019-SS-SJSB055-S (2-4)	SJSB055	Soil	2	4	09/10/2019	16:15	X	
	11187072-091019-SS-SJSB055-S (4-6)	SJSB055	Soil	4	6	09/10/2019	16:20	X	
	11187072-091019-SS-SJSB055-S (6-8)	SJSB055	Soil	6	8	09/10/2019	16:25	X	
	11187072-091019-SS-SJSB055-S (8-10)	SJSB055	Soil	8	10	09/10/2019	16:30	X	
	11187072-091019-SS-SJSB055-S (10-12)	SJSB055	Soil	10	12	09/10/2019	16:35	X	
	11187072-091019-SS-SJSB055-S (12-14)	SJSB055	Soil	12	14	09/10/2019	16:40	X	
	11187072-091019-SS-SJSB055-S (14-16)	SJSB055	Soil	14	16	09/10/2019	16:45	X	
	11187072-091019-SS-SJSB055-S (16-18)	SJSB055	Soil	16	18	09/10/2019	16:50	X	
	11187072-091019-SS-SJSB055-S (0-2)	SJSB055	Soil	0	2	09/10/2019	16:10	X	

Table 1

**Sample Collection and Analysis Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs)	Final Sample Depth (ft. bgs)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters	Comments
								Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)	
320-54241-1	11187072-091219-SS-SJSB052-S (2-4)	SJSB052	Soil	2	4	09/12/2019	10:15	X	
	11187072-091219-SS-SJSB052-S (4-6)	SJSB052	Soil	4	6	09/12/2019	10:20	X	
	11187072-091219-SS-SJSB052-S (6-8)	SJSB052	Soil	6	8	09/12/2019	10:25	X	
	11187072-091219-SS-SJSB052-S (8-10)	SJSB052	Soil	8	10	09/12/2019	10:30	X	
	11187072-091219-SS-SJSB052-S (10-12)	SJSB052	Soil	10	12	09/12/2019	10:35	X	
	11187072-091219-SS-SJSB052-S (12-14)	SJSB052	Soil	12	14	09/12/2019	10:40	X	
	11187072-091219-SS-SJSB052-S (14-16)	SJSB052	Soil	14	16	09/12/2019	10:45	X	
	11187072-091219-SS-SJSB052-S (16-18)	SJSB052	Soil	16	18	09/12/2019	10:50	X	
	11187072-091219-SS-DUP-4	SJSB052	Soil	16	18	09/12/2019	-	X	Field Duplicate for 11187072-091219-SS-SJSB052-S (16-18)
11187072-091219-SS-SJSB052-S (0-2)	SJSB052	Soil	0	2	09/12/2019	10:10	X		
320-55119-1	11187072-100819-SS-SJSB052-C1 (2-4)	SJSB052-C1	Soil	2	4	10/08/2019	13:15	X	
	11187072-100819-SS-SJSB052-C1 (4-6)	SJSB052-C1	Soil	4	6	10/08/2019	13:20	X	
	11187072-100819-SS-SJSB052-C1 (6-8)	SJSB052-C1	Soil	6	8	10/08/2019	13:25	X	
	11187072-100819-SS-SJSB052-C1 (8-10)	SJSB052-C1	Soil	8	10	10/08/2019	13:30	X	
	11187072-100819-SS-SJSB052-C1 (10-12)	SJSB052-C1	Soil	10	12	10/08/2019	13:35	X	
	11187072-100819-SS-SJSB052-C1 (12-14)	SJSB052-C1	Soil	12	14	10/08/2019	13:40	X	
	11187072-100819-SS-SJSB052-C1 (14-16)	SJSB052-C1	Soil	14	16	10/08/2019	13:45	X	
	11187072-100819-SS-SJSB052-C1 (16-18)	SJSB052-C1	Soil	16	18	10/08/2019	13:50	X	
	11187072-100819-SS-SJSB052-C1 (0-2)	SJSB052-C1	Soil	0	2	10/08/2019	13:10	X	
320-55399-1	11187072-101319-SS-SJSB053 (2-4)	SJSB053	Soil	2	4	10/13/2019	11:25	X	
	11187072-101319-SS-SJSB053 (4-6)	SJSB053	Soil	4	6	10/13/2019	11:30	X	
	11187072-101319-SS-SJSB053 (6-8)	SJSB053	Soil	6	8	10/13/2019	11:35	X	
	11187072-101319-SS-SJSB053 (8-10)	SJSB053	Soil	8	10	10/13/2019	11:40	X	
	11187072-101319-SS-SJSB053 (10-12)	SJSB053	Soil	10	12	10/13/2019	11:45	X	
	11187072-101319-SS-SJSB053 (12-14)	SJSB053	Soil	12	14	10/13/2019	11:50	X	
	11187072-101319-SS-SJSB053 (14-15)	SJSB053	Soil	14	15	10/13/2019	11:55	X	
	11187072-101319-SS-SJSB053 (0-2)	SJSB053	Soil	0	2	10/13/2019	11:20	X	

Table 1

**Sample Collection and Analysis Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event - Northern Impoundment Area**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs)	Final Sample Depth (ft. bgs)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters	Comments
								Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)	
320-56182-1	11187072-111019-KW-SJSB053-S(14-16)	SJSB053	Soil	14	16	11/10/2019	14:30	X	
	11187072-111019-KW-SJSB053-S(16-18)	SJSB053	Soil	16	18	11/10/2019	14:35	X	
	11187072-110919-KW-SJSB053-C1-S (2-4)	SJSB053-C1	Soil	2	4	11/09/2019	16:10	X	
	11187072-110919-KW-SJSB053-C1-S (4-6)	SJSB053-C1	Soil	4	6	11/09/2019	16:13	X	
	11187072-110919-KW-SJSB053-C1-S (6-8)	SJSB053-C1	Soil	6	8	11/09/2019	16:15	X	
	11187072-110919-KW-SJSB053-C1-S (8-10)	SJSB053-C1	Soil	8	10	11/09/2019	16:16	X	
	11187072-110919-KW-SJSB053-C1-S (10-12)	SJSB053-C1	Soil	10	12	11/09/2019	16:19	X	
	11187072-110919-KW-SJSB053-C1-S (12-14)	SJSB053-C1	Soil	12	14	11/09/2019	16:21	X	
	11187072-110919-KW-SJSB053-C1-S (14-16)	SJSB053-C1	Soil	14	16	11/09/2019	16:23	X	
	11187072-110919-KW-SJSB053-C1-S (0-2)	SJSB053-C1	Soil	0	2	11/09/2019	16:05	X	
140-17019-1	11187072-101319-SS-SJSB054 (2-4)	SJSB054	Soil	2	4	10/13/2019	15:55	X	
	11187072-101319-SS-SJSB054 (4-6)	SJSB054	Soil	4	6	10/13/2019	16:00	X	
	11187072-101319-SS-SJSB054 (6-8)	SJSB054	Soil	6	8	10/13/2019	16:05	X	
	11187072-101319-SS-SJSB054 (8-10)	SJSB054	Soil	8	10	10/13/2019	16:10	X	
	11187072-101319-SS-SJSB054 (10-12)	SJSB054	Soil	10	12	10/13/2019	16:15	X	
	11187072-101319-SS-SJSB054 (12-14)	SJSB054	Soil	12	14	10/13/2019	16:20	X	
	11187072-101319-SS-SJSB054 (14-16)	SJSB054	Soil	14	16	10/13/2019	16:25	X	
	11187072-101319-SS-SJSB054 (16-18)	SJSB054	Soil	16	18	10/13/2019	16:30	X	
	11187072-101319-SS-SJSB054 (0-2)	SJSB054	Soil	0	2	10/13/2019	15:50	X	
	11187072-101419-BN-SJSB058-S (2-4)	SJSB058	Soil	2	4	10/14/2019	12:55	X	
	11187072-101419-BN-SJSB058-S (4-6)	SJSB058	Soil	4	6	10/14/2019	13:05	X	
	11187072-101419-BN-SJSB058-S (6-8)	SJSB058	Soil	6	8	10/14/2019	13:05	X	
	11187072-101419-BN-SJSB058-S (8-10)	SJSB058	Soil	8	10	10/14/2019	13:10	X	
	11187072-101419-BN-SJSB058-S (10-12)	SJSB058	Soil	10	12	10/14/2019	13:10	X	
	11187072-101419-BN-SJSB058-S (12-14)	SJSB058	Soil	12	14	10/14/2019	13:15	X	
	11187072-101419-BN-SJSB058-S (14-16)	SJSB058	Soil	14	16	10/14/2019	13:15	X	
	11187072-101419-BN-SJSB058-S (16-18)	SJSB058	Soil	16	18	10/14/2019	13:20	X	
	11187072-101419-BN-SJSB058-S (0-2)	SJSB058	Soil	0	2	10/14/2019	12:55	X	



Table 1

**Sample Collection and Analysis Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs)	Final Sample Depth (ft. bgs)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters	Comments
								Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)	
320-55439-1	11187072-101419-SS-SJSB055 C1 (2-4)	SJSB055	Soil	2	4	10/14/2019	11:45	X	
	11187072-101419-SS-SJSB055 C1 (4-6)	SJSB055	Soil	4	6	10/14/2019	11:50	X	
	11187072-101419-SS-SJSB055 C1 (6-8)	SJSB055	Soil	6	8	10/14/2019	11:55	X	
	11187072-101419-SS-SJSB055 C1 (8-10)	SJSB055	Soil	8	10	10/14/2019	12:00	X	
	11187072-101419-SS-SJSB055 C1 (10-12)	SJSB055	Soil	10	12	10/14/2019	12:05	X	
	11187072-101419-SS-SJSB055 C1 (12-14)	SJSB055	Soil	12	14	10/14/2019	12:10	X	
	11187072-101419-SS-SJSB055 C1 (14-16)	SJSB055	Soil	14	16	10/14/2019	12:15	X	
	11187072-101419-SS-SJSB055 C1 (16-18)	SJSB055	Soil	16	18	10/14/2019	12:20	X	
11187072-101419-SS-SJSB055 C1 (0-2)	SJSB055	Soil	0	2	10/14/2019	11:40	X		
320-56254-1	11187072-111119-SS-SJSB056 (2-4)	SJSB056	Soil	2	4	11/11/2019	08:55	X	
	11187072-111119-SS-SJSB056 (4-6)	SJSB056	Soil	4	6	11/11/2019	09:00	X	
	11187072-111119-SS-SJSB056 (6-8)	SJSB056	Soil	6	8	11/11/2019	09:05	X	
	11187072-111119-SS-SJSB056 (8-10)	SJSB056	Soil	8	10	11/11/2019	09:10	X	
	11187072-111119-SS-SJSB056 (10-12)	SJSB056	Soil	10	12	11/11/2019	09:15	X	
	11187072-111119-SS-SJSB056 (12-14)	SJSB056	Soil	12	14	11/11/2019	09:20	X	
	11187072-111119-SS-SJSB056 (14-16)	SJSB056	Soil	14	16	11/11/2019	09:25	X	
	11187072-111119-SS-SJSB056 (16-18)	SJSB056	Soil	16	18	11/11/2019	09:30	X	
11187072-111119-SS-SJSB056 (0-2)	SJSB056	Soil	0	2	11/11/2019	08:50	X		
320-56808-1	11187072-120319-SS-SJSB056-C1(2-4)	SJSB056-C1	Soil	2	4	12/03/2019	13:55	X	
	11187072-120319-SS-SJSB056-C1(4-6)	SJSB056-C1	Soil	4	6	12/03/2019	14:00	X	
	11187072-120319-SS-SJSB056-C1(6-8)	SJSB056-C1	Soil	6	8	12/03/2019	14:05	X	
	11187072-120319-SS-SJSB056-C1(8-10)	SJSB056-C1	Soil	8	10	12/03/2019	14:10	X	
	11187072-120319-SS-SJSB056-C1(10-12)	SJSB056-C1	Soil	10	12	12/03/2019	14:15	X	
	11187072-120319-SS-SJSB056-C1(12-14)	SJSB056-C1	Soil	12	14	12/03/2019	14:20	X	
	11187072-120319-SS-SJSB056-C1(14-16)	SJSB056-C1	Soil	14	16	12/03/2019	14:25	X	
	11187072-120319-SS-DUP-1	SJSB056-C1	Soil	14	16	12/03/2019	-	X	Field Duplicate for 11187072-120319-SS-SJSB056-C1(14-16)
	11187072-120319-SS-SJSB056-C1(16-18)	SJSB056-C1	Soil	16	18	12/03/2019	14:30	X	
11187072-120319-SS-SJSB056-C1(0-2)	SJSB056-C1	Soil	0	0	12/03/2019	13:50	X		

Table 1

**Sample Collection and Analysis Summary  
 San Jacinto River Waste Pits Superfund Site Investigation  
 Predesign Investigation Sampling Event - Northern Impoundment Area  
 San Jacinto, Harris County, Texas  
 September through December 2019**

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs)	Final Sample Depth (ft. bgs)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters	Comments
								Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)	
320-56179-1	11187072-110519-SS-SJSB057 (2-4)	SJSB057	Soil	2	4	11/05/2019	10:30	X	
	11187072-110519-SS-SJSB057 (4-6)	SJSB057	Soil	4	6	11/05/2019	10:35	X	
	11187072-110519-SS-SJSB057 (6-8)	SJSB057	Soil	6	8	11/05/2019	10:40	X	
	11187072-110519-SS-SJSB057 (8-10)	SJSB057	Soil	8	10	11/05/2019	10:45	X	
	11187072-110519-SS-SJSB057 (10-12)	SJSB057	Soil	10	12	11/05/2019	10:50	X	
	11187072-110519-SS-SJSB057 (12-14)	SJSB057	Soil	12	14	11/05/2019	14:45	X	
	11187072-110519-SS-SJSB057 (14-16)	SJSB057	Soil	14	16	11/05/2019	14:50	X	
	11187072-110519-SS-SJSB057 (16-18)	SJSB057	Soil	16	18	11/05/2019	15:15	X	
	11187072-110519-SS-SJSB057 (0-2)	SJSB057	Soil	0	2	11/05/2019	10:25	X	

Notes:

- ft. bgs - Feet below ground surface
- DUP - Laboratory Duplicate
- MS/MSD - Matrix Spike/Matrix Spike Duplicate
- - Not Applicable

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB045</b>	<b>SJSB045</b>
<b>Sample Name:</b>	<b>11187072-090719-SS-SJSB045-S- (8-10)</b>	<b>11187072-090719-SS-SJSB045-S- (10-12)</b>
<b>Sample Date:</b>	<b>09/07/2019</b>	<b>09/07/2019</b>
<b>Depth:</b>	<b>8-10 ft BGS</b>	<b>10-12 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	350	240
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.6 J	0.28 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	11	6.9
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.57 J	0.37 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1.2 J	0.52 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.53 J	0.25 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.37 J	0.19 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.57 J	0.24 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.32 J	0.20 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.80 J	0.67 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.3 U	1.6 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.49 U	0.36 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.36 U	0.29 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.26 J	0.15 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.39 U	0.33 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.6	0.21 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	7.1	0.32 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	36 J	29 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.8 J	0.52 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	8.8 J	7.0 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	4.4 J	3.0 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.64 J	0.55 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.42 U	0.34 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.1 J	0.21 U
Total tetrachlorodibenzofuran (TCDF)	pg/g	9.0 J	0.32 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	2.83	0.245
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	3.25	0.717

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB045</b>	<b>SJSB045</b>
<b>Sample Name:</b>	<b>11187072-090719-SS-SJSB045-S- (12-14)</b>	<b>11187072-090719-SS-SJSB045-S- (14-16)</b>
<b>Sample Date:</b>	<b>09/07/2019</b>	<b>09/07/2019</b>
<b>Depth:</b>	<b>12-14 ft BGS</b>	<b>14-16 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	950
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.30 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	33
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.38 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.81 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.43 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.22 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.44 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.23 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.3 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.7 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.61 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.37 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.18 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.39 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.27 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1.0 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	110 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.81 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	20 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.1 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.9 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.45 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.4 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.6 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.853
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.52
		1900
		1.4 J
		70
		0.44 U
		0.95 J
		0.76 U
		0.25 J
		0.80 U
		0.22 U
		3.2 J
		1.8 U
		0.51 U
		0.39 U
		0.17 U
		0.42 U
		0.25 U
		0.97 J
		250 J
		0.95 J
		47 J
		3.6 J
		7.9 J
		0.46 U
		4.2 J
		1.9 J
		1.72
		2.36

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB045</b>	<b>SJSB045</b>
<b>Sample Name:</b>	<b>11187072-090719-SS-SJSB045-S- (16-18)</b>	<b>11187072-091119-SS-SJSB045-S (2-4)</b>
<b>Sample Date:</b>	<b>09/07/2019</b>	<b>09/11/2019</b>
<b>Depth:</b>	<b>16-18 ft BGS</b>	<b>2-4 ft BGS</b>

**Parameters**

**Unit**

**Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	350 J	120
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.93 J	0.29 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	11	3.3 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.37 U	0.25 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.67 J	0.79 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.31 U	0.22 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.27 J	0.27 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.31 U	0.23 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.20 U	0.18 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.77 J	0.21 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.7 U	1.5 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.46 U	0.31 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.44 J	0.29 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 U	0.14 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.36 U	0.31 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.9	2.1
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	13 J	8.9
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	41 J	12 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.67 J	0.79 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	8.2 J	2.7 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	3.0 J	2.3 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.66 J	0.31 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.44 J	0.31 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.5 J	2.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	16 J	12 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	4.54	3.09
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	4.96	3.42

**Notes:**

- J - Estimated concentration
- U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB045</b>	<b>SJSB045</b>
<b>Sample Name:</b>	<b>11187072-091119-SS-DUP-2</b>	<b>11187072-091119-SS-SJSB045-S (4-6)</b>
<b>Sample Date:</b>	<b>09/11/2019</b>	<b>09/11/2019</b>
<b>Depth:</b>	<b>2-4 ft BGS Duplicate</b>	<b>4-6 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	230	170
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.87 J	0.89 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	6.1 J	5.3 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.23 U	0.26 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.93 U	1.1 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.22 U	0.25 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.38 J	0.21 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.22 U	0.26 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.26 J	0.34 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.21 U	0.24 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.9 U	2.2 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.36 U	0.44 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.54 U	0.28 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 U	0.17 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.27 U	0.31 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.1	3.2
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	16	18
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	22 J	18 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.93 J	1.1 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.1 J	4.0 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	3.4 J	3.3 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.36 U	0.44 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.54 J	0.31 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.1 J	3.2 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	25 J	33 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	4.89	5.14
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	5.26	5.58

## Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit



Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB045</b>	<b>SJSB045</b>
<b>Sample Name:</b>	<b>11187072-091119-SS-SJSB045-S (6-8)</b>	<b>11187072-091119-SS-DUP-3</b>
<b>Sample Date:</b>	<b>09/11/2019</b>	<b>09/11/2019</b>
<b>Depth:</b>	<b>6-8 ft BGS</b>	<b>6-8 ft BGS Duplicate</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	740	350
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.28 U	0.38 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	23	11
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.19 U	0.27 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.95 U	0.99 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.47 J	0.24 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.37 J	0.20 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.49 J	0.25 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.16 U	0.21 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.0 J	0.70 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.9 U	1.9 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.32 U	0.36 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.21 U	0.32 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.12 U	0.16 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.22 U	0.34 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.88 J	3.0
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	2.8 J	12 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	63 J	35 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.95 J	0.99 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	11 J	6.9 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.9 J	2.5 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.32 U	0.36 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.27 U	0.34 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.5 J	3.5 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	4.0 J	18 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.85	4.49
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	2.16	4.88

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB045</b>	<b>SJSB045-C1</b>
<b>Sample Name:</b>	<b>11187072-091119-SS-SJSB045-S (0-2)</b>	<b>11187072-11719-KW-SJSB045-C1-S (2-4)</b>
<b>Sample Date:</b>	<b>09/11/2019</b>	<b>11/09/2019</b>
<b>Depth:</b>	<b>0-2 ft BGS</b>	<b>2-4 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	410	250
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.8 J	7.4 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	10	10
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.26 U	5.6
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1.3 U	2.0 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.26 U	0.15 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.53 J	17
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.27 U	0.31 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.27 J	3.8 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.62 J	0.44 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.9 U	0.37 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.37 U	1.2 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.85 U	10
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 U	0.46 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.34 U	9.2
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	6.4	130
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	31	530
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	44 J	30 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.3 J	9.9 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	9.8 J	6.8 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	3.4 J	26 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.37 U	1.5 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.85 J	34 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	6.8 J	150 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	47 J	1100 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	9.87	190
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	10.3	190

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB045-C1</b>	<b>SJSB045-C1</b>
<b>Sample Name:</b>	<b>11187072-11719-KW-SJSB045-C1-S (4-6)</b>	<b>11187072-11719-KW-SJSB045-C1-S (6-8)</b>
<b>Sample Date:</b>	<b>11/09/2019</b>	<b>11/09/2019</b>
<b>Depth:</b>	<b>4-6 ft BGS</b>	<b>6-8 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1000	1200
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	11 J	3.4 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	34	40
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	9.8	1.6 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	3.3 J	0.50 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.62 J	0.46 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	27	4.1 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.84 J	0.80 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	7.1	0.94 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.9 J	1.8 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.52 J	0.096 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.5 J	0.51 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	17	2.4 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.94 J	0.079 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	13	2.1 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	200	31
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	740	130
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	97 J	100 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	16 J	2.8 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	20 J	20 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	42 J	5.5 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.2 J	3.3 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	53 J	7.8 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	220 J	36 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1500 J	230 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	286	46.8
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	286	46.8

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB045-C1</b>	<b>SJSB045-C1</b>
<b>Sample Name:</b>	<b>11187072-11719-KW-SJSB045-C1-S (8-10)</b>	<b>11187072-11719-KW-SJSB045-C1-S (10-12)</b>
<b>Sample Date:</b>	<b>11/09/2019</b>	<b>11/09/2019</b>
<b>Depth:</b>	<b>8-10 ft BGS</b>	<b>10-12 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	590	1600
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	2.4 U	1.6 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	21	64
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	1.6 J	1.5 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.56 J	0.32 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.31 J	0.67 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	5.4 J	3.6 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.38 J	1.6 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.3 J	0.89 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.0 J	2.9 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 J	0.16 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.32 J	0.58 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4.1 J	2.3 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 J	0.13 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.9 J	2.2 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	41	32
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	110	150
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	69 J	200 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	2.8 J	2.2 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	16 J	48 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	8.3 J	4.9 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.2 J	6.6 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	10 J	7.2 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	47 J	39 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	330 J	270 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	54.6	50.4
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	54.6	50.4

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB045-C1</b>	<b>SJSB045-C1</b>
<b>Sample Name:</b>	<b>11187072-11719-KW-SJSB045-C1-S (12-14)</b>	<b>11187072-11719-KW-SJSB045-C1-S (14-16)</b>
<b>Sample Date:</b>	<b>11/09/2019</b>	<b>11/09/2019</b>
<b>Depth:</b>	<b>12-14 ft BGS</b>	<b>14-16 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2400	2900
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.20 U	0.83 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	100	110
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.072 U	0.46 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.033 U	0.24 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.4 J	1.1 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.059 U	1.6 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.0 J	2.2 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.056 U	0.45 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.1 J	5.2 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.077 U	0.14 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.37 J	0.46 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.094 J	0.84 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.064 U	0.11 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.030 U	0.89 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.56 J	13
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1.6	56
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	300 J	330 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.15 J	0.93 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	72 J	82 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.077 U	2.1 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	12 J	14 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.19 J	2.9 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	7.0 J	23 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	5.2 J	100 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	3.76	22.4
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	3.79	22.4

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB045-C1</b>	<b>SJSB045-C1</b>
<b>Sample Name:</b>	<b>11187072-11719-KW-SJSB045-C1-S (16-18)</b>	<b>11187072-11719-KW-SJSB045-C1-S (0-2)</b>
<b>Sample Date:</b>	<b>11/09/2019</b>	<b>11/09/2019</b>
<b>Depth:</b>	<b>16-18 ft BGS</b>	<b>0-2 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	3400	360
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.25 U	9.7 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	130	13
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.087 U	7.6
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.040 U	3.3 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.3 J	0.26 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 J	27
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.3 J	0.38 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.091 J	6.8
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.5 J	0.62 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.096 U	0.64 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.58 J	2.0 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.17 J	17
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.078 U	0.75 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.098 J	13
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.3 J	200
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	4.3	760
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	380 J	40 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.17 J	14 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	93 J	9.1 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.26 J	42 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	17 J	3.7 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.26 J	52 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	12 J	220 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	9.8 J	1600 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	5.80	286
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	5.81	286

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit



**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB046</b>	<b>SJSB046</b>
<b>Sample Name:</b>	<b>11187072-100719-SS-SJSB046 (2-4)</b>	<b>11187072-100719-SS-SJSB046 (4-6)</b>
<b>Sample Date:</b>	<b>10/07/2019</b>	<b>10/07/2019</b>
<b>Depth:</b>	<b>2-4 ft BGS</b>	<b>4-6 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	3800	4900
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	98	470
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	130	190
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	78	240
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	23	85
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.9 J	2.7 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	210	820
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.7 J	7.2 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	54	210
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.8 J	7.1 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	3.5 J	14
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	17	62
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	160	590
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	6.6 J	24
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	110	380
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1700	6400
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	8700	19000
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	380 J	520 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	130 J	410 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	68 J	92 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	320 J	1200 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	30 J	83 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	450 J	1600 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1900 J	7000 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	14000 J	41000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	2660	8610
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	2660	8610

## Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

Location ID:	SJSB046	SJSB046
Sample Name:	11187072-100719-SS-SJSB046 (6-8)	11187072-100719-SS-SJSB046 (8-10)
Sample Date:	10/07/2019	10/07/2019
Depth:	6-8 ft BGS	8-10 ft BGS

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2900	5100
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	780	410
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	190 J	210
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	1800	180
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	660	61
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.5 U	3.1 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	5700	600
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	13 J	7.4 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1400	150
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	7.5 J	7.1 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	76 J	11
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	200 J	46
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2800	450
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	140 J	18
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1500	290
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	24000 J	4900
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	30000	18000
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	470 J	590 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	2800 J	310 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	90 J	100 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	8300 J	920 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	230 J	67 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	6800 J	1200 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	27000 J	5300 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	140000 J	31000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	28500	6930
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	28500	6930

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB046</b>	<b>SJSB046</b>
<b>Sample Name:</b>	<b>11187072-100719-SS-SJSB046 (10-12)</b>	<b>11187072-100719-SS-SJSB046 (12-14)</b>
<b>Sample Date:</b>	<b>10/07/2019</b>	<b>10/07/2019</b>
<b>Depth:</b>	<b>10-12 ft BGS</b>	<b>12-14 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	800	2000
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	6.4 J	320
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	29	74
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	3.5 J	110
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1.7 J	35
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.67 U	1.3 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	12	360
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.79 J	2.9 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3.1 J	91
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.8 J	2.8 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.44 J	6.1 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.94 J	22
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	7.6	260
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.61 J	12
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4.4 J	150
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	75	2500
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	310	7900
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	110 J	200 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	6.5 J	180 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	30 J	40 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	19 J	540 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	7.7 J	30 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	19 J	660 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	84 J	2600 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	490 J	14000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	111	3420
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	111	3420

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB046</b>	<b>SJSB046</b>
<b>Sample Name:</b>	<b>11187072-100719-DUP-6</b>	<b>11187072-100719-SS-SJSB046 (14-16)</b>
<b>Sample Date:</b>	<b>10/07/2019</b>	<b>10/07/2019</b>
<b>Depth:</b>	<b>12-14 ft BGS Duplicate</b>	<b>14-16 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	3300	1800
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	290	270
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	120	63
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	130	59
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	38	18
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.6 J	0.99 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	340	170
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.0 J	2.2 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	87	41
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.0 J	2.4 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	5.8 J	2.6 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	23	11
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	230	110
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	10	4.9 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	140	70
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2400	1200
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	8500	4500
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	330 J	180 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	210 J	97 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	56 J	37 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	520 J	250 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	34 J	17 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	600 J	300 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2600 J	1200 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	15000 J	7300 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	3370	1710
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	3370	1710

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB046</b>	<b>SJSB046</b>
<b>Sample Name:</b>	<b>11187072-100719-SS-SJSB046 (16-18)</b>	<b>11187072-100719-SS-SJSB046 (0-2)</b>
<b>Sample Date:</b>	<b>10/07/2019</b>	<b>10/07/2019</b>
<b>Depth:</b>	<b>16-18 ft BGS</b>	<b>0-2 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2500	400
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	230	9.7 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	95	22
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	98	8.7
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	31	2.4 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.3 J	0.44 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	310	31
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.2 J	0.80 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	77	7.8
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.5 J	0.76 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	5.0 J	0.53 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	22	3.4 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	220	28
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	9.1	1.2 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	140	25
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2400	360
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	8900	2600
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	260 J	63 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	160 J	15 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	48 J	13 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	460 J	48 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	31 J	9.2 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	580 J	88 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2500 J	420 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	15000 J	4100 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	3400	636
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	3400	636

**Notes:**

- J - Estimated concentration
- U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB046</b>	<b>SJSB046-C1</b>
<b>Sample Name:</b>	<b>11187072-111119-KW-SJSB046-S(18-20)</b>	<b>11187072-120919-BN-SJSB046-C1(2-4)</b>
<b>Sample Date:</b>	<b>11/11/2019</b>	<b>12/09/2019</b>
<b>Depth:</b>	<b>18-20 ft BGS</b>	<b>2-4 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1800	1600 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.9 J	45
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	76	49
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.44 U	54
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.17 U	16
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.3 U	0.97 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.35 U	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.2 J	1.7 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.34 U	48
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.0 J	1.9 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.39 J	2.9 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.44 J	18
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.59 U	170
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.24 U	5.7 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.28 J	130
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.6 U	2400
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	9.1	8600
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	220 J	150 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.44 J	84 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	54 J	29 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.39 J	280 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	11 J	24 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.88 J	480 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	8.8 J	2700 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	15 J	25000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	3.39	3350
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	4.82	3350

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit



**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB046-C1</b>	<b>SJSB046-C1</b>
<b>Sample Name:</b>	<b>11187072-120919-BN-SJSB046-C1(4-6)</b>	<b>11187072-120919-BN-SJSB046-C1(6-8)</b>
<b>Sample Date:</b>	<b>12/09/2019</b>	<b>12/09/2019</b>
<b>Depth:</b>	<b>4-6 ft BGS</b>	<b>6-8 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1900 J	2400 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	65	370
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	69	130
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	55	290
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	17	120
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.2 U	2.4 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	180	1400
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.4 J	6.2 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	45	390
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.6 J	5.6 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	3.0 J	25
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	14	70
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	150	1100
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	5.4 J	46
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	110	590
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1900	9100
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	8400	21000
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	200 J	350 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	96 J	500 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	38 J	77 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	270 J	2200 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	23 J	89 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	420 J	2700 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2200 J	9900 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	19000 J	70000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	2820	11700
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	2820	11700

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

Location ID:	SJSB046-C1	SJSB046-C1
Sample Name:	11187072-120919-BN-SJSB046-C1(8-10)	11187072-120919-BN-SJSB046-C1(10-12)
Sample Date:	12/09/2019	12/09/2019
Depth:	8-10 ft BGS	10-12 ft BGS

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2100 J	1200 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	270	2.6 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	120	41
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	540	1.5 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	180	0.56 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.3 J	0.64 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2000	4.7 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.6 J	0.92 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	510	1.6 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.6 J	2.2 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	34	0.28 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	89	0.48 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1400	3.7 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	56	0.24 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	710	2.3 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	13000	36
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	13000	160
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	250 J	140 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	850 J	2.8 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	56 J	37 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2900 J	7.2 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	100 J	6.6 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	3300 J	9.4 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	15000 J	43 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	74000 J	270 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	14900	55.0
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	14900	55.1

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB046-C1</b>	<b>SJSB046-C1</b>
<b>Sample Name:</b>	<b>11187072-120919-BN-SJSB046-C1(12-14)</b>	<b>11187072-120919-BN-SJSB046-C1(14-16)</b>
<b>Sample Date:</b>	<b>12/09/2019</b>	<b>12/09/2019</b>
<b>Depth:</b>	<b>12-14 ft BGS</b>	<b>14-16 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1800 J	1600 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	50	4.9 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	72	68
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	60	3.2 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	24	1.4 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.5 J	0.93 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	180	10
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.6 J	2.0 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	46	3.1 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.3 J	3.7 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	6.2 J	0.56 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	13	1.3 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	140	9.5
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	7.4 J	0.59 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	93	7.3 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1600	130
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	5600	680
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	210 J	190 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	98 J	5.8 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	60 J	49 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	270 J	17 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	20 J	9.7 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	370 J	28 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1800 J	150 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	12000 J	1300 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	2230	205
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	2230	205

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB046-C1</b>	<b>SJSB046-C1</b>
<b>Sample Name:</b>	<b>11187072-120919-BN-SJSB046-C1(16-18)</b>	<b>11187072-120919-BN-DUP3</b>
<b>Sample Date:</b>	<b>12/09/2019</b>	<b>12/09/2019</b>
<b>Depth:</b>	<b>16-18 ft BGS</b>	<b>16-18 ft BGS Duplicate</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1600 J	4100 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	93	180
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	67	150
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	160	120
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	45	38
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.1 J	2.0 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	470	390
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.8 J	4.7 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	120	94
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.3 J	4.6 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	7.8	5.6 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	39	25
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	340	280
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	13	11
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	240	180
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4300	3000
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	12000	8400
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	170 J	420 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	240 J	210 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	34 J	71 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	680 J	570 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	84 J	35 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	910 J	710 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4800 J	3300 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	35000 J	24000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	5690	3980
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	5690	3980

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB046-C1</b>	<b>SJSB047</b>
<b>Sample Name:</b>	<b>11187072-120919-BN-SJSB046-C1(0-2)</b>	<b>11187072-100919-SS-SJSB047(8-10)</b>
<b>Sample Date:</b>	<b>12/09/2019</b>	<b>10/09/2019</b>
<b>Depth:</b>	<b>0-2 ft BGS</b>	<b>8-10 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1000 J	1700
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	30	0.83 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	38	49
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	26	0.29 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	8.1	0.052 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.66 U	0.62 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	100	0.20 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.2 J	1.1 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	25	0.10 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.2 J	2.6 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.7 J	0.19 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	7.4	0.25 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	85	0.17 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3.2 J	0.059 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	61	0.067 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1000	0.27 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	5100	0.42 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	130 J	210 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	44 J	0.29 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	21 J	47 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	150 J	0.48 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	12 J	7.9 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	240 J	0.31 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1100 J	4.0 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	11000 J	1.0 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1550	1.99
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1550	2.03

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB047</b>	<b>SJSB047</b>
<b>Sample Name:</b>	<b>11187072-100919-SS-SJSB047(10-12)</b>	<b>11187072-100919-SS-SJSB047(12-14)</b>
<b>Sample Date:</b>	<b>10/09/2019</b>	<b>10/09/2019</b>
<b>Depth:</b>	<b>10-12 ft BGS</b>	<b>12-14 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	930	1000
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.4 U	1.5 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	34	48
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.22 U	0.65 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.22 J	0.33 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.60 U	0.75 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.084 U	0.24 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.81 J	1.3 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.083 U	0.26 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.8 J	3.0 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.21 J	0.23 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.20 J	0.36 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.070 U	0.23 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.066 U	0.16 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.077 U	0.24 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.22 J	0.27 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.31 J	0.27 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	120 J	160 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.44 J	0.65 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	30 J	43 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.28 J	0.23 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.6 J	9.5 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.10 U	0.24 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.9 J	5.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.1 J	0.96 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.35	1.27
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.41	1.69

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB047</b>	<b>SJSB047</b>
<b>Sample Name:</b>	<b>11187072-100919-SS-SJSB047(14-16)</b>	<b>11187072-100919-SS-SJSB047(16-18)</b>
<b>Sample Date:</b>	<b>10/09/2019</b>	<b>10/09/2019</b>
<b>Depth:</b>	<b>14-16 ft BGS</b>	<b>16-18 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1400	1100
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.33 U	0.29 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	65	46
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.27 U	0.29 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.29 U	0.34 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.70 U	0.82 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.21 U	0.25 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.5 J	1.2 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.22 U	0.27 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.2 J	2.7 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.11 U	0.27 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.38 U	0.39 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.20 U	0.18 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 U	0.16 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.22 U	0.19 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.28 U	0.28 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.13 U	0.20 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	200 J	160 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.29 U	0.34 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	47 J	45 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.22 U	0.27 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	7.6 J	9.3 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.22 U	0.20 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4.3 J	5.2 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.50 J	0.82 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.54	1.23
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.98	1.67

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit



**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB047</b>	<b>SJSB047</b>
<b>Sample Name:</b>	<b>11187072-101019-SS-SJSB047(2-4)</b>	<b>11187072-101019-SS-SJSB047(4-6)</b>
<b>Sample Date:</b>	<b>10/10/2019</b>	<b>10/10/2019</b>
<b>Depth:</b>	<b>2-4 ft BGS</b>	<b>4-6 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1100	830
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.91 U	0.48 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	43	27
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.17 J	0.14 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.16 J	0.15 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.47 J	0.50 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.098 J	0.085 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.95 J	0.60 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.11 J	0.075 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.1 J	1.5 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.24 J	0.18 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.097 U	0.18 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.043 U	0.14 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.094 J	0.063 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.043 U	0.047 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.10 J	0.35 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.27 J	1.7
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	150 J	110 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.52 J	0.43 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	35 J	28 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.55 J	0.40 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.6 J	5.8 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.053 U	0.14 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4.1 J	4.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.93 J	3.2 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.30	1.53
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.35	1.53

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB047</b>	<b>SJSB047</b>
<b>Sample Name:</b>	<b>11187072-101019-SS-SJSB047(6-8)</b>	<b>11187072-101019-SS-SJSB047(0-2)</b>
<b>Sample Date:</b>	<b>10/10/2019</b>	<b>10/10/2019</b>
<b>Depth:</b>	<b>6-8 ft BGS</b>	<b>0-2 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2300	500
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	27	2.5 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	79	22
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	3.5 J	0.57 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.33 J	0.13 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.86 J	0.38 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.067 U	0.11 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.6 J	0.65 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.16 J	0.064 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.6 J	1.6 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 J	0.13 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.30 J	0.11 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.064 U	0.054 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.055 U	0.048 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.066 U	0.056 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.23 J	0.36 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.17 J	1.0 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	250 J	85 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	12 J	1.6 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	52 J	17 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	1.3 J	0.24 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	11 J	1.9 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.080 U	0.066 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5.0 J	2.0 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.93 J	1.8 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	2.71	1.12
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	2.73	1.19

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB047-C1</b>	<b>SJSB047-C1</b>
<b>Sample Name:</b>	<b>11187072-101719-SS-SJSB047-C1-(2-4)</b>	<b>11187072-101719-SS-SJSB047-C1-(4-6)</b>
<b>Sample Date:</b>	<b>10/17/2019</b>	<b>10/17/2019</b>
<b>Depth:</b>	<b>2-4 ft BGS</b>	<b>4-6 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2400	1300
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	410	5.5 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	110	50
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	150	3.6 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	52	1.2 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.1 J	0.79 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	530	11
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.4 J	1.2 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	140	3.1 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.4 J	2.7 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	8.8 J	0.26 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	49	1.3 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	400	8.2 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	16	0.43 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	260	5.5 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4800	95
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	13000	380
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	330 J	180 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	260 J	6.0 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	70 J	43 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	780 J	17 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	54 J	10 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	1000 J	22 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5300 J	110 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	30000 J	630 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	6310	139
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	6310	139

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB047-C1</b>	<b>SJSB047-C1</b>
<b>Sample Name:</b>	<b>11187072-101719-SS-SJSB047-C1-(6-8)</b>	<b>11187072-101719-SS-SJSB047-C1-(8-10)</b>
<b>Sample Date:</b>	<b>10/17/2019</b>	<b>10/17/2019</b>
<b>Depth:</b>	<b>6-8 ft BGS</b>	<b>8-10 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1200	1200
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.8 U	45
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	53	44
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.83 J	25
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.27 J	7.3
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.71 U	0.62 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.8 J	75
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.4 J	1.2 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.57 J	19
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.1 J	1.8 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.18 J	1.2 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.26 U	6.3 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.8 J	51
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.095 U	2.2 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.1 J	34
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	19	540
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	82	2000
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	170 J	140 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.3 J	40 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	48 J	28 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.7 J	110 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	12 J	10 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	4.1 J	130 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	26 J	590 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	130 J	3900 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	29.2	769
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	29.4	769

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB047-C1</b>	<b>SJSB047-C1</b>
<b>Sample Name:</b>	<b>11187072-101719-SS-SJSB047-C1-(10-12)</b>	<b>11187072-101719-SS-SJSB047-C1-(12-14)</b>
<b>Sample Date:</b>	<b>10/17/2019</b>	<b>10/17/2019</b>
<b>Depth:</b>	<b>10-12 ft BGS</b>	<b>12-14 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1300	1100
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	31	17
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	43	40
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	19	25
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	6.1 J	7.6
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.59 U	0.68 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	61	76
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.2 J	1.0 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	16	20
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.8 J	1.6 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.95 J	1.2 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.5 J	7.3
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	43	50
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.0 J	2.3 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	30	37
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	490	600
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1700	1900
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	140 J	120 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	32 J	39 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	31 J	25 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	91 J	110 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	10 J	11 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	120 J	140 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	530 J	650 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	3500 J	4300 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	685	821
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	685	821

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB047-C1</b>	<b>SJSB047-C1</b>
<b>Sample Name:</b>	<b>11187072-101719-SS-SJSB047-C1-(14-16)</b>	<b>11187072-101719-SS-SJSB047-C1-(16-18)</b>
<b>Sample Date:</b>	<b>10/17/2019</b>	<b>10/17/2019</b>
<b>Depth:</b>	<b>14-16 ft BGS</b>	<b>16-18 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	930	1400
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	9.0 J	1.1 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	34	60
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	9.4	0.27 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	3.1 J	0.093 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.52 U	1.0 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	29	0.49 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.74 J	1.3 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	7.6	0.15 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.5 J	4.1 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.53 J	0.10 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.7 J	0.47 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	19	0.46 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.97 J	0.10 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	13	0.29 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	220	3.5
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	950	16
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	100 J	220 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	15 J	0.27 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	22 J	55 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	42 J	0.49 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.5 J	13 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	51 J	0.95 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	240 J	10 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1500 J	23 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	327	7.28
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	327	7.35

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB047-C1</b>	<b>SJSB048</b>
<b>Sample Name:</b>	<b>11187072-101719-SS-SJSB047-C1-(0-2)</b>	<b>11187072-090819-SS-SJSB048-S- (2-4)</b>
<b>Sample Date:</b>	<b>10/17/2019</b>	<b>09/08/2019</b>
<b>Depth:</b>	<b>0-2 ft BGS</b>	<b>2-4 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4300	280
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	390	1.5 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	190	8.0
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	190	0.94 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	63	0.73 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.4 J	0.27 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	690	0.53 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	7.6 J	0.29 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	180	0.16 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	7.3 J	0.91 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	11	1.4 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	58	0.46 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	510	0.30 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	20	0.13 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	330	0.34 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5800	0.24 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	14000 J	1.8
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	550 J	27 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	330 J	2.2 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	95 J	6.2 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	1000 J	3.5 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	64 J	0.46 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	1300 J	0.34 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	6300 J	0.31 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	39000 J	2.6 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	7470	0.505
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	7470	1.02

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit



Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB048</b>	<b>SJSB048</b>
<b>Sample Name:</b>	<b>11187072-090819-SS-SJSB048-S- (4-6)</b>	<b>11187072-090819-SS-SJSB048-S- (6-8)</b>
<b>Sample Date:</b>	<b>09/08/2019</b>	<b>09/08/2019</b>
<b>Depth:</b>	<b>4-6 ft BGS</b>	<b>6-8 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1100	1800
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.35 U	1.3 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	42	74
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.41 U	0.75 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.71 J	0.51 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.61 J	0.77 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.23 U	0.20 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.3 J	1.7 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.24 U	0.22 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.1 J	3.4 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.4 U	1.5 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.47 U	0.55 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.41 U	0.38 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.18 U	0.18 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.43 U	0.42 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.26 U	0.25 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.26 J	0.17 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	120 J	210 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.71 J	0.75 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	21 J	40 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.0 J	2.0 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.0 J	6.3 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.43 U	0.50 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.5 J	3.8 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.84 J	0.52 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.18	1.87
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.72	2.46

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB048</b>	<b>SJSB048</b>
<b>Sample Name:</b>	<b>11187072-090819-SS-SJSB048-S- (8-10)</b>	<b>11187072-090819-SS-SJSB048-S- (10-12)</b>
<b>Sample Date:</b>	<b>09/08/2019</b>	<b>09/08/2019</b>
<b>Depth:</b>	<b>8-10 ft BGS</b>	<b>10-12 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1700	1200
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.2 J	0.34 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	66	44
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.45 U	0.41 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.79 J	0.69 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.86 J	0.60 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.22 U	0.22 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.7 J	1.2 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.24 U	0.24 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.5 J	2.4 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.0 U	1.3 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.63 U	0.49 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.43 U	0.36 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.18 U	0.19 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.46 U	0.39 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.34 U	0.26 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.42 J	0.16 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	280 J	160 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.79 J	0.69 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	60 J	35 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.5 J	2.2 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	9.1 J	5.1 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.47 U	0.39 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.6 J	3.9 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.1 J	0.66 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.83	1.23
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	2.52	1.77

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB048</b>	<b>SJSB048</b>
<b>Sample Name:</b>	11187072-090819-SS-SJSB048-S- (12-14)	11187072-090819-SS-SJSB048-S- (14-16)
<b>Sample Date:</b>	09/08/2019	09/08/2019
<b>Depth:</b>	12-14 ft BGS	14-16 ft BGS

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1300	920
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.2 J	0.31 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	45	36
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.40 U	0.62 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.41 U	0.45 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.63 J	0.56 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 U	0.21 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.0 J	0.93 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.18 U	0.23 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.1 J	2.2 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.90 U	1.3 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.48 U	0.58 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.35 U	0.38 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 U	0.18 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.36 U	0.41 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.38 J	0.26 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.59 J	0.65 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	150 J	130 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.41 U	0.62 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	30 J	32 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.90 J	1.8 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.9 J	6.8 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.36 U	0.41 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.7 J	4.7 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.4 J	1.7 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.65	1.08
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	2.03	1.66

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB048</b>	<b>SJSB048</b>
<b>Sample Name:</b>	<b>11187072-090819-SS-SJSB048-S- (16-18)</b>	<b>11187072-090819-SS-SJSB048-S- (0-2)</b>
<b>Sample Date:</b>	<b>09/08/2019</b>	<b>09/08/2019</b>
<b>Depth:</b>	<b>106-18 ft BGS</b>	<b>0-2 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1900	400
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.3 J	1.4 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	69	9.5
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.38 U	0.45 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.55 J	1.1 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.83 J	0.31 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.25 U	0.37 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.6 J	0.32 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.27 U	0.34 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.6 J	1.0 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.4 U	1.9 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.58 U	0.57 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.38 U	0.39 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.20 U	0.17 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.42 U	0.43 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.32 U	0.64 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.62 J	1.7
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	250 J	33 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.55 J	1.1 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	53 J	6.9 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	1.4 J	4.2 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	8.2 J	0.57 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.45 U	0.51 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5.8 J	0.64 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.6 J	2.7 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.93	1.21
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	2.56	1.70

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

Location ID:	SJSB048-C1	SJSB048-C1
Sample Name:	11187072-11719-KW-SJSB048-C1-S (2-4)	11187072-11719-KW-SJSB048-C1-S (4-6)
Sample Date:	11/07/2019	11/07/2019
Depth:	2-4 ft BGS	4-6 ft BGS

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	490	380
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.1 U	9.2 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	19	16
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2.0 J	20
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.70 J	7.8
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.23 J	0.28 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	5.7 J	55
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.54 J	0.38 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.5 J	13
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.1 J	0.96 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.16 J	1.0 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.59 J	5.3 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	3.5 J	33
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.13 J	1.6 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	3.1 J	28
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	48	430
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	42	1400
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	53 J	42 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	3.2 J	32 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	13 J	11 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	8.4 J	81 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.3 J	7.9 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	11 J	93 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	54 J	480 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	340 J	3000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	55.1	592
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	55.1	592

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB048-C1</b>	<b>SJSB048-C1</b>
<b>Sample Name:</b>	<b>11187072-11719-KW-SJSB048-C1-S (6-8)</b>	<b>11187072-11719-KW-SJSB048-C1-S (8-10)</b>
<b>Sample Date:</b>	<b>11/07/2019</b>	<b>11/07/2019</b>
<b>Depth:</b>	<b>6-8 ft BGS</b>	<b>8-10 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1300	150
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.37 U	3.4 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	48	6.4
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.33 U	7.2
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.22 U	2.6 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.51 J	0.13 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.63 J	25
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.93 J	0.22 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 J	6.1
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.8 J	0.36 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.069 U	0.44 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.24 J	2.8 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.26 J	16
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.058 U	0.86 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.24 J	15
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.7	230
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	5.5	820
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	150 J	20 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.55 J	12 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	39 J	5.7 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.78 J	37 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.5 J	3.0 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.50 J	49 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	7.0 J	260 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	21 J	1700 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	4.94	323
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	4.95	323

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB048-C1</b>	<b>SJSB048-C1</b>
<b>Sample Name:</b>	<b>11187072-11719-KW-SJSB048-C1-S (10-12)</b>	<b>11187072-11719-KW-SJSB048-C1-S (12-14)</b>
<b>Sample Date:</b>	<b>11/07/2019</b>	<b>11/07/2019</b>
<b>Depth:</b>	<b>10-12 ft BGS</b>	<b>12-14 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2000	2200
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.24 U	1.5 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	91	98
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.25 U	3.1 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.031 U	1.3 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.86 J	1.1 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.41 J	11
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.2 J	2.5 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.18 J	2.6 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.9 J	5.3 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.073 U	0.25 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.33 J	1.4 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.31 J	6.8 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.062 U	0.35 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.26 J	6.4 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.9	100
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	6.6	390
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	290 J	300 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.34 J	5.1 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	66 J	78 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.60 J	16 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	10 J	13 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.67 J	23 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	9.6 J	120 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	22 J	790 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	6.34	147
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	6.35	147

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit



**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB048-C1</b>	<b>SJSB048-C1</b>
<b>Sample Name:</b>	<b>11187072-11719-KW-SJSB048-C1-S (14-16)</b>	<b>11187072-11719-KW-SJSB048-C1-S (16-18)</b>
<b>Sample Date:</b>	<b>11/07/2019</b>	<b>11/07/2019</b>
<b>Depth:</b>	<b>14-16 ft BGS</b>	<b>16-18 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2600	710
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.5 U	2.3 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	87	30
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	3.2 J	5.3 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1.1 J	1.9 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.86 J	0.30 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	9.7	18
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.9 J	0.67 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.4 J	4.3 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.9 J	1.3 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.30 J	0.39 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.5 J	2.0 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	6.6 J	11
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.38 J	0.49 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	6.0 J	9.9
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	96	160
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	400	510
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	240 J	77 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	5.1 J	8.6 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	54 J	19 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	15 J	26 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	8.9 J	3.0 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	22 J	36 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	110 J	170 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	750 J	1100 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	143	219
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	143	219

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB048-C1</b>	<b>SJSB048-C1</b>
<b>Sample Name:</b>	11187072-11719-KW-SJSB048-C1-S (0-2)	1187072-120519-SS-SJSB048-C1(18-20)
<b>Sample Date:</b>	11/07/2019	12/05/2019
<b>Depth:</b>	0-2 ft BGS	18-20 ft BGS

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

Parameters	Unit	SJSB048-C1	SJSB048-C1
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	780	1200 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	7.9 J	2.5 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	35	47
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	16	0.63 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	5.4 J	0.20 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.40 J	0.86 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	53	0.92 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.0 J	1.3 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	13	0.44 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.9 J	4.0 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.1 J	0.55 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.4 J	0.60 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	35	0.20 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.8 J	0.23 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	30	0.47 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	460	6.9
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1400	25 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	89 J	170 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	26 J	0.63 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	20 J	47 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	80 J	2.1 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.4 J	7.9 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	110 J	0.47 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	510 J	11 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	3300 J	44 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	623	11.8
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	623	11.8

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB048-C1</b>	<b>SJSB049</b>
<b>Sample Name:</b>	<b>1187072-120519-SS-DUP-1</b>	<b>1187072-091119-SS-SJSB049-S (2-4)</b>
<b>Sample Date:</b>	<b>12/05/2019</b>	<b>09/11/2019</b>
<b>Depth:</b>	<b>20-22 ft BGS</b>	<b>2-4 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	62	3200
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.9 U	240
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.3 J	120
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.13 U	190
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.17 U	56
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.32 J	1.7 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.19 J	550
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.27 J	4.6 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 J	150
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.42 J	4.3 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.28 J	10 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.17 U	46
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.11 U	430
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.11 J	16
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.11 U	330
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.56 J	5000 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1.9	14000 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	6.6 J	320 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.17 U	300 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.9 J	61 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.73 J	820 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.17 U	61 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.12 U	1200 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.1 J	5500 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	2.1 J	35000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.965	6640
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.07	6640

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB049</b>	<b>SJSB049</b>
<b>Sample Name:</b>	11187072-091119-SS-SJSB049-S (4-6)	11187072-091119-SS-SJSB049-S (6-8)
<b>Sample Date:</b>	09/11/2019	09/11/2019
<b>Depth:</b>	4-6 ft BGS	6-8 ft BGS

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1600	1700
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	82	5.1 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	60	64
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	94	3.0 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	30	2.9 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.94 J	0.57 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	240	8.1
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.7 J	1.3 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	65	2.4 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.5 J	2.8 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	5.6 U	3.6 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	12 J	1.1 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	150	6.4 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	6.1 J	0.22 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	100	4.2 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1700 J	73
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	5700 J	320
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	180 J	190 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	140 J	5.9 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	33 J	39 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	350 J	18 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	14 J	6.3 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	380 J	17 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1800 J	80 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	11000 J	520 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	2350	110
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	2350	110

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB049</b>	<b>SJSB049</b>
<b>Sample Name:</b>	<b>11187072-091119-SS-SJSB049-S (8-10)</b>	<b>11187072-091119-SS-SJSB049-S (10-12)</b>
<b>Sample Date:</b>	<b>09/11/2019</b>	<b>09/11/2019</b>
<b>Depth:</b>	<b>8-10 ft BGS</b>	<b>10-12 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1600	1700
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	9.7 J	3.2 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	59	75
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	6.6 J	2.2 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	3.6 U	2.5 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.62 J	1.0 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	18	6.5 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.4 J	2.0 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	4.6 J	2.1 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.6 J	4.1 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	3.1 U	2.4 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.6 J	1.1 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	14	5.8 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.63 J	0.19 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	9.4	4.1 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	170	74
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	720 J	330
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	190 J	220 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	12 J	4.7 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	42 J	58 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	31 J	13 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	7.9 J	15 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	37 J	16 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	190 J	84 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1200 J	530 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	251	112
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	251	112

**Notes:**

J - Estimated concentration  
U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB049</b>	<b>SJSB049</b>
<b>Sample Name:</b>	<b>11187072-091119-SS-SJSB049-S (12-14)</b>	<b>11187072-091119-SS-SJSB049-S (14-16)</b>
<b>Sample Date:</b>	<b>09/11/2019</b>	<b>09/11/2019</b>
<b>Depth:</b>	<b>12-14 ft BGS</b>	<b>14-16 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2600	2000
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4.5 J	1.8 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	99	75
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2.8 J	0.49 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	3.0 U	1.5 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.0 J	1.4 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	8.4	1.7 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.3 J	2.2 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.6 J	0.67 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.5 J	6.3 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	3.5 U	2.8 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.89 J	0.52 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	7.4 J	1.9 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.48 J	0.18 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4.5 J	1.1 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	77	17
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	340	77
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	290 J	260 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	7.0 J	1.5 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	68 J	67 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	18 J	6.5 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	10 J	5.5 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	19 J	2.9 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	88 J	22 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	530 J	110 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	117	27.7
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	117	28.1

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB049</b>	<b>SJSB049</b>
<b>Sample Name:</b>	<b>11187072-091119-SS-SJSB049-S (16-18)</b>	<b>11187072-091119-SS-SJSB049-S (0-2)</b>
<b>Sample Date:</b>	<b>09/11/2019</b>	<b>09/11/2019</b>
<b>Depth:</b>	<b>16-18 ft BGS</b>	<b>0-2 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2000	5200
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.47 U	490
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	77	260
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.37 U	830
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1.6 U	260
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.83 J	3.2 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.24 U	2400
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.5 J	14
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.25 U	680
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.0 J	7.7 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	3.2 U	43
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.60 U	150
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.39 U	1600
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.20 U	76
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.41 U	1100
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.1 J	20000 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	11 J	27000 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	240 J	620 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.6 J	1400 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	62 J	110 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	4.7 J	3600 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	9.6 J	160 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.41 U	4400 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	7.5 J	21000 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	17 J	100000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	5.30	23600
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	5.87	23600

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit



**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB050</b>	<b>SJSB050</b>
<b>Sample Name:</b>	11187072-091619-SS-SJSB050-(2-4)	11187072-091619-SS-DUP-5
<b>Sample Date:</b>	09/16/2019	09/16/2019
<b>Depth:</b>	2-4 ft BGS	2-4 ft BGS Duplicate

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2300	1400
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.7 J	1.8 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	62	50
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.34 U	0.27 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.38 U	0.32 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.2 J	0.76 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.20 U	0.20 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.3 J	1.3 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.21 U	0.20 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.1 J	2.7 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.30 U	0.53 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.52 U	0.48 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.54 J	0.30 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.16 U	0.16 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.36 U	0.31 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.71 J	1.0 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.97 J	3.9
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	160 J	120 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.38 U	0.32 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	30 J	24 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.30 J	0.53 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.4 J	4.2 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	1.5 J	0.36 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4.1 J	2.0 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	2.8 J	5.9 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	2.69	2.79
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	3.05	3.13

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB050</b>	<b>SJSB050</b>
<b>Sample Name:</b>	<b>11187072-091619-SS-SJSB050-(4-6)</b>	<b>11187072-091619-SS-SJSB050-(6-8)</b>
<b>Sample Date:</b>	<b>09/16/2019</b>	<b>09/16/2019</b>
<b>Depth:</b>	<b>4-6 ft BGS</b>	<b>6-8 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	850	1300
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.46 U	0.39 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	31	38
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.27 U	0.23 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.32 U	0.26 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.51 J	0.42 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 U	0.16 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.62 J	0.78 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.18 U	0.17 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.9 J	2.0 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.23 U	0.23 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.48 U	0.41 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.23 U	0.23 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 U	0.12 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.25 U	0.25 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.27 U	0.21 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.20 U	0.14 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	120 J	150 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.32 U	0.26 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	34 J	36 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.23 J	0.23 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	7.3 J	6.2 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.28 U	0.25 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.2 J	1.6 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.20 U	0.14 U
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.868	1.09
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.33	1.48

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB050</b>	<b>SJSB050</b>
<b>Sample Name:</b>	<b>11187072-091619-SS-SJSB050-(8-10)</b>	<b>11187072-091619-SS-SJSB050-(10-12)</b>
<b>Sample Date:</b>	<b>09/16/2019</b>	<b>09/16/2019</b>
<b>Depth:</b>	<b>8-10 ft BGS</b>	<b>10-12 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2500	2000
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.0 J	0.45 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	110	85
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.22 U	0.24 U
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.24 U	0.28 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.1 J	1.0 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.18 U	0.15 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.4 J	2.1 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.18 U	0.16 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.6 J	4.7 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.35 U	0.32 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.45 U	0.47 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.24 U	0.22 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 U	0.12 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.26 U	0.25 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.30 J	0.31 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.19 U	0.21 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	280 J	230 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.24 U	0.28 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	78 J	66 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.35 J	0.32 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	17 J	13 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.26 U	0.26 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	8.4 J	8.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.47 J	1.4 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	3.06	2.23
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	3.38	2.71

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB050</b>	<b>SJSB050</b>
<b>Sample Name:</b>	<b>11187072-091619-SS-SJSB050-(12-14)</b>	<b>11187072-091619-SS-SJSB050-(14-16)</b>
<b>Sample Date:</b>	<b>09/16/2019</b>	<b>09/16/2019</b>
<b>Depth:</b>	<b>12-14 ft BGS</b>	<b>14-16 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1400	1200
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.34 U	0.41 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	50	45
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.19 U	0.23 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.20 U	0.26 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.44 J	0.61 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.13 U	0.21 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.97 J	1.3 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 U	0.21 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.4 J	2.9 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.27 U	0.36 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.36 U	0.48 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.20 U	0.27 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.10 U	0.16 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.22 U	0.29 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.25 J	0.27 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.15 U	0.19 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	140 J	130 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.20 U	0.26 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	33 J	38 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.27 J	0.36 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.6 J	7.5 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.22 U	0.29 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.8 J	4.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.37 J	0.80 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.55	1.29
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.81	1.77

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB050</b>	<b>SJSB050</b>
<b>Sample Name:</b>	<b>11187072-091619-SS-SJSB050-(16-18)</b>	<b>11187072-091619-SS-SJSB050-(0-2)</b>
<b>Sample Date:</b>	<b>09/16/2019</b>	<b>09/16/2019</b>
<b>Depth:</b>	<b>16-18 ft BGS</b>	<b>0-2 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	40	2600
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.31 U	7.2 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	0.94 J	91
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.16 U	1.1 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.20 U	0.42 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.15 U	1.1 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.13 U	0.27 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.16 U	2.5 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.13 U	0.27 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.14 U	4.7 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.26 U	0.70 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.29 U	0.47 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.22 U	0.38 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.098 U	0.21 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.23 U	0.42 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.17 U	3.4
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.13 U	11
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	3.8 J	220 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.20 U	1.1 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.78 J	44 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.26 J	0.70 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.29 U	6.1 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.23 U	0.42 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.17 U	6.4 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.13 U	13 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.0214	7.03
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.351	7.41

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

Location ID:	SJSB050-C1	SJSB050-C1
Sample Name:	11187072-100919-SS-SJSB050C1(2-4)	11187072-100919-SS-SJSB050C1(4-6)
Sample Date:	10/10/2019	10/10/2019
Depth:	2-4 ft BGS	4-6 ft BGS

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	750	1500
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.83 U	0.26 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	33	58
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.20 U	0.24 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.23 U	0.25 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.44 U	0.62 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.18 U	0.17 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.77 J	1.2 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.20 U	0.18 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.5 J	2.6 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.25 J	0.094 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.29 U	0.33 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.16 U	0.17 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.12 U	0.11 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.17 U	0.18 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.85 J	0.51 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.86 J	0.44 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	110 J	180 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.23 U	0.25 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	20 J	40 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.25 J	0.18 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.5 J	6.6 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.19 U	0.18 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.1 J	4.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.7 J	0.88 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.74	1.96
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.97	2.22

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB050-C1</b>	<b>SJSB050-C1</b>
<b>Sample Name:</b>	<b>11187072-100919-SS-SJSB050C1(6-8)</b>	<b>11187072-100919-SS-SJSB050C1(8-10)</b>
<b>Sample Date:</b>	<b>10/10/2019</b>	<b>10/10/2019</b>
<b>Depth:</b>	<b>6-8 ft BGS</b>	<b>8-10 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2300	130
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.4 U	0.52 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	97	6.0 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.22 U	0.15 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.26 U	0.18 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.0 U	0.15 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.19 U	0.14 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.0 J	0.16 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.22 U	0.15 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.5 J	0.34 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.27 J	0.076 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.36 U	0.21 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.17 U	0.22 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.13 U	0.090 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.18 U	0.14 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.44 J	0.70 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.31 J	3.0
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	320 J	15 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.26 U	0.18 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	72 J	2.2 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.27 J	0.15 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	12 J	0.21 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.18 U	0.22 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	7.5 J	0.91 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.89 J	4.4 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	2.81	1.14
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	3.10	1.31

## Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit



**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB050-C1</b>	<b>SJSB050-C1</b>
<b>Sample Name:</b>	<b>11187072-100919-SS-SJSB050C1(10-12)</b>	<b>11187072-100919-SS-SJSB050C1(12-14)</b>
<b>Sample Date:</b>	<b>10/10/2019</b>	<b>10/10/2019</b>
<b>Depth:</b>	<b>10-12 ft BGS</b>	<b>12-14 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	340	2000
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.24 U	0.32 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	14	100
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.19 U	0.24 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.21 U	0.27 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.38 U	0.97 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 U	0.21 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.35 J	2.6 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 U	0.23 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.71 J	5.7 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.085 U	0.33 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.24 U	0.41 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.15 U	0.18 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.10 U	0.15 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.17 U	0.20 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.76 J	0.59 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	2.4	0.15 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	40 J	260 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.21 U	0.27 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	8.1 J	67 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.17 U	0.33 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.57 J	9.7 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.17 U	0.20 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.2 J	6.4 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	2.7 J	0.70 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.35	3.05
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.54	3.38

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB050-C1</b>	<b>SJSB050-C1</b>
<b>Sample Name:</b>	<b>11187072-100919-SS-SJSB050C1(14-16)</b>	<b>11187072-100919-SS-SJSB050C1(16-18)</b>
<b>Sample Date:</b>	<b>10/10/2019</b>	<b>10/10/2019</b>
<b>Depth:</b>	<b>14-16 ft BGS</b>	<b>16-18 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1800	960 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.1 U	0.24 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	96	41 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.21 U	0.19 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.24 U	0.21 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.88 U	0.51 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.19 U	0.16 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.7 J	0.92 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.21 U	0.18 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.4 J	2.0 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.24 J	0.088 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.38 U	0.30 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.19 U	0.18 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.13 U	0.11 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.21 U	0.18 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.24 J	0.19 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.12 U	0.14 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	240 J	110 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.24 U	0.21 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	59 J	22 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.24 J	0.18 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	8.8 J	2.2 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.21 U	0.18 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5.3 J	1.2 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.99 J	0.14 U
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	2.57	0.99
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	2.88	1.33

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB050-C1</b>	<b>SJSB050-C1</b>
<b>Sample Name:</b>	<b>11187072-101019-SS-DUP-7</b>	<b>11187072-100919-SS-SJSB050C1(0-2)</b>
<b>Sample Date:</b>	<b>10/10/2019</b>	<b>10/10/2019</b>
<b>Depth:</b>	<b>16-18 ft BGS</b>	<b>0-2 ft BGS</b>
	<b>Duplicate</b>	

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	250 J	450
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.19 U	0.18 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	8.7 J	16
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.13 U	0.17 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.16 U	0.20 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.17 U	0.33 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.13 U	0.14 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.17 U	0.39 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 U	0.15 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.39 J	0.79 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.11 J	0.11 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.23 U	0.27 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.11 U	0.16 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.087 U	0.092 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.12 U	0.17 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.17 U	1.3 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.097 U	3.5
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	25 J	51 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.16 U	0.20 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.2 J	9.2 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.11 U	0.11 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.46 J	0.49 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.15 U	0.17 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.18 J	2.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.097 U	4.6 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.212	2.07
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.473	2.27

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB051</b>	<b>SJSB051</b>
<b>Sample Name:</b>	<b>11187072-091019-SS-SJSB051-S (2-4)</b>	<b>11187072-091019-SS-SJSB051-S (4-6)</b>
<b>Sample Date:</b>	<b>09/10/2019</b>	<b>09/10/2019</b>
<b>Depth:</b>	<b>2-4 ft BGS</b>	<b>4-6 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	5500	1600
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4.0 J	0.38 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	130	62
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.53 U	0.40 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.67 U	0.48 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.3 J	0.73 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.33 U	0.23 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.1 J	1.3 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.32 U	0.22 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.1 J	3.6 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.3 U	1.5 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.94 U	0.60 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.58 U	0.32 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.25 U	0.17 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.67 U	0.34 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.43 U	0.34 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.30 U	0.21 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	330 J	220 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.67 U	0.48 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	53 J	49 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.6 J	1.5 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.8 J	7.9 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.67 U	0.34 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.1 J	4.2 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.2 J	0.21 U
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	4.00	2.00
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	4.98	2.48

## Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB051</b>	<b>SJSB051</b>
<b>Sample Name:</b>	<b>11187072-091019-SS-SJSB051-S (6-8)</b>	<b>11187072-091019-SS-SJSB051-S (8-10)</b>
<b>Sample Date:</b>	<b>09/10/2019</b>	<b>09/10/2019</b>
<b>Depth:</b>	<b>6-8 ft BGS</b>	<b>8-10 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2200	1400
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.2 J	2.6 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	81	49
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.34 J	0.50 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.76 J	0.76 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.2 J	0.95 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.24 J	0.17 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.5 J	1.2 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 J	0.15 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.4 J	2.9 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.6 U	1.5 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.080 U	0.28 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.29 J	0.28 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.024 U	0.021 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.13 J	0.18 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.23 J	0.93 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.13 J	2.2
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	290 J	150 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.5 J	1.9 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	76 J	44 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.9 J	3.1 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	13 J	9.2 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.92 J	1.3 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	8.2 J	5.8 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.92 J	3.9 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	2.52	2.95
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	2.64	3.03

## Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

Location ID:	SJSB051	SJSB051
Sample Name:	11187072-091019-SS-SJSB051-S (10-12)	11187072-091019-SS-SJSB051-S (12-14)
Sample Date:	09/10/2019	09/10/2019
Depth:	10-12 ft BGS	12-14 ft BGS

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1400	2600
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.58 J	0.85 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	51	70
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.14 J	0.25 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.71 J	0.75 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.79 J	1.1 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 J	0.27 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.0 J	1.5 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.12 J	0.17 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.7 J	3.1 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.4 U	1.5 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.060 U	0.37 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.22 J	0.28 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.019 U	0.026 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.13 J	0.15 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.14 J	0.25 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.11 J	0.56 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	180 J	210 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.1 J	1.3 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	51 J	42 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.5 J	2.9 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	7.6 J	8.0 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.86 J	1.1 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4.1 J	6.0 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.49 J	3.0 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.61	2.83
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.71	2.91

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB051</b>	<b>SJSB051</b>
<b>Sample Name:</b>	<b>11187072-091019-SS-SJSB051-S (14-16)</b>	<b>11187072-091019-SS-SJSB051-S (16-18)</b>
<b>Sample Date:</b>	<b>09/10/2019</b>	<b>09/10/2019</b>
<b>Depth:</b>	<b>14-16 ft BGS</b>	<b>16-18 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1500	1500
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.74 J	0.75 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	66	67
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.22 J	0.19 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.74 J	0.67 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.90 J	1.1 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.18 J	0.11 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.3 J	1.5 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 J	0.15 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.6 J	4.5 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.5 U	1.4 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.33 J	0.33 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.17 J	0.25 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.019 U	0.023 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.083 J	0.045 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.17 J	0.19 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.11 J	0.11 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	220 J	240 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.3 J	1.3 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	65 J	66 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.7 J	2.1 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	12 J	9.7 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.69 J	0.68 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5.5 J	5.2 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.0 J	0.70 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	2.27	2.40
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	2.35	2.48

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB051</b>	<b>SJSB051</b>
<b>Sample Name:</b>	<b>11187072-091019-SS-DUP-1</b>	<b>11187072-091019-SS-SJSB051-S (0-2)</b>
<b>Sample Date:</b>	<b>09/10/2019</b>	<b>09/10/2019</b>
<b>Depth:</b>	<b>16-18 ft BGS Duplicate</b>	<b>0-2 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	850	2300
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.61 J	2.5 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	40	60
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.15 J	0.28 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.56 J	0.35 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.74 J	0.62 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.19 J	0.19 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.1 J	1.4 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.032 U	0.19 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.3 J	3.2 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.3 U	1.5 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.24 J	0.45 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.19 J	0.29 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.027 U	0.15 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.058 U	0.33 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.17 J	0.67 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.096 J	1.4 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	140 J	160 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.98 J	0.35 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	41 J	31 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.4 J	1.9 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.9 J	2.4 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.82 J	0.33 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.9 J	2.4 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.2 J	2.6 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.62	2.62
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.70	3.02

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit



Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB052</b>	<b>SJSB052</b>
<b>Sample Name:</b>	<b>11187072-091219-SS-SJSB052-S (2-4)</b>	<b>11187072-091219-SS-SJSB052-S (4-6)</b>
<b>Sample Date:</b>	<b>09/12/2019</b>	<b>09/12/2019</b>
<b>Depth:</b>	<b>2-4 ft BGS</b>	<b>4-6 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	280	610
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.33 U	0.30 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	13	23
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.25 U	0.26 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1.6 U	1.5 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.25 U	0.25 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.26 J	0.16 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.26 U	0.46 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.38 J	0.17 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.72 J	1.0 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.7 U	2.1 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.38 U	0.33 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.76 J	0.23 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.16 U	0.13 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.29 U	0.25 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.78 J	0.76 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	3.8	3.2
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	38 J	79 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.6 J	1.5 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	7.6 J	17 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	4.5 J	2.9 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.38 U	0.95 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.76 J	0.25 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.78 J	1.3 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	4.3 J	4.6 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.53	1.64
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.94	1.99

**Notes:**

J - Estimated concentration  
U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB052</b>	<b>SJSB052</b>
<b>Sample Name:</b>	<b>11187072-091219-SS-SJSB052-S (6-8)</b>	<b>11187072-091219-SS-SJSB052-S (8-10)</b>
<b>Sample Date:</b>	<b>09/12/2019</b>	<b>09/12/2019</b>
<b>Depth:</b>	<b>6-8 ft BGS</b>	<b>8-10 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1200	640
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.58 U	0.46 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	48	29
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.38 U	0.33 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1.6 U	1.7 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.67 J	0.62 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.20 U	0.23 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.1 J	0.66 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.22 U	0.23 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.7 J	1.8 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	3.4 U	3.0 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.47 U	0.48 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.36 U	0.28 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.16 U	0.19 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.38 U	0.31 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.30 U	0.56 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.43 J	1.8
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	170 J	100 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.6 J	1.7 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	41 J	30 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	4.7 J	4.2 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	4.6 J	4.7 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.38 U	0.31 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.9 J	2.3 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.43 J	2.6 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.33	1.53
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.99	2.01

## Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB052</b>	<b>SJSB052</b>
<b>Sample Name:</b>	<b>11187072-091219-SS-SJSB052-S (10-12)</b>	<b>11187072-091219-SS-SJSB052-S (12-14)</b>
<b>Sample Date:</b>	<b>09/12/2019</b>	<b>09/12/2019</b>
<b>Depth:</b>	<b>10-12 ft BGS</b>	<b>12-14 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1700	1500
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.6 J	0.30 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	74	53
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.25 U	0.25 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.1 U	1.7 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.97 J	0.61 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.22 J	0.20 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.6 J	1.1 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.38 J	0.19 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.7 J	3.1 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	3.2 U	3.0 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.37 U	0.36 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.28 U	0.24 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 U	0.16 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.32 U	0.26 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.40 J	0.33 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.46 J	0.44 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	210 J	170 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	2.1 J	1.7 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	48 J	38 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	5.1 J	4.7 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	8.7 J	3.0 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.32 U	0.27 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5.2 J	2.3 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.2 J	0.93 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	2.38	1.84
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	2.80	2.24

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB052</b>	<b>SJSB052</b>
<b>Sample Name:</b>	<b>11187072-091219-SS-SJSB052-S (14-16)</b>	<b>11187072-091219-SS-SJSB052-S (16-18)</b>
<b>Sample Date:</b>	<b>09/12/2019</b>	<b>09/12/2019</b>
<b>Depth:</b>	<b>14-16 ft BGS</b>	<b>16-18 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	140	1000
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.32 U	0.38 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	4.4 J	46
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.27 U	0.31 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.5 U	2.5 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.25 U	0.59 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.21 U	0.25 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.26 U	1.1 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.44 J	0.26 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.24 U	3.0 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	3.8 U	4.1 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.29 U	0.39 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.67 U	1.1 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 U	0.20 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.31 U	0.33 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.19 U	5.5
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.15 U	49 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	14 J	140 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	2.5 J	2.5 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.8 J	37 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	6.3 J	6.1 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.29 U	5.9 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.67 J	1.9 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.19 U	8.5 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.15 U	88 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.130	11.6
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.694	12.1

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB052</b>	<b>SJSB052</b>
<b>Sample Name:</b>	<b>11187072-091219-SS-DUP-4</b>	<b>11187072-091219-SS-SJSB052-S (0-2)</b>
<b>Sample Date:</b>	<b>09/12/2019</b>	<b>09/12/2019</b>
<b>Depth:</b>	<b>16-18 ft BGS Duplicate</b>	<b>0-2 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1400	440
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.34 U	1.3 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	55	31
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.32 U	0.29 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.0 U	2.0 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.90 J	0.70 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.21 U	0.44 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.2 J	0.90 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.23 U	0.33 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.1 J	1.5 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	3.0 U	2.6 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.2 J	0.36 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.54 U	0.57 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.18 U	0.13 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.31 U	0.25 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.0	0.58 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1.0 J	2.8
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	170 J	58 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	2.0 J	2.0 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	52 J	11 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	5.7 J	4.4 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	19 J	0.39 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	7.7 J	0.57 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	8.0 J	0.80 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.9 J	3.8 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	9.89	1.71
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	10.1	2.07

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB052-C1</b>	<b>SJSB052-C1</b>
<b>Sample Name:</b>	<b>11187072-100819-SS-SJSB052-C1 (2-4)</b>	<b>11187072-100819-SS-SJSB052-C1 (4-6)</b>
<b>Sample Date:</b>	<b>10/08/2019</b>	<b>10/08/2019</b>
<b>Depth:</b>	<b>2-4 ft BGS</b>	<b>4-6 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	460	100
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.31 J	0.53 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	33	3.0 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.12 J	0.12 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.075 J	0.027 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.51 U	0.22 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.066 J	0.10 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.98 J	0.13 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.040 J	0.038 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.0 J	0.18 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 J	0.088 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.21 J	0.071 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.15 J	0.041 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.044 J	0.030 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.043 U	0.042 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.11 J	0.24 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.41 J	0.85 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	68 J	8.4 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.25 J	0.16 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	15 J	1.7 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.30 J	0.19 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.8 J	0.29 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.33 J	0.061 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.8 J	0.57 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.8 J	1.7 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.16	0.436
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.20	0.493

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB052-C1</b>	<b>SJSB052-C1</b>
<b>Sample Name:</b>	<b>11187072-100819-SS-SJSB052-C1 (6-8)</b>	<b>11187072-100819-SS-SJSB052-C1 (8-10)</b>
<b>Sample Date:</b>	<b>10/08/2019</b>	<b>10/08/2019</b>
<b>Depth:</b>	<b>6-8 ft BGS</b>	<b>8-10 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	790	1400
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.25 J	0.37 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	31	60
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.13 J	0.13 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.072 J	0.12 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.50 U	0.73 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.035 U	0.12 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.83 J	1.5 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.093 J	0.13 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.0 J	3.8 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 J	0.26 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.20 J	0.33 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.11 J	0.077 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.028 U	0.049 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.041 U	0.081 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.30 J	0.32 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.74 J	0.28 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	100 J	180 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.20 J	0.25 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	26 J	40 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.26 J	0.51 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.2 J	7.0 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.11 J	0.094 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.9 J	4.4 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	2.1 J	1.4 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.44	2.25
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.47	2.32

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB052-C1</b>	<b>SJSB052-C1</b>
<b>Sample Name:</b>	<b>11187072-100819-SS-SJSB052-C1 (10-12)</b>	<b>11187072-100819-SS-SJSB052-C1 (12-14)</b>
<b>Sample Date:</b>	<b>10/08/2019</b>	<b>10/08/2019</b>
<b>Depth:</b>	<b>10-12 ft BGS</b>	<b>12-14 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	740 J	1100
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.17 U	0.69 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	31	43
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.079 U	0.25 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.037 U	0.055 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.67 U	0.72 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.059 U	0.057 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.91 J	1.1 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.060 U	0.099 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.1 J	3.0 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.13 U	0.21 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.24 J	0.31 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.055 U	0.060 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.047 U	0.078 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.059 U	0.064 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.25 J	0.15 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.11 J	0.056 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	120 J	150 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.079 J	0.25 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	29 J	44 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.13 J	0.39 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.0 J	10 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.073 U	0.071 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.6 J	5.4 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.3 J	0.85 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.33	1.65
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.39	1.71

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit



**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB052-C1</b>	<b>SJSB052-C1</b>
<b>Sample Name:</b>	<b>11187072-100819-SS-SJSB052-C1 (14-16)</b>	<b>11187072-100819-SS-SJSB052-C1 (16-18)</b>
<b>Sample Date:</b>	<b>10/08/2019</b>	<b>10/08/2019</b>
<b>Depth:</b>	<b>14-16 ft BGS</b>	<b>16-18 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	900	1300
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.26 U	0.24 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	39	56
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.13 U	0.13 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.076 J	0.087 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.83 U	0.78 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.088 J	0.048 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.1 J	1.5 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.092 J	0.087 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.2 J	4.0 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 U	0.18 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.42 J	0.33 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.058 U	0.051 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.083 J	0.065 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.059 U	0.052 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.17 J	0.17 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.22 J	0.044 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	140 J	180 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.21 J	0.22 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	43 J	49 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.43 J	0.33 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	9.0 J	11 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.067 U	0.059 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.9 J	6.6 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.1 J	1.5 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.73	2.02
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.79	2.08

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB052-C1</b>	<b>SJSB053</b>
<b>Sample Name:</b>	<b>11187072-100819-SS-SJSB052-C1 (0-2)</b>	<b>11187072-101319-SS-SJSB053 (2-4)</b>
<b>Sample Date:</b>	<b>10/08/2019</b>	<b>10/13/2019</b>
<b>Depth:</b>	<b>0-2 ft BGS</b>	<b>2-4 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1300	570
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.4 J	0.57 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	39	22
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.47 J	0.050 U
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.26 J	0.053 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.86 U	0.42 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.75 J	0.096 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.1 J	0.52 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.28 J	0.097 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.3 J	1.3 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.30 J	0.10 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.44 J	0.13 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.75 J	0.063 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.13 J	0.075 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.47 J	0.065 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5.0	0.18 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	23	0.22 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	120 J	81 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.96 J	0.053 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	21 J	20 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	1.5 J	0.10 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	10 J	3.8 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	2.8 J	0.086 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	13 J	2.3 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	47 J	0.55 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	9.18	0.827
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	9.22	0.917

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

Location ID:	SJSB053	SJSB053
Sample Name:	11187072-101319-SS-SJSB053 (4-6)	11187072-101319-SS-SJSB053 (6-8)
Sample Date:	10/13/2019	10/13/2019
Depth:	4-6 ft BGS	6-8 ft BGS

## Parameters

## Unit

**Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	640	800
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.1 U	2.0 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	22	32
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.15 J	0.43 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.050 U	0.073 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.42 J	0.62 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.095 U	0.096 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.54 J	0.79 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.093 U	0.095 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.3 J	2.1 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.067 U	0.094 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.17 U	0.19 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.087 U	0.099 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.074 U	0.072 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.088 U	0.099 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.55 J	0.29 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1.3 J	0.98 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	79 J	110 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.33 J	1.0 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	18 J	28 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.095 U	0.094 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.2 J	4.0 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.11 U	0.13 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.7 J	2.6 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.7 J	1.7 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.32	1.31
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.44	1.44

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB053</b>	<b>SJSB053</b>
<b>Sample Name:</b>	<b>11187072-101319-SS-SJSB053 (8-10)</b>	<b>11187072-101319-SS-SJSB053 (10-12)</b>
<b>Sample Date:</b>	<b>10/13/2019</b>	<b>10/13/2019</b>
<b>Depth:</b>	<b>8-10 ft BGS</b>	<b>10-12 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	810	1300
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	2.8 U	0.50 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	34	53
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.69 J	0.11 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.067 U	0.060 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.42 J	0.51 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.12 U	0.086 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.80 J	1.1 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.12 U	0.087 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.3 J	3.3 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.089 U	0.16 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.14 U	0.25 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.093 U	0.088 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.099 U	0.071 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.096 U	0.087 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.21 J	0.15 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.23 J	0.14 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	130 J	180 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.7 J	0.11 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	31 J	38 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.12 U	0.16 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	4.7 J	5.7 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.14 U	0.097 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.9 J	2.6 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.64 J	0.55 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.17	1.68
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.28	1.79

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB053</b>	<b>SJSB053</b>
<b>Sample Name:</b>	<b>11187072-101319-SS-SJSB053 (12-14)</b>	<b>11187072-101319-SS-SJSB053 (14-15)</b>
<b>Sample Date:</b>	<b>10/13/2019</b>	<b>10/13/2019</b>
<b>Depth:</b>	<b>12-14 ft BGS</b>	<b>14-15 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	21 U	2100
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.29 U	120
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	0.97 J	110 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.14 J	17
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.048 U	1.4 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.25 J	0.75 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.10 U	0.28 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.12 J	2.3 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.099 U	0.44 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.18 J	5.1 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.077 U	0.14 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.12 U	0.21 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.066 U	0.062 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.081 U	0.19 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.068 U	0.063 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.11 U	0.24 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.13 U	0.057 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	3.2 J	250 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.14 J	58 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.2 J	41 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.10 U	6.3 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.12 U	8.3 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.092 U	0.19 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.11 U	2.9 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.13 U	0.18 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.0660	3.32
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.220	3.33

## Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB053</b>	<b>SJSB053</b>
<b>Sample Name:</b>	<b>11187072-101319-SS-SJSB053 (0-2)</b>	<b>11187072-111019-KW-SJSB053-S(14-16)</b>
<b>Sample Date:</b>	<b>10/13/2019</b>	<b>11/10/2019</b>
<b>Depth:</b>	<b>0-2 ft BGS</b>	<b>14-16 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	720	92
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	10 U	1.5 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	36	2.8 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2.1 J	0.25 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.32 U	0.12 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.57 J	0.31 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.27 U	0.068 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.1 J	0.25 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.32 U	0.067 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.1 J	0.33 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 U	0.13 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.34 U	0.16 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.16 U	0.13 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.18 U	0.049 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.18 U	0.058 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.53 J	0.062 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.33 J	0.068 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	120 J	10 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	5.8 J	0.37 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	26 J	3.5 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.55 J	0.13 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.7 J	0.67 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.18 U	0.13 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.8 J	1.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.76 J	0.068 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.54	0.247
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.79	0.339

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

Location ID:	SJSB053	SJSB053-C1
Sample Name:	11187072-111019-KW-SJSB053-S(16-18)	11187072-110919-KW-SJSB053-C1-S (2-4)
Sample Date:	11/10/2019	11/09/2019
Depth:	16-18 ft BGS	2-4 ft BGS

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	130	600
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.59 U	3.4 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	4.0 J	24
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.14 U	0.40 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.073 U	0.21 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.27 U	0.41 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.059 U	0.074 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.19 J	0.65 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.058 U	0.070 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.41 U	1.5 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.12 U	0.054 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.16 J	0.099 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.14 U	0.16 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.069 J	0.052 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.050 U	0.050 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.046 U	0.11 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.057 J	0.14 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	17 J	86 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.21 J	0.77 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.6 J	21 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.19 J	0.074 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.0 J	4.8 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.14 J	0.16 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.6 J	2.9 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.12 J	0.34 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.271	0.759
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.350	0.855

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB053-C1</b>	<b>SJSB053-C1</b>
<b>Sample Name:</b>	<b>11187072-110919-KW-SJSB053-C1-S (4-6)</b>	<b>11187072-110919-KW-SJSB053-C1-S (6-8)</b>
<b>Sample Date:</b>	<b>11/09/2019</b>	<b>11/09/2019</b>
<b>Depth:</b>	<b>4-6 ft BGS</b>	<b>6-8 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	940	1000
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	3.3 U	9.3 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	38	42
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.47 U	0.71 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.25 U	0.35 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.57 U	0.60 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 U	0.14 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.80 J	1.0 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 U	0.14 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.9 J	2.4 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.20 U	0.27 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.23 J	0.14 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.17 U	0.14 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.11 U	0.074 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.061 U	0.084 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.092 J	0.15 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.15 J	0.094 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	130 J	160 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.72 J	1.5 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	29 J	39 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.20 J	0.63 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.4 J	6.0 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.17 J	0.31 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.9 J	3.3 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.44 J	0.27 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.27	1.28
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.34	1.40

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit



**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB053-C1</b>	<b>SJSB053-C1</b>
<b>Sample Name:</b>	<b>11187072-110919-KW-SJSB053-C1-S (8-10)</b>	<b>11187072-110919-KW-SJSB053-C1-S (10-12)</b>
<b>Sample Date:</b>	<b>11/09/2019</b>	<b>11/09/2019</b>
<b>Depth:</b>	<b>8-10 ft BGS</b>	<b>10-12 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	510	1300
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.82 U	0.80 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	18	50
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.13 U	0.13 U
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.033 U	0.087 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.35 U	0.76 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.056 U	0.062 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.35 J	1.0 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.055 U	0.060 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.91 J	2.6 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.12 U	0.22 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.097 U	0.25 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.15 U	0.14 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.068 J	0.048 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.047 U	0.047 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.29 J	0.18 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.92 J	0.10 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	61 J	170 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.13 J	0.29 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	14 J	39 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.19 J	0.27 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.2 J	6.8 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.15 J	0.14 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.7 J	3.4 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.6 J	0.25 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.848	1.69
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.936	1.76

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB053-C1</b>	<b>SJSB053-C1</b>
<b>Sample Name:</b>	<b>11187072-110919-KW-SJSB053-C1-S (12-14)</b>	<b>11187072-110919-KW-SJSB053-C1-S (14-16)</b>
<b>Sample Date:</b>	<b>11/09/2019</b>	<b>11/09/2019</b>
<b>Depth:</b>	<b>12-14 ft BGS</b>	<b>14-16 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	410	1300
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.82 U	1.1 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	15	57
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.12 U	0.23 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.028 U	0.053 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.35 U	0.80 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.067 J	0.091 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.35 J	1.6 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.050 U	0.090 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.87 J	4.5 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 U	0.24 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.14 J	0.31 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.042 U	0.20 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.056 J	0.062 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.078 J	0.056 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.39 J	0.22 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1.6	0.18 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	53 J	190 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.12 J	0.23 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	12 J	49 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.26 J	0.24 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.4 J	10 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.078 J	0.20 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.6 J	6.7 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	2.2 J	0.92 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.12	2.12
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.15	2.20

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB053-C1</b>	<b>SJSB054</b>
<b>Sample Name:</b>	<b>11187072-110919-KW-SJSB053-C1-S (0-2)</b>	<b>11187072-101319-SS-SJSB054 (2-4)</b>
<b>Sample Date:</b>	<b>11/09/2019</b>	<b>10/13/2019</b>
<b>Depth:</b>	<b>0-2 ft BGS</b>	<b>2-4 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	150	310
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.8 U	29 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	7.1	15 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.19 U	66 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.12 U	29 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.31 U	0.51 UJ
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.066 U	180
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.22 J	1.5 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.063 U	47 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.35 U	0.48 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 U	2.5 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.13 J	13 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.047 U	88
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.048 U	5.1 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.047 U	78
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.37 J	1200
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1.1 J	2900
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	26 J	50 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.39 J	110 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.8 J	15 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.14 J	260 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.84 J	15 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.048 U	280 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.83 J	1300 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.8 J	8800 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.748	1550
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.806	1550

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB054</b>	<b>SJSB054</b>
<b>Sample Name:</b>	<b>11187072-101319-SS-SJSB054 (4-6)</b>	<b>11187072-101319-SS-SJSB054 (6-8)</b>
<b>Sample Date:</b>	<b>10/13/2019</b>	<b>10/13/2019</b>
<b>Depth:</b>	<b>4-6 ft BGS</b>	<b>6-8 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1400	1900
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.36 U	0.24 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	53	70
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.23 U	0.19 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.092 U	0.052 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.57 J	0.93 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.59 J	0.38 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.0 J	1.4 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 J	0.068 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.1 J	3.5 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.081 U	0.14 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.35 J	0.27 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.28 J	0.24 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.064 U	0.071 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.24 J	0.087 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.2	2.8 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	13	9.4
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	180 J	230 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.38 J	0.33 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	49 J	55 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.76 J	0.52 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	9.8 J	9.1 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.52 J	0.24 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	10 J	10 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	24 J	21 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	6.42	5.92
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	6.43	5.94

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB054</b>	<b>SJSB054</b>
<b>Sample Name:</b>	<b>11187072-101319-SS-SJSB054 (8-10)</b>	<b>11187072-101319-SS-SJSB054 (10-12)</b>
<b>Sample Date:</b>	<b>10/13/2019</b>	<b>10/13/2019</b>
<b>Depth:</b>	<b>8-10 ft BGS</b>	<b>10-12 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1700	1300
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.28 U	0.19 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	67	61
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.52 U	0.15 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.15 U	0.061 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.56 J	0.68 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.0 J	0.27 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.5 J	1.3 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.29 J	0.058 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.0 J	3.3 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.086 U	0.074 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.47 J	0.38 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.0 J	0.18 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.066 U	0.059 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.78 J	0.072 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	11	2.4
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	39	9.2
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	200 J	210 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.84 J	0.15 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	43 J	53 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	1.3 J	0.27 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	7.3 J	8.2 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	2.6 J	0.18 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	16 J	8.2 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	79 J	18 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	17.5	5.26
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	17.6	5.28

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB054</b>	<b>SJSB054</b>
<b>Sample Name:</b>	<b>11187072-101319-SS-SJSB054 (12-14)</b>	<b>11187072-101319-SS-SJSB054 (14-16)</b>
<b>Sample Date:</b>	<b>10/13/2019</b>	<b>10/13/2019</b>
<b>Depth:</b>	<b>12-14 ft BGS</b>	<b>14-16 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	550	310
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4.2 U	0.63 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	25	12
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	8.0	0.98 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	3.0 J	0.52 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.44 J	0.15 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	29	3.0 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.69 J	0.21 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	7.5	0.80 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.3 J	0.12 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.56 J	0.099 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.4 J	0.30 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	19	1.8 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.0 J	0.079 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	17	1.6 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	270	23
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	850	82
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	81 J	43 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	13 J	1.7 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	21 J	11 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	43 J	4.3 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.3 J	2.0 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	58 J	5.1 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	300 J	27 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	2000 J	160 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	369	32.7
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	369	32.7

## Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB054</b>	<b>SJSB054</b>
<b>Sample Name:</b>	<b>11187072-101319-SS-SJSB054 (16-18)</b>	<b>11187072-101319-SS-SJSB054 (0-2)</b>
<b>Sample Date:</b>	<b>10/13/2019</b>	<b>10/13/2019</b>
<b>Depth:</b>	<b>16-18 ft BGS</b>	<b>0-2 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2000	690
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.25 U	130 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	82	49 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.18 U	370
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.097 U	150 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.90 J	1.5 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.34 J	1300
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.7 J	4.6 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.21 J	340
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.8 J	1.5 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.087 U	20 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.43 J	140 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.12 J	850
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.070 U	42 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.20 J	730
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.6	11000
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	11	50000 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	250 J	110 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.28 J	620 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	68 J	26 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.55 J	1900 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	13 J	140 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.32 J	2600 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	9.6 J	12000 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	19 J	89000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	6.51	16600
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	6.52	16600

## Notes:

J - Estimated concentration  
U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB055</b>	<b>SJSB055</b>
<b>Sample Name:</b>	<b>11187072-091019-SS-SJSB055-S (2-4)</b>	<b>11187072-091019-SS-SJSB055-S (4-6)</b>
<b>Sample Date:</b>	<b>09/10/2019</b>	<b>09/10/2019</b>
<b>Depth:</b>	<b>2-4 ft BGS</b>	<b>4-6 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	280	240
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.72 J	0.57 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	24	11
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.26 J	0.19 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.69 J	0.79 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.51 J	0.31 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.16 J	0.16 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.63 J	0.35 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 J	0.022 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.2 J	0.74 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.2 U	1.4 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.21 J	0.12 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.22 J	0.24 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.13 J	0.019 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.089 J	0.091 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.12 J	0.22 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.38 J	0.19 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	58 J	44 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.2 J	1.2 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	13 J	11 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.3 J	2.4 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.9 J	1.2 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.66 J	0.85 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.5 J	2.0 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.0 J	0.69 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.01	0.741
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.07	0.814

**Notes:**

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**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB055</b>	<b>SJSB055</b>
<b>Sample Name:</b>	<b>11187072-091019-SS-SJSB055-S (6-8)</b>	<b>11187072-091019-SS-SJSB055-S (8-10)</b>
<b>Sample Date:</b>	<b>09/10/2019</b>	<b>09/10/2019</b>
<b>Depth:</b>	<b>6-8 ft BGS</b>	<b>8-10 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	720	260
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.79 J	1.4 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	27	9.0
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.29 J	0.28 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.83 J	0.69 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.62 J	0.37 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 J	0.29 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.64 J	0.32 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 J	0.15 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.7 J	0.57 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.8 U	1.4 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.17 J	0.12 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.27 J	0.43 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.019 U	0.020 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.14 J	0.21 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.13 J	1.4
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.13 J	5.1
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	110 J	30 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.6 J	1.4 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	29 J	8.3 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	3.3 J	2.7 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.1 J	1.6 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	1.1 J	1.5 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4.0 J	2.8 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.83 J	9.2 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.19	2.45
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.28	2.53

## Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB055</b>	<b>SJSB055</b>
<b>Sample Name:</b>	<b>11187072-091019-SS-SJSB055-S (10-12)</b>	<b>11187072-091019-SS-SJSB055-S (12-14)</b>
<b>Sample Date:</b>	<b>09/10/2019</b>	<b>09/10/2019</b>
<b>Depth:</b>	<b>10-12 ft BGS</b>	<b>12-14 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	110	300
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.5 J	0.72 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	4.3 J	16
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.32 J	0.21 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.88 J	0.61 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.41 J	0.46 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.28 J	0.17 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.33 J	0.41 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.25 J	0.15 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.45 J	1.3 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.4 U	1.1 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.17 J	0.16 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.30 J	0.25 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.016 U	0.015 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.17 J	0.11 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.26 J	0.25 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.69 J	0.79 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	13 J	70 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.6 J	1.0 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.5 J	22 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.9 J	2.0 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.76 J	4.3 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.88 J	0.75 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.86 J	3.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.3 J	1.8 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.819	1.04
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.890	1.09

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB055</b>	<b>SJSB055</b>
<b>Sample Name:</b>	<b>11187072-091019-SS-SJSB055-S (14-16)</b>	<b>11187072-091019-SS-SJSB055-S (16-18)</b>
<b>Sample Date:</b>	<b>09/10/2019</b>	<b>09/10/2019</b>
<b>Depth:</b>	<b>14-16 ft BGS</b>	<b>16-18 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	630	400
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.6 J	0.60 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	29	19
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.41 J	0.16 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1.2 J	0.58 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.84 J	0.49 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.25 J	0.12 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.63 J	0.47 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.20 J	0.12 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.3 J	1.9 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.0 U	1.4 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.26 J	0.17 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.29 J	0.19 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.021 U	0.018 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.15 J	0.085 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.075 J	0.025 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.15 J	0.12 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	130 J	89 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	2.0 J	0.97 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	36 J	29 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	3.9 J	2.5 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.0 J	5.4 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	1.3 J	0.81 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.5 J	3.7 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.56 J	0.55 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.32	0.841
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.42	0.920

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB055</b>	<b>SJSB055</b>
<b>Sample Name:</b>	<b>11187072-091019-SS-SJSB055-S (0-2)</b>	<b>11187072-101419-SS-SJSB055 C1 (2-4)</b>
<b>Sample Date:</b>	<b>09/10/2019</b>	<b>10/14/2019</b>
<b>Depth:</b>	<b>0-2 ft BGS</b>	<b>2-4 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	410 J	600
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.61 J	1.3 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	20	24
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.25 J	0.61 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.70 J	0.33 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.85 J	0.49 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.23 J	1.6 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.037 U	0.65 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 J	0.58 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.7 J	1.7 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.5 U	0.17 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.30 J	0.43 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.63 J	1.3 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.020 U	0.098 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.051 U	1.2 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.22 J	20
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1.1 J	93
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	63 J	100 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.2 J	1.3 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	20 J	24 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.9 J	2.7 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	7.5 J	4.0 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	3.4 J	3.9 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	8.8 J	23 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	7.0 J	160 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.27	31.0
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.36	31.1

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB055</b>	<b>SJSB055</b>
<b>Sample Name:</b>	<b>11187072-101419-SS-SJSB055 C1 (4-6)</b>	<b>11187072-101419-SS-SJSB055 C1 (6-8)</b>
<b>Sample Date:</b>	<b>10/14/2019</b>	<b>10/14/2019</b>
<b>Depth:</b>	<b>4-6 ft BGS</b>	<b>6-8 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	430	250
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.14 U	0.35 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	19	12
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.12 U	0.12 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.071 J	0.094 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.33 U	0.35 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.11 U	0.075 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.48 J	0.31 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.10 U	0.070 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.5 J	1.3 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.067 U	0.092 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.15 U	0.13 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.062 U	0.052 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.072 U	0.045 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.064 U	0.055 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.49 J	0.19 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	2.1	0.39 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	84 J	55 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.20 J	0.21 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	21 J	18 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.11 U	0.092 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.9 J	3.6 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.064 U	0.055 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.4 J	2.2 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	3.7 J	0.71 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.22	0.595
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.34	0.697

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB055</b>	<b>SJSB055</b>
<b>Sample Name:</b>	<b>11187072-101419-SS-SJSB055 C1 (8-10)</b>	<b>11187072-101419-SS-SJSB055 C1 (10-12)</b>
<b>Sample Date:</b>	<b>10/14/2019</b>	<b>10/14/2019</b>
<b>Depth:</b>	<b>8-10 ft BGS</b>	<b>10-12 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	670	500
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.43 J	0.50 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	31	23
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.12 U	0.068 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.044 U	0.083 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.54 U	0.44 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.088 U	0.078 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.59 J	0.41 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.083 U	0.073 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.7 J	1.9 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 J	0.12 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.15 U	0.21 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.078 U	0.052 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.058 U	0.048 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.084 U	0.053 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.12 U	0.22 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.26 J	0.62 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	150 J	110 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.12 J	0.15 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	35 J	29 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.15 J	0.12 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.4 J	5.8 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.084 U	0.061 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.0 J	3.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.81 J	1.1 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.881	1.12
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.07	1.16

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB055</b>	<b>SJSB055</b>
<b>Sample Name:</b>	<b>11187072-101419-SS-SJSB055 C1 (12-14)</b>	<b>11187072-101419-SS-SJSB055 C1 (14-16)</b>
<b>Sample Date:</b>	<b>10/14/2019</b>	<b>10/14/2019</b>
<b>Depth:</b>	<b>12-14 ft BGS</b>	<b>14-16 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	210	500
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.092 U	0.49 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	11	24
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.031 U	0.058 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.036 U	0.056 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.37 U	0.54 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.066 U	0.092 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.36 J	0.56 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.060 U	0.086 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.67 J	2.4 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.074 J	0.18 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.12 U	0.17 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.050 U	0.075 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.040 U	0.057 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.052 U	0.079 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.24 J	0.22 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.52 J	0.55 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	52 J	140 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.036 U	0.11 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	19 J	41 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.074 J	0.18 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	4.9 J	8.6 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.085 U	0.079 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.9 J	5.9 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.90 J	1.2 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.575	0.980
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.671	1.12

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB055</b>	<b>SJSB055</b>
<b>Sample Name:</b>	<b>11187072-101419-SS-SJSB055 C1 (16-18)</b>	<b>11187072-101419-SS-SJSB055 C1 (0-2)</b>
<b>Sample Date:</b>	<b>10/14/2019</b>	<b>10/14/2019</b>
<b>Depth:</b>	<b>16-18 ft BGS</b>	<b>0-2 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	51	860
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.42 J	2.7 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.7 J	34
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.18 U	1.2 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.073 J	0.48 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.25 U	0.77 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.35 J	1.9 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.14 J	0.88 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.11 J	0.58 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.26 J	2.3 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.078 J	0.24 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.11 U	0.61 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.28 J	1.4 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.037 U	0.25 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.26 J	1.3 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.7	21
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	15	110
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	10 J	140 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.33 J	2.5 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.7 J	29 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.58 J	3.3 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.28 J	4.7 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.75 J	3.3 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4.4 J	26 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	28 J	190 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	5.42	34.3
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	5.49	34.3

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit



Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB056</b>	<b>SJSB056</b>
<b>Sample Name:</b>	<b>11187072-111119-SS-SJSB056 (2-4)</b>	<b>11187072-111119-SS-SJSB056 (4-6)</b>
<b>Sample Date:</b>	<b>11/11/2019</b>	<b>11/11/2019</b>
<b>Depth:</b>	<b>2-4 ft BGS</b>	<b>4-6 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	340	220
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.83 J	0.19 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	14	10
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.14 U	0.13 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.14 U	0.14 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.36 J	0.33 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 U	0.12 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.45 J	0.39 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 U	0.14 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.1 J	0.92 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 J	0.14 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.26 U	0.27 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.14 U	0.14 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.11 U	0.087 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.15 U	0.15 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.81 J	0.20 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	2.2	0.46 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	65 J	45 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.14 U	0.14 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	16 J	13 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.14 J	0.14 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.6 J	3.1 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.15 U	0.15 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.1 J	0.49 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	2.7 J	0.46 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.48	0.660
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.65	0.803

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB056</b>	<b>SJSB056</b>
<b>Sample Name:</b>	<b>11187072-111119-SS-SJSB056 (6-8)</b>	<b>11187072-111119-SS-SJSB056 (8-10)</b>
<b>Sample Date:</b>	<b>11/11/2019</b>	<b>11/11/2019</b>
<b>Depth:</b>	<b>6-8 ft BGS</b>	<b>8-10 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

Parameters	Unit	SJSB056	SJSB056
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	390	81
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.19 U	1.0 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	17	2.9 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.13 U	0.15 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.14 U	0.15 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.37 J	0.16 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 U	0.36 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.32 J	0.17 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.16 U	0.15 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.4 J	0.16 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.081 U	0.075 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.23 U	0.20 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.13 U	0.15 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.11 U	0.10 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.14 U	0.16 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.18 U	2.5 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.32 J	10
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	72 J	11 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.14 U	0.15 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	20 J	1.9 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.16 U	0.36 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.9 J	0.20 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.16 U	0.16 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.18 U	2.5 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.32 J	16 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.528	3.59
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.782	3.76

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB056</b>	<b>SJSB056</b>
<b>Sample Name:</b>	<b>11187072-111119-SS-SJSB056 (10-12)</b>	<b>11187072-111119-SS-SJSB056 (12-14)</b>
<b>Sample Date:</b>	<b>11/11/2019</b>	<b>11/11/2019</b>
<b>Depth:</b>	<b>10-12 ft BGS</b>	<b>12-14 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	17	350
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.35 J	4.0 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	0.89 J	14
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.13 U	0.53 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.14 U	0.54 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.30 J	0.48 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.12 U	0.31 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.14 U	0.25 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 U	0.17 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.13 U	1.2 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.12 J	0.24 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.20 U	0.27 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.10 U	0.14 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.093 U	0.29 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.12 U	0.16 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.57 J	1.7
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1.5	5.2
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.7 J	64 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.14 U	1.1 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.30 J	15 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.12 J	0.84 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.20 U	2.1 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.15 U	0.18 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.57 J	2.4 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	2.1 J	9.1 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.776	2.73
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.928	2.91

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB056</b>	<b>SJSB056</b>
<b>Sample Name:</b>	<b>11187072-111119-SS-SJSB056 (14-16)</b>	<b>11187072-111119-SS-SJSB056 (16-18)</b>
<b>Sample Date:</b>	<b>11/11/2019</b>	<b>11/11/2019</b>
<b>Depth:</b>	<b>14-16 ft BGS</b>	<b>16-18 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	190	59
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.5 J	1.1 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	8.2	3.0 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.14 U	0.55 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.13 U	0.14 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.32 J	0.43 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.13 U	0.31 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.26 J	0.28 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 U	0.16 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.71 J	0.45 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.074 U	0.078 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.17 U	0.25 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.34 J	0.14 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.093 U	0.10 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.19 J	0.16 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.9	0.16 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	11	0.16 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	33 J	8.8 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.14 U	0.55 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	9.4 J	1.9 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.15 U	0.31 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.2 J	0.25 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.53 J	0.24 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.9 J	0.19 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	18 J	0.16 U
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	4.34	0.201
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	4.44	0.457

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB056</b>	<b>SJSB056-C1</b>
<b>Sample Name:</b>	<b>11187072-111119-SS-SJSB056 (0-2)</b>	<b>11187072-120319-SS-SJSB056-C1(2-4)</b>
<b>Sample Date:</b>	<b>11/11/2019</b>	<b>12/03/2019</b>
<b>Depth:</b>	<b>0-2 ft BGS</b>	<b>2-4 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	480	150 U
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	2.5 J	11 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	24	4.8 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.47 J	0.98 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.16 U	0.31 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.62 J	0.27 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.17 U	0.12 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.87 J	0.15 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.20 U	0.13 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.9 J	0.33 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.35 J	0.14 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.56 J	0.15 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.19 U	0.11 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.13 U	0.11 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.21 U	0.11 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.5	0.72 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	4.7	1.6
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	96 J	13 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.47 J	2.6 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	27 J	2.4 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.35 J	0.14 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	4.9 J	0.15 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.21 U	0.11 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.8 J	0.72 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	6.8 J	2.2 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	3.29	0.980
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	3.35	1.14

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB056-C1</b>	<b>SJSB056-C1</b>
<b>Sample Name:</b>	<b>11187072-120319-SS-SJSB056-C1(4-6)</b>	<b>11187072-120319-SS-SJSB056-C1(6-8)</b>
<b>Sample Date:</b>	<b>12/03/2019</b>	<b>12/03/2019</b>
<b>Depth:</b>	<b>4-6 ft BGS</b>	<b>6-8 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	120 U	260
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4.8 U	35
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	3.3 U	14
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.19 U	1.9 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.087 U	0.20 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.079 U	0.23 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.12 U	0.094 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.082 U	0.30 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.14 U	0.11 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.26 J	0.40 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.090 U	0.13 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.16 U	0.18 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.094 U	0.17 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.10 U	0.081 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.091 U	0.080 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.099 U	0.11 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.45 U	0.86 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	11 J	29 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.47 J	11 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.8 J	5.1 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.14 U	0.13 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.16 U	0.29 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.094 U	0.17 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.099 U	0.91 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.63 J	1.4 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.0260	0.406
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.260	0.597

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

Location ID:	SJSB056-C1	SJSB056-C1
Sample Name:	11187072-120319-SS-SJSB056-C1(8-10)	11187072-120319-SS-SJSB056-C1(10-12)
Sample Date:	12/03/2019	12/03/2019
Depth:	8-10 ft BGS	10-12 ft BGS

## Parameters

## Unit

**Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	88 U	160 U
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	2.4 U	3.3 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.7 U	6.8
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.044 U	0.94 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.16 J	0.90 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.25 U	0.83 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.11 U	0.53 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.18 J	0.79 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.11 U	0.60 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.36 J	1.1 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.081 U	0.81 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.12 U	0.39 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.13 U	0.36 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.088 U	0.61 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.081 U	0.35 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.92 J	0.23 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	2.9	0.20 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	8.9 J	24 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.77 J	2.0 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.7 J	8.0 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.11 U	2.6 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.29 J	1.3 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.13 J	0.72 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.1 J	0.55 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	4.0 J	0.41 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.27	1.25
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.40	1.33

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB056-C1</b>	<b>SJSB056-C1</b>
<b>Sample Name:</b>	<b>11187072-120319-SS-SJSB056-C1(12-14)</b>	<b>11187072-120319-SS-SJSB056-C1(14-16)</b>
<b>Sample Date:</b>	<b>12/03/2019</b>	<b>12/03/2019</b>
<b>Depth:</b>	<b>12-14 ft BGS</b>	<b>14-16 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	320	270
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	2.5 U	2.6 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	15	10
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.31 U	0.62 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.13 J	0.10 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.40 U	0.26 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.064 U	0.34 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.46 J	0.26 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.068 U	0.13 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.3 J	0.98 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.16 U	0.16 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.12 U	0.097 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.067 U	0.054 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.050 U	0.070 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.070 U	0.055 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.11 U	0.15 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.14 U	0.086 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	62 J	45 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.73 J	0.93 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	19 J	14 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.16 J	0.63 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.2 J	2.2 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.087 U	0.063 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.3 J	1.4 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.59 J	0.16 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.423	0.503
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.596	0.593

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit



**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB056-C1</b>	<b>SJSB056-C1</b>
<b>Sample Name:</b>	<b>11187072-120319-SS-DUP-1</b>	<b>11187072-120319-SS-SJSB056-C1(16-18)</b>
<b>Sample Date:</b>	<b>12/03/2019</b>	<b>12/03/2019</b>
<b>Depth:</b>	<b>14-16 ft BGS</b>	<b>16-18 ft BGS</b>
	<b>Duplicate</b>	

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	370	440
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4.3 U	3.2 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	17	18
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.55 U	0.45 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.064 U	0.058 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.44 U	0.41 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.075 U	0.090 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.46 J	0.44 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.078 U	0.097 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.3 J	1.7 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.13 U	0.21 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.12 U	0.19 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.067 U	0.069 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.063 U	0.076 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.067 U	0.071 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.10 U	0.18 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.050 U	0.15 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	69 J	80 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.2 J	1.5 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	20 J	24 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.13 J	0.44 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.4 J	4.5 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.067 U	0.073 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.3 J	2.5 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.31 J	0.44 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.457	0.896
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.624	0.962

## Notes:

- J - Estimated concentration  
U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB056-C1</b>	<b>SJSB057</b>
<b>Sample Name:</b>	<b>11187072-120319-SS-SJSB056-C1(0-2)</b>	<b>11187072-110519-SS-SJSB057 (2-4)</b>
<b>Sample Date:</b>	<b>12/03/2019</b>	<b>11/05/2019</b>
<b>Depth:</b>	<b>0-0 ft BGS</b>	<b>2-4 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	140 U	2400
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	7.1 U	520 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.5 U	190 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.17 U	1300
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.11 U	410 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.25 U	5.6 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.10 U	4400
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.14 J	2.9 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.11 U	1100
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.22 J	9.0 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 U	56 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.16 U	300 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.094 U	2900
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.086 U	120 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.094 U	1900
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.48 J	31000
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1.1 J	51000 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	10 J	410 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.45 J	2100 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.3 J	83 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.15 J	6400 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.16 U	330 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.094 U	7400 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.48 J	34000 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.6 J	210000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.626	37600
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.792	37600

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB057</b>	<b>SJSB057</b>
<b>Sample Name:</b>	<b>11187072-110519-SS-SJSB057 (4-6)</b>	<b>11187072-110519-SS-SJSB057 (6-8)</b>
<b>Sample Date:</b>	<b>11/05/2019</b>	<b>11/05/2019</b>
<b>Depth:</b>	<b>4-6 ft BGS</b>	<b>6-8 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	670	94
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	55	6.8 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	43	4.7 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	110	13
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	34	4.0 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.64 U	0.25 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	350	39
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.9 J	0.27 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	92	10
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.1 J	0.25 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	5.0 J	0.64 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	21	2.3 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	230	26
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	9.1	1.1 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	140	15
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2600	270
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	8200	890
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	99 J	13 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	180 J	20 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	18 J	3.0 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	510 J	58 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	27 J	2.7 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	570 J	64 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2800 J	290 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	13000 J	1500 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	3540	372
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	3540	372

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB057</b>	<b>SJSB057</b>
<b>Sample Name:</b>	<b>11187072-110519-SS-SJSB057 (8-10)</b>	<b>11187072-110519-SS-SJSB057 (10-12)</b>
<b>Sample Date:</b>	<b>11/05/2019</b>	<b>11/05/2019</b>
<b>Depth:</b>	<b>8-10 ft BGS</b>	<b>10-12 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	48	85
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.94 U	6.1 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	4.0 J	6.1
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.36 U	2.0 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.27 U	1.9 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.35 U	1.2 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.71 J	0.75 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.28 U	1.3 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.25 U	0.59 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.42 J	1.5 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.21 U	1.1 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.26 J	0.45 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.53 J	0.21 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 U	1.2 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.31 J	0.32 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5.2	1.2
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	18	2.9
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	11 J	13 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.63 J	4.1 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.3 J	6.1 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	1.3 J	3.6 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.71 J	0.91 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	1.1 J	0.53 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5.8 J	1.5 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	29 J	5.0 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	7.54	2.93
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	7.60	2.93

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB057</b>	<b>SJSB057</b>
<b>Sample Name:</b>	<b>11187072-110519-SS-SJSB057 (12-14)</b>	<b>11187072-110519-SS-SJSB057 (14-16)</b>
<b>Sample Date:</b>	<b>11/05/2019</b>	<b>11/05/2019</b>
<b>Depth:</b>	<b>12-14 ft BGS</b>	<b>14-16 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	99	85
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	2.2 U	0.53 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	4.0 J	3.5 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.65 U	0.11 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.36 U	0.081 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.27 U	0.33 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.4 J	0.15 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.26 U	0.21 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.42 J	0.083 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.47 J	0.36 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.26 U	0.077 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.19 J	0.21 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.1 J	0.13 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.18 U	0.040 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.64 J	0.11 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	11	0.92 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	41	2.7
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	13 J	10 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.2 J	0.23 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.8 J	2.8 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.4 J	0.35 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.86 J	0.73 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	2.6 J	0.29 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	13 J	1.4 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	66 J	5.2 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	15.8	1.55
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	15.9	1.59

**Notes:**

J - Estimated concentration  
U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB057</b>	<b>SJSB057</b>
<b>Sample Name:</b>	<b>11187072-110519-SS-SJSB057 (16-18)</b>	<b>11187072-110519-SS-SJSB057 (0-2)</b>
<b>Sample Date:</b>	<b>11/05/2019</b>	<b>11/05/2019</b>
<b>Depth:</b>	<b>16-18 ft BGS</b>	<b>0-2 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	69	5200
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.34 U	490 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	3.1 J	310
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.096 U	990
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.032 U	300
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.25 U	3.6 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.12 J	3000
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.23 U	21 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.062 U	740
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.32 J	8.7 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.091 U	45 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.24 J	200 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.098 J	2000
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.047 U	90 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.058 U	1300
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.87 J	20000
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	2.5	31000 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	8.6 J	700 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.096 J	1600 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.5 J	110 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.21 J	4400 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.58 J	230 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.098 J	5200 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.2 J	22000 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	3.8 J	130000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1.46	24200
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.50	24200

## Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

Location ID:	SJSB058	SJSB058
Sample Name:	11187072-101419-BN-SJSB058-S (2-4)	11187072-101419-BN-SJSB058-S (4-6)
Sample Date:	10/14/2019	10/14/2019
Depth:	2-4 ft BGS	4-6 ft BGS

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	6600	13000
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	690	1100
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	540	620
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	1900	2100
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	780	820
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.3 J	6.3 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	8200	7200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	30 J	41 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2000 J	1800 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	11 J	14 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	110 J	120 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	260	430
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4200	3900
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	200 J	210 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2200	2900
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	24000 J	31000 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	100000 J	150000 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1100 J	1400 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	3200 J	3800 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	220 J	230 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	12000 J	11000 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	310 J	510 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	10000 J	11000 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	27000 J	34000 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	180000 J	270000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	36100	48400
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	36100	48400

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB058</b>	<b>SJSB058</b>
<b>Sample Name:</b>	<b>11187072-101419-BN-SJSB058-S (6-8)</b>	<b>11187072-101419-BN-SJSB058-S (8-10)</b>
<b>Sample Date:</b>	<b>10/14/2019</b>	<b>10/14/2019</b>
<b>Depth:</b>	<b>6-8 ft BGS</b>	<b>8-10 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	400	670
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	8.4 J	25 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	18	28 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	14	47
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	5.6 J	17 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.38 J	0.18 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	44	150
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.62 J	0.95 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	11	37
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.7 J	0.17 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.90 J	3.0 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.6 J	8.7 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	23	88
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.4 J	4.3 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	15	59
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	230	920
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	800	1900
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	67 J	80 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	24 J	81 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	17 J	14 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	66 J	220 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.4 J	8.7 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	60 J	240 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	250 J	1000 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1400 J	5800 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	324	1160
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	324	1160

## Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit



**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB058</b>	<b>SJSB058</b>
<b>Sample Name:</b>	<b>11187072-101419-BN-SJSB058-S (10-12)</b>	<b>11187072-101419-BN-SJSB058-S (12-14)</b>
<b>Sample Date:</b>	<b>10/14/2019</b>	<b>10/14/2019</b>
<b>Depth:</b>	<b>10-12 ft BGS</b>	<b>12-14 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	360	3400
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	6.4 J	270 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	20	160
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	14	590
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	5.3 J	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.55 J	0.82 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	50	1700
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.94 J	9.0 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	13	440
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.0 J	3.2 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.92 J	26 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.0 J	96 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	29	940
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.6 J	51 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	19	630
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	280	8700
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	790	6400
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	77 J	370 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	24 J	990 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	23 J	60 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	74 J	2500 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.4 J	96 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	78 J	2600 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	310 J	9700 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1600 J	62000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	376	9890
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	376	9890

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB058</b>	<b>SJSB058</b>
<b>Sample Name:</b>	<b>11187072-101419-BN-SJSB058-S (14-16)</b>	<b>11187072-101419-BN-SJSB058-S (16-18)</b>
<b>Sample Date:</b>	<b>10/14/2019</b>	<b>10/14/2019</b>
<b>Depth:</b>	<b>14-16 ft BGS</b>	<b>16-18 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	140	410
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	3.0 U	20 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	8.0	22 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	5.7 J	35
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.1 J	15 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.13 J	0.40 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	18	120
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.23 J	0.94 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	4.9 J	31 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.38 J	1.2 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.30 J	1.7 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.66 J	6.2 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	9.2	70
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.61 J	3.3 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	6.7	42
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	99	600
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	310	1500
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	27 J	68 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	9.9 J	61 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	9.1 J	16 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	28 J	180 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.8 J	6.2 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	26 J	180 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	110 J	670 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	630 J	3800 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	136	788
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	136	788

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB058</b>	<b>SJSB058</b>
<b>Sample Name:</b>	<b>11187072-101419-BN-SJSB058-S (0-2)</b>	<b>11187072-111219-SS-SJSB058 (18-20)</b>
<b>Sample Date:</b>	<b>10/14/2019</b>	<b>11/12/2019</b>
<b>Depth:</b>	<b>0-2 ft BGS</b>	<b>18-20 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	520	120
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	13	0.37 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	35	5.6 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	4.7 J	0.15 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.62 J	0.16 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.25 J	0.16 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.2 J	0.12 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.83 J	0.17 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.78 J	0.14 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.92 J	0.38 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.15 U	0.23 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.28 U	0.35 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.4 J	0.18 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.32 J	0.10 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.87 J	0.18 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	8.0	0.20 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	25	0.60 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	83 J	23 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	14 J	0.16 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	11 J	6.9 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	9.9 J	0.23 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.0 J	0.35 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	9.2 J	0.18 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	9.4 J	0.70 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	55 J	0.96 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	11.9	0.153
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	12.0	0.524

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB070</b>	<b>SJSB070</b>
<b>Sample Name:</b>	<b>11187072-111219-SS-SJSB070 (2-4)</b>	<b>11187072-111219-SS-SJSB070 (4-6)</b>
<b>Sample Date:</b>	<b>11/12/2019</b>	<b>11/12/2019</b>
<b>Depth:</b>	<b>2-4 ft BGS</b>	<b>4-6 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	15000 J	11000 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1400	920
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	960	630
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2800	1900
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	860	550
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	7.8 J	6.1 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	9100	5800
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	55	39
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2300	1500
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	15	11 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	110 J	61 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	550	410
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	6500	4300
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	250 J	170 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	3800	2800
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	62000 J	41000 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	35000 J	24000
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2000 J	1300 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	4900 J	3200 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	320 J	220 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	13000 J	8600 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	640 J	410 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	17000 J	12000 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	70000 J	45000 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	350000 J	280000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	68600	45600
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	68600	45600

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Location ID:</b>	<b>SJSB070</b>	<b>SJSB070</b>
<b>Sample Name:</b>	<b>11187072-111219-SS-SJSB070 (6-8)</b>	<b>11187072-111219-SS-SJSB070 (8-10)</b>
<b>Sample Date:</b>	<b>11/12/2019</b>	<b>11/12/2019</b>
<b>Depth:</b>	<b>6-8 ft BGS</b>	<b>8-10 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	6000 J	4500
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	480	370
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	330	260
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	980	790
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	290	240
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.2 J	2.0 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3100	2200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	20	14
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	780	570
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.1	4.4 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	37 J	33
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	200	130
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2100	1400
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	78 J	57
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1500	920
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	22000 J	15000 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	12000	9700
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	710 J	560 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1700 J	1300 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	110 J	75 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	4300 J	3200 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	230 J	150 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	5600 J	3800 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	25000 J	17000 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	130000 J	86000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	24300	16700
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	24300	16700

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB070</b>	<b>SJSB070</b>
<b>Sample Name:</b>	<b>11187072-111219-SS-SJSB070 (10-12)</b>	<b>11187072-111219-SS-SJSB070 (12-14)</b>
<b>Sample Date:</b>	<b>11/12/2019</b>	<b>11/12/2019</b>
<b>Depth:</b>	<b>10-12 ft BGS</b>	<b>12-14 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	300	410 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	14	7.8 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	15	19
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	29	16
1,2,3,4,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	9.6	5.2 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.38 U	0.47 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	97	51
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.61 U	0.72 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	24	13
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.73 J	1.0 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.45 J	0.85 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.0 J	3.6 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	65	36
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.8 J	1.6 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	40	23
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	730	430
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	2400	1600
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	44 J	63 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	48 J	26 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	8.8 J	14 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	140 J	75 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.4 J	5.1 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	170 J	94 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	800 J	470 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	5100 J	2600 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	1000	609
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1000	609

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB070</b>	<b>SJSB070</b>
<b>Sample Name:</b>	<b>11187072-111219-SS-SJSB070 (14-16)</b>	<b>11187072-111219-SS-SJSB070 (16-18)</b>
<b>Sample Date:</b>	<b>11/12/2019</b>	<b>11/12/2019</b>
<b>Depth:</b>	<b>14-16 ft BGS</b>	<b>16-18 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	110 J	310 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.52 J	0.41 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	5.0 J	13
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.35 U	0.22 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.094 J	0.054 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.30 U	0.37 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.81 J	0.52 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.19 U	0.39 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.065 U	0.090 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.41 J	1.0 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.12 J	0.19 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.13 J	0.11 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.64 U	0.65 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.047 U	0.072 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.38 J	0.29 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4.7	3.0
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	17	11
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	22 J	61 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.54 J	0.22 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.4 J	16 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.93 J	0.70 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.2 J	2.7 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	1.2 J	1.1 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5.6 J	4.8 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	31 J	20 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	6.86	4.58
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	6.90	4.69

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB070</b>	<b>SJSB071</b>
<b>Sample Name:</b>	<b>11187072-111219-SS-SJSB070 (0-2)</b>	<b>11187072-111219-SS-SJSB071 (2-4)</b>
<b>Sample Date:</b>	<b>11/12/2019</b>	<b>11/12/2019</b>
<b>Depth:</b>	<b>0-2 ft BGS</b>	<b>2-4 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2000	11000 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	710	1200 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	190	650
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	1900	2500
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	610	770
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.7 J	6.6 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	6700	8300
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	14	36
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1700	2100
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.9 J	13
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	46 J	100 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	390	380 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4200	5000
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	170 J	200 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2700	3000
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	39000 J	41000 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	27000 J	24000
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	370 J	1400 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	2900 J	4200 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	98 J	220 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	9600 J	14000 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	410 J	400 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	11000 J	13000 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	44000 J	46000 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	300000 J	260000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	43900	45900
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	43900	45900

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit



**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB071</b>	<b>SJSB071</b>
<b>Sample Name:</b>	<b>11187072-111219-SS-SJSB071 (4-6)</b>	<b>11187072-111219-SS-SJSB071 (6-8)</b>
<b>Sample Date:</b>	<b>11/12/2019</b>	<b>11/12/2019</b>
<b>Depth:</b>	<b>4-6 ft BGS</b>	<b>6-8 ft BGS</b>

<b>Parameters</b>	<b>Unit</b>		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	110 J	38 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.2 J	1.1 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	3.5 J	1.7 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.97 U	0.70 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.37 J	0.15 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.24 U	0.24 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.7 J	0.73 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.20 U	0.12 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.0 J	0.19 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.23 J	0.20 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.10 U	0.13 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.24 J	0.13 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.8 J	0.38 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.11 U	0.14 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.1 J	0.090 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	19	2.4 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	67	7.9
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	12 J	5.3 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.8 J	0.85 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.3 J	2.4 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	3.7 J	0.73 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.24 J	0.28 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	4.5 J	0.56 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	21 J	3.6 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	110 J	14 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	26.8	0.913
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	26.8	2.24

## Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB071</b>	<b>SJSB071</b>
<b>Sample Name:</b>	<b>11187072-111219-SS-SJSB071 (8-10)</b>	<b>11187072-111219-SS-SJSB071 (10-12)</b>
<b>Sample Date:</b>	<b>11/12/2019</b>	<b>11/12/2019</b>
<b>Depth:</b>	<b>8-10 ft BGS</b>	<b>10-12 ft BGS</b>

**Parameters****Unit****Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)**

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	46 J	98 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.39 J	0.11 UJ
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1.7 J	5.7 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.20 U	0.23 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.089 J	0.053 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.20 U	0.30 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.089 U	0.30 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.13 U	0.29 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.085 U	0.095 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.23 J	0.38 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.16 J	0.23 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.098 U	0.12 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.24 U	0.30 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.063 U	0.079 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.058 U	0.15 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.4 U	1.7 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	3.3 U	6.1 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	6.6 J	17 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.29 J	0.23 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.4 J	7.2 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.16 J	0.53 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.91 J	1.6 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.24 J	0.45 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.4 J	2.7 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	5.0 J	10 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.0710	0.222
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	1.03	1.48

**Notes:**

J - Estimated concentration

U - Not detected at the associated reporting limit

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB071</b>	<b>SJSB071</b>
<b>Sample Name:</b>	<b>11187072-111219-SS-SJSB071 (12-14)</b>	<b>11187072-111219-SS-SJSB071 (14-16)</b>
<b>Sample Date:</b>	<b>11/12/2019</b>	<b>11/12/2019</b>
<b>Depth:</b>	<b>12-14 ft BGS</b>	<b>14-16 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	130 J	59
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.24 J	1.7 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	5.9 J	3.0 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.11 U	1.9 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.038 U	0.52 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.32 U	0.14 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.071 U	4.6 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.24 U	0.14 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.067 U	1.3 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.48 J	0.13 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.089 J	0.27 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.094 U	0.35 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.23 U	3.3 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.051 U	0.21 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.063 U	2.0 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.43 U	32
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1.1 U	110
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	21 J	8.5 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.11 J	3.0 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	7.0 J	1.6 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.089 J	6.8 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.3 J	0.35 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.23 J	8.5 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.2 J	34 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.8 J	190 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.155	44.4
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.523	44.6

## Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit

Table 2

**Analytical Results Summary  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event  
San Jacinto, Harris County, Texas  
September through December 2019**

<b>Location ID:</b>	<b>SJSB071</b>	<b>SJSB071</b>
<b>Sample Name:</b>	<b>11187072-111219-SS-SJSB071 (16-18)</b>	<b>11187072-111219-SS-SJSB071 (0-2)</b>
<b>Sample Date:</b>	<b>11/12/2019</b>	<b>11/12/2019</b>
<b>Depth:</b>	<b>16-18 ft BGS</b>	<b>0-2 ft BGS</b>

Parameters	Unit		
<b>Polychlorinated Dibenzodioxins (PCDDs) &amp; Polychlorinated Dibenzofurans (PCDFs)</b>			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	63	8100 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.8 J	820 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.6 J	460
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	1.7 J	1600
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.47 J	460
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.14 U	5.3 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	4.6 J	4200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.15 U	32 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.3 J	1100
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.14 U	10 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.43 J	56
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.31 U	320 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.4 J	3200
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.12 U	120
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.6 J	2200
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	33	31000 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	110	20000
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	7.3 J	1000 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	2.8 J	2600 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.4 J	140 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	6.3 J	6300 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.31 U	320 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	6.4 J	8500 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	35 J	34000 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	180 J	220000 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	45.3	34700
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	45.4	34700

## Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit

Table 3

**Analytical Methods**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Predesign Investigation Sampling Event - Northern Impoundment Area**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

<b>Parameter</b>	<b>Method</b>	<b>Matrix</b>	<b>Holding Time</b> <b>Collection or Extraction</b> <b>to Analysis</b> <b>(Days)</b>
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)	E1613	Soil	360

Table 4

**Qualified Sample Results Due to Outlying Continuing Calibration Results  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Parameter	Analyte	Calibration Date (mm/dd/yyyy)	RRF	%D	Associated Sample ID	Analyte	Qualified Result	Units				
Diox Fur	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) C13	11/26/2019	0.8694	55	11187072-111219-SS-SJSB070 (12-14)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	7.8 J	pg/g				
					11187072-111219-SS-SJSB070 (12-14)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	410 J	pg/g				
					11187072-111219-SS-SJSB070 (14-16)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.52 J	pg/g				
					11187072-111219-SS-SJSB070 (14-16)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	110 J	pg/g				
					11187072-111219-SS-SJSB070 (16-18)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.41 J	pg/g				
					11187072-111219-SS-SJSB070 (16-18)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	310 J	pg/g				
					11187072-111219-SS-SJSB071 (10-12)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	98 J	pg/g				
					11187072-111219-SS-SJSB071 (10-12)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	13 UJ	pg/g				
					11187072-111219-SS-SJSB071 (12-14)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.24 J	pg/g				
					11187072-111219-SS-SJSB071 (12-14)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	130 J	pg/g				
					11187072-111219-SS-SJSB071 (2-4)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1200 J	pg/g				
					11187072-111219-SS-SJSB071 (4-6)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1.2 J	pg/g				
					11187072-111219-SS-SJSB071 (4-6)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	110 J	pg/g				
					11187072-111219-SS-SJSB071 (6-8)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1.1 J	pg/g				
					11187072-111219-SS-SJSB071 (6-8)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	38 J	pg/g				
					11187072-111219-SS-SJSB071 (8-10)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.39 J	pg/g				
					11187072-111219-SS-SJSB071 (8-10)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	46 J	pg/g				
					1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) C13	11/26/2019	0.7972	42	11187072-111219-SS-SJSB070 (2-4)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	15000 J	pg/g
									11187072-111219-SS-SJSB070 (4-6)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	11000 J	pg/g
									11187072-111219-SS-SJSB070 (6-8)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	6000 J	pg/g
11187072-111219-SS-SJSB071 (0-2)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	820 J	pg/g									
11187072-111219-SS-SJSB071 (0-2)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	8100 J	pg/g									
11187072-111219-SS-SJSB071 (2-4)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	11000 J	pg/g									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) C13	12/12/2019	0.7842	140	11187072-120919-BN-SJSB046-C1(0-2)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	1000 J	pg/g					
				11187072-120919-BN-SJSB046-C1(2-4)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	1600 J	pg/g					
				11187072-120919-BN-SJSB046-C1(4-6)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	1900 J	pg/g					
				11187072-120919-BN-SJSB046-C1(6-8)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	2400 J	pg/g					
				11187072-120919-BN-SJSB046-C1(8-10)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	2100 J	pg/g					
				11187072-120919-BN-SJSB046-C1(10-12)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	1200 J	pg/g					
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) C13	12/13/2019	0.8312	148	11187072-120919-BN-DUP3	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	4100 J	pg/g					
				11187072-120919-BN-SJSB046-C1(12-14)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	1800 J	pg/g					
				11187072-120919-BN-SJSB046-C1(14-16)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	1600 J	pg/g					
				11187072-120919-BN-SJSB046-C1(16-18)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	1600 J	pg/g					

Notes:

- %D - Percent difference
- RRF - Relative Response Factor
- J - Estimated concentration
- UJ - Not detected; associated reporting limit is estimated

Table 5

**Qualified Sample Results Due to Analyte Concentrations in the Method Blanks  
San Jacinto River Waste Pits Superfund Site Investigation  
Pre-design Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Parameter	Analyte	Extraction Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units			
Diox Fur	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	09/10/2019	0.986J	11187072-090719-SS-SJSB045-S- (8-10)	2.3 J	2.3 U	pg/g			
				11187072-090819-SS-SJSB048-S- (8-10)	2.0 J	2.0 U	pg/g			
				11187072-090819-SS-SJSB048-S- (10-12)	1.3 J	1.3 U	pg/g			
				11187072-090819-SS-SJSB048-S- (12-14)	0.90 J	0.90 U	pg/g			
				11187072-090819-SS-SJSB048-S- (14-16)	1.3 J	1.3 U	pg/g			
				11187072-090819-SS-SJSB048-S- (16-18)	1.4 J	1.4 U	pg/g			
				11187072-090719-SS-SJSB045-S- (10-12)	1.6 J	1.6 U	pg/g			
				11187072-090719-SS-SJSB045-S- (12-14)	1.7 J	1.7 U	pg/g			
				11187072-090719-SS-SJSB045-S- (14-16)	1.8 J	1.8 U	pg/g			
				11187072-090719-SS-SJSB045-S- (16-18)	1.7 J	1.7 U	pg/g			
				11187072-090819-SS-SJSB048-S- (0-2)	1.9 J	1.9 U	pg/g			
				11187072-090819-SS-SJSB048-S- (2-4)	1.4 J	1.4 U	pg/g			
				11187072-090819-SS-SJSB048-S- (4-6)	1.4 J	1.4 U	pg/g			
				11187072-090819-SS-SJSB048-S- (6-8)	1.5 J	1.5 U	pg/g			
				1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	09/12/2019	1.1J	11187072-091019-SS-SJSB051-S (0-2)	1.5 J	1.5 U	pg/g
							11187072-091019-SS-SJSB051-S (2-4)	2.3 J	2.3 U	pg/g
							11187072-091019-SS-SJSB051-S (4-6)	1.5 J	1.5 U	pg/g
	11187072-091019-SS-SJSB051-S (6-8)	1.6 J	1.6 U				pg/g			
	11187072-091019-SS-SJSB051-S (8-10)	1.5 J	1.5 U				pg/g			
	11187072-091019-SS-SJSB051-S (10-12)	1.4 J	1.4 U				pg/g			
	11187072-091019-SS-SJSB051-S (12-14)	1.5 J	1.5 U				pg/g			
	11187072-091019-SS-SJSB051-S (14-16)	1.5 J	1.5 U				pg/g			
	11187072-091019-SS-SJSB051-S (16-18)	1.4 J	1.4 U				pg/g			
	11187072-091019-SS-DUP-1	1.3 J	1.3 U				pg/g			
	11187072-091019-SS-SJSB055-S (16-18)	1.4 J	1.4 U				pg/g			
	11187072-091019-SS-SJSB055-S (0-2)	1.5 J	1.5 U				pg/g			
	11187072-091019-SS-SJSB055-S (2-4)	1.2 J	1.2 U				pg/g			
	11187072-091019-SS-SJSB055-S (4-6)	1.4 J	1.4 U				pg/g			
	11187072-091019-SS-SJSB055-S (6-8)	1.8 J	1.8 U	pg/g						
	11187072-091019-SS-SJSB055-S (8-10)	1.4 J	1.4 U	pg/g						
	11187072-091019-SS-SJSB055-S (10-12)	1.4 J	1.4 U	pg/g						
	11187072-091019-SS-SJSB055-S (12-14)	1.1 J	1.1 U	pg/g						
	11187072-091019-SS-SJSB055-S (14-16)	2.0 J	2.0 U	pg/g						
	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	09/15/2019	0.871J	11187072-091119-SS-SJSB049-S (6-8)	2.9 J	2.9 U	pg/g			
				11187072-091119-SS-SJSB049-S (8-10)	3.6 J	3.6 U	pg/g			
				11187072-091119-SS-SJSB049-S (10-12)	2.5 J	2.5 U	pg/g			
				11187072-091119-SS-SJSB049-S (12-14)	3.0 J	3.0 U	pg/g			
				11187072-091119-SS-SJSB049-S (14-16)	1.5 J	1.5 U	pg/g			
				11187072-091119-SS-SJSB049-S (16-18)	1.6 J	1.6 U	pg/g			
				11187072-091219-SS-SJSB052-S (0-2)	2.0 J	2.0 U	pg/g			
				11187072-091219-SS-SJSB052-S (2-4)	1.6 J	1.6 U	pg/g			
11187072-091219-SS-SJSB052-S (4-6)				1.5 J	1.5 U	pg/g				
11187072-091219-SS-SJSB052-S (6-8)				1.6 J	1.6 U	pg/g				
11187072-091219-SS-SJSB052-S (8-10)	1.7 J	1.7 U	pg/g							

Table 5

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Parameter	Analyte	Extraction Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units			
Diox Fur	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	09/15/2019	1.58J	11187072-091119-SS-SJSB049-S (2-4)	10	10 U	pg/g			
				11187072-091119-SS-SJSB049-S (4-6)	5.6 J	5.6 U	pg/g			
				11187072-091119-SS-SJSB049-S (6-8)	3.6 J	3.6 U	pg/g			
				11187072-091119-SS-SJSB049-S (8-10)	3.1 J	3.1 U	pg/g			
				11187072-091119-SS-SJSB049-S (10-12)	2.4 J	2.4 U	pg/g			
				11187072-091119-SS-SJSB049-S (12-14)	3.5 J	3.5 U	pg/g			
				11187072-091119-SS-SJSB049-S (14-16)	2.8 J	2.8 U	pg/g			
				11187072-091119-SS-SJSB049-S (16-18)	3.2 J	3.2 U	pg/g			
				11187072-091219-SS-SJSB052-S (0-2)	2.6 J	2.6 U	pg/g			
				11187072-091219-SS-SJSB052-S (2-4)	2.7 J	2.7 U	pg/g			
				11187072-091219-SS-SJSB052-S (4-6)	2.1 J	2.1 U	pg/g			
				11187072-091219-SS-SJSB052-S (6-8)	3.4 J	3.4 U	pg/g			
				11187072-091219-SS-SJSB052-S (8-10)	3.0 J	3.0 U	pg/g			
				1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	09/16/2019	1.87J	11187072-091119-SS-SJSB045-S (0-2)	1.3 J	1.3 U	pg/g
							11187072-091119-SS-SJSB045-S (2-4)	0.79 J	0.79 U	pg/g
							11187072-091119-SS-SJSB045-S (4-6)	1.1 J	1.1 U	pg/g
	11187072-091119-SS-SJSB045-S (6-8)	0.95 J	0.95 U				pg/g			
	11187072-091119-SS-DUP-2	0.93 J	0.93 U				pg/g			
	11187072-091119-SS-DUP-3	0.99 J	0.99 U				pg/g			
	11187072-091219-SS-DUP-4	2.0 J	2.0 U				pg/g			
	11187072-091219-SS-SJSB052-S (10-12)	2.1 J	2.1 U				pg/g			
	11187072-091219-SS-SJSB052-S (12-14)	1.7 J	1.7 U				pg/g			
	11187072-091219-SS-SJSB052-S (14-16)	2.5 J	2.5 U				pg/g			
	11187072-091219-SS-SJSB052-S (16-18)	2.5 J	2.5 U	pg/g						
	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	09/16/2019	2.50J	11187072-091119-SS-SJSB045-S (0-2)	1.9 J	1.9 U	pg/g			
				11187072-091119-SS-SJSB045-S (2-4)	1.5 J	1.5 U	pg/g			
				11187072-091119-SS-SJSB045-S (4-6)	2.2 J	2.2 U	pg/g			
				11187072-091119-SS-SJSB045-S (6-8)	1.9 J	1.9 U	pg/g			
				11187072-091119-SS-DUP-2	1.9 J	1.9 U	pg/g			
				11187072-091119-SS-DUP-3	1.9 J	1.9 U	pg/g			
				11187072-091219-SS-DUP-4	3.0 J	3.0 U	pg/g			
				11187072-091219-SS-SJSB052-S (10-12)	3.2 J	3.2 U	pg/g			
				11187072-091219-SS-SJSB052-S (12-14)	3.0 J	3.0 U	pg/g			
				11187072-091219-SS-SJSB052-S (14-16)	3.8 J	3.8 U	pg/g			
	11187072-091219-SS-SJSB052-S (16-18)	4.1 J	4.1 U	pg/g						
	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	09/16/2019	0.498J	11187072-091119-SS-SJSB045-S (0-2)	0.85 J	0.85 U	pg/g			
11187072-091119-SS-DUP-2				0.54 J	0.54 U	pg/g				
11187072-091219-SS-DUP-4				0.54 J	0.54 U	pg/g				
11187072-091219-SS-SJSB052-S (14-16)				0.67 J	0.67 U	pg/g				
11187072-091219-SS-SJSB052-S (16-18)	1.1 J	1.1 U	pg/g							
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	09/19/2019	0.232J	11187072-091619-SS-SJSB050-(0-2)	0.70 J	0.70 U	pg/g				
			11187072-091619-SS-DUP-5	0.53 J	0.53 U	pg/g				
			11187072-091619-SS-SJSB050-(2-4)	0.30 J	0.30 U	pg/g				
			11187072-091619-SS-SJSB050-(4-6)	0.23 J	0.23 U	pg/g				
			11187072-091619-SS-SJSB050-(6-8)	0.23 J	0.23 U	pg/g				
			11187072-091619-SS-SJSB050-(8-10)	0.35 J	0.35 U	pg/g				
			11187072-091619-SS-SJSB050-(10-12)	0.32 J	0.32 U	pg/g				
			11187072-091619-SS-SJSB050-(12-14)	0.27 J	0.27 U	pg/g				
			11187072-091619-SS-SJSB050-(14-16)	0.36 J	0.36 U	pg/g				
			11187072-091619-SS-SJSB050-(16-18)	0.26 J	0.26 U	pg/g				



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Parameter	Analyte	Extraction Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units
Diox Fur	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	10/10/2019	0.139J	11187072-100819-SS-SJSB052-C1 (0-2)	0.86 J	0.86 U	pg/g
				11187072-100819-SS-SJSB052-C1 (2-4)	0.51 J	0.51 U	pg/g
				11187072-100819-SS-SJSB052-C1 (4-6)	0.22 J	0.22 U	pg/g
				11187072-100819-SS-SJSB052-C1 (6-8)	0.50 J	0.50 U	pg/g
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	10/10/2019	0.120J	11187072-100819-SS-SJSB052-C1 (8-10)	0.37 J	0.37 U	pg/g
				11187072-100819-SS-SJSB052-C1 (10-12)	0.17 J	0.17 U	pg/g
				11187072-100819-SS-SJSB052-C1 (12-14)	0.69 J	0.69 U	pg/g
				11187072-100819-SS-SJSB052-C1 (14-16)	0.26 J	0.26 U	pg/g
				11187072-100819-SS-SJSB052-C1 (16-18)	0.24 J	0.24 U	pg/g
	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	10/10/2019	0.0373J	11187072-100819-SS-SJSB052-C1 (8-10)	0.13 J	0.13 U	pg/g
				11187072-100819-SS-SJSB052-C1 (10-12)	0.079 J	0.079 U	pg/g
				11187072-100819-SS-SJSB052-C1 (12-14)	0.25 J	0.25 U	pg/g
				11187072-100819-SS-SJSB052-C1 (14-16)	0.13 J	0.13 U	pg/g
				11187072-100819-SS-SJSB052-C1 (16-18)	0.13 J	0.13 U	pg/g
	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	10/10/2019	0.146J	11187072-100819-SS-SJSB052-C1 (8-10)	0.73 J	0.73 U	pg/g
				11187072-100819-SS-SJSB052-C1 (10-12)	0.67 J	0.67 U	pg/g
				11187072-100819-SS-SJSB052-C1 (12-14)	0.72 J	0.72 U	pg/g
				11187072-100819-SS-SJSB052-C1 (14-16)	0.83 J	0.83 U	pg/g
				11187072-100819-SS-SJSB052-C1 (16-18)	0.78 J	0.78 U	pg/g
	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	10/10/2019	0.0798J	11187072-100819-SS-SJSB052-C1 (8-10)	0.26 J	0.26 U	pg/g
				11187072-100819-SS-SJSB052-C1 (10-12)	0.13 J	0.13 U	pg/g
				11187072-100819-SS-SJSB052-C1 (12-14)	0.21 J	0.21 U	pg/g
				11187072-100819-SS-SJSB052-C1 (14-16)	0.17 J	0.17 U	pg/g
				11187072-100819-SS-SJSB052-C1 (16-18)	0.18 J	0.18 U	pg/g
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	10/17/2019	1.01J	11187072-101019-SS-SJSB047(0-2)	2.5 J	2.5 U	pg/g
				11187072-101019-SS-SJSB047(2-4)	0.91 J	0.91 U	pg/g
				11187072-101019-SS-SJSB047(4-6)	0.48 J	0.48 U	pg/g
				11187072-101319-SS-SJSB053 (0-2)	10 J	10 U	pg/g
11187072-101319-SS-SJSB053 (2-4)				0.57 J	0.57 U	pg/g	
11187072-101319-SS-SJSB053 (4-6)				1.1 J	1.1 U	pg/g	
11187072-101319-SS-SJSB053 (6-8)				2.0 J	2.0 U	pg/g	
11187072-101319-SS-SJSB053 (8-10)				2.8 J	2.8 U	pg/g	
11187072-101319-SS-SJSB053 (10-12)				0.50 J	0.50 U	pg/g	
11187072-101319-SS-SJSB053 (12-14)				0.29 J	0.29 U	pg/g	
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	10/17/2019	1.89J	11187072-101319-SS-SJSB053 (12-14)	21	21 U	pg/g	
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	10/18/2019	0.117J	11187072-101419-SS-SJSB055 C1 (2-4)	0.61 J	0.61 U	pg/g	
			11187072-101419-SS-SJSB055 C1 (4-6)	0.12 J	0.12 U	pg/g	
			11187072-101419-SS-SJSB055 C1 (6-8)	0.12 J	0.12 U	pg/g	
			11187072-101419-SS-SJSB055 C1 (8-10)	0.12 J	0.12 U	pg/g	
			11187072-101419-SS-SJSB055 C1 (10-12)	0.068 J	0.068 U	pg/g	
			11187072-101419-SS-SJSB055 C1 (14-16)	0.058 J	0.058 U	pg/g	
11187072-101419-SS-SJSB055 C1 (16-18)	0.18 J	0.18 U	pg/g				

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Parameter	Analyte	Extraction Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units	
Diox Fur	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	10/18/2019	0.265J	11187072-101419-SS-SJSB055 C1 (0-2)	0.77 J	0.77 U	pg/g	
				11187072-101419-SS-SJSB055 C1 (2-4)	0.49 J	0.49 U	pg/g	
				11187072-101419-SS-SJSB055 C1 (4-6)	0.33 J	0.33 U	pg/g	
				11187072-101419-SS-SJSB055 C1 (6-8)	0.35 J	0.35 U	pg/g	
				11187072-101419-SS-SJSB055 C1 (8-10)	0.54 J	0.54 U	pg/g	
				11187072-101419-SS-SJSB055 C1 (10-12)	0.44 J	0.44 U	pg/g	
				11187072-101419-SS-SJSB055 C1 (12-14)	0.37 J	0.37 U	pg/g	
				11187072-101419-SS-SJSB055 C1 (14-16)	0.54 J	0.54 U	pg/g	
					11187072-101419-SS-SJSB055 C1 (16-18)	0.25 J	0.25 U	pg/g
		1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	10/16/2019	0.323J	11187072-101319-SS-SJSB054 (2-4)	29 J	29 U	pg/g
	11187072-101319-SS-SJSB054 (4-6)				0.36 J	0.36 U	pg/g	
	11187072-101319-SS-SJSB054 (6-8)				0.24 J	0.24 U	pg/g	
	11187072-101319-SS-SJSB054 (8-10)				0.28 J	0.28 U	pg/g	
	11187072-101319-SS-SJSB054 (10-12)				0.19 J	0.19 U	pg/g	
	11187072-101319-SS-SJSB054 (12-14)				4.2 J	4.2 U	pg/g	
	11187072-101319-SS-SJSB054 (14-16)				0.63 J	0.63 U	pg/g	
	11187072-101319-SS-SJSB054 (16-18)				0.25 J	0.25 U	pg/g	
					11187072-101419-BN-SJSB058-S (14-16)	3.0 J	3.0 U	pg/g
					11187072-101419-BN-SJSB058-S (16-18)	20 J	20 U	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	10/16/2019	0.0748J	11187072-101319-SS-SJSB054 (4-6)	0.23 J	0.23 U	pg/g
	11187072-101319-SS-SJSB054 (6-8)				0.19 J	0.19 U	pg/g	
	11187072-101319-SS-SJSB054 (8-10)				0.52 J	0.52 U	pg/g	
	11187072-101319-SS-SJSB054 (10-12)				0.15 J	0.15 U	pg/g	
	11187072-101319-SS-SJSB054 (16-18)				0.18 J	0.18 U	pg/g	
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	10/16/2019	0.0427J	11187072-101319-SS-SJSB054 (4-6)	0.092 J	0.092 U	pg/g
	11187072-101319-SS-SJSB054 (6-8)				0.052 J	0.052 U	pg/g	
	11187072-101319-SS-SJSB054 (8-10)				0.15 J	0.15 U	pg/g	
	11187072-101319-SS-SJSB054 (16-18)				0.097 J	0.097 U	pg/g	
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	10/25/2019	0.137J	11187072-101719-SS-SJSB047-C1-(6-8)	1.8 J	1.8 U	pg/g	
				11187072-101719-SS-SJSB047-C1-(16-18)	1.1 J	1.1 U	pg/g	
	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	10/25/2019	0.131J	11187072-101719-SS-SJSB047-C1-(4-6)	0.79 J	0.79 U	pg/g	
				11187072-101719-SS-SJSB047-C1-(6-8)	0.71 J	0.71 U	pg/g	
				11187072-101719-SS-SJSB047-C1-(8-10)	0.62 J	0.62 U	pg/g	
				11187072-101719-SS-SJSB047-C1-(10-12)	0.59 J	0.59 U	pg/g	
				11187072-101719-SS-SJSB047-C1-(12-14)	0.68 J	0.68 U	pg/g	
				11187072-101719-SS-SJSB047-C1-(14-16)	0.52 J	0.52 U	pg/g	
				11187072-101719-SS-SJSB047-C1-(16-18)	1.0 J	1.0 U	pg/g	
	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	10/10/2019	0.139J	11187072-100719-SS-SJSB046 (6-8)	4.5 J	4.5 U	pg/g	
				11187072-100719-SS-SJSB046 (10-12)	0.67 J	0.67 U	pg/g	
				11187072-100719-SS-SJSB046 (14-16)	0.99 J	0.99 U	pg/g	
				11187072-100719-SS-SJSB046 (0-2)	0.44 J	0.44 U	pg/g	

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Parameter	Analyte	Extraction Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units
Diox Fur	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	10/14/2019	0.194J	11187072-100919-SS-SJSB050C1(2-4)	0.83 J	0.83 U	pg/g
				11187072-100919-SS-SJSB050C1(6-8)	1.4 J	1.4 U	pg/g
				11187072-100919-SS-SJSB050C1(8-10)	0.52 J	0.52 U	pg/g
				11187072-100919-SS-SJSB050C1(14-16)	1.1 J	1.1 U	pg/g
				11187072-100919-SS-SJSB047(8-10)	0.83 J	0.83 U	pg/g
				11187072-100919-SS-SJSB047(10-12)	1.4 J	1.4 U	pg/g
				11187072-100919-SS-SJSB047(12-14)	1.5 J	1.5 U	pg/g
	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	10/14/2019	0.0785J	11187072-100919-SS-SJSB047(8-10)	0.29 J	0.29 U	pg/g
	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	10/14/2019	0.215J	11187072-100919-SS-SJSB047(10-12)	0.22 J	0.22 U	pg/g
				11187072-100919-SS-SJSB047(16-18)	0.82 J	0.82 U	pg/g
				11187072-100919-SS-SJSB050C1(0-2)	0.33 J	0.33 U	pg/g
				11187072-100919-SS-SJSB050C1(2-4)	0.44 J	0.44 U	pg/g
				11187072-100919-SS-SJSB050C1(4-6)	0.62 J	0.62 U	pg/g
				11187072-100919-SS-SJSB050C1(6-8)	1.0 J	1.0 U	pg/g
				11187072-100919-SS-SJSB050C1(10-12)	0.38 J	0.38 U	pg/g
				11187072-100919-SS-SJSB050C1(12-14)	0.97 J	0.97 U	pg/g
				11187072-100919-SS-SJSB050C1(14-16)	0.88 J	0.88 U	pg/g
				11187072-100919-SS-SJSB050C1(16-18)	0.51 J	0.51 U	pg/g
				11187072-100919-SS-SJSB047(8-10)	0.62 J	0.62 U	pg/g
				11187072-100919-SS-SJSB047(10-12)	0.60 J	0.60 U	pg/g
				11187072-100919-SS-SJSB047(12-14)	0.75 J	0.75 U	pg/g
				11187072-100919-SS-SJSB047(14-16)	0.70 J	0.70 U	pg/g
				1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	11/13/2019	0.897J	11187072-11719-KW-SJSB045-C1-S (6-8)
	11187072-11719-KW-SJSB045-C1-S (8-10)	2.4 J	2.4 U				pg/g
	11187072-11719-KW-SJSB045-C1-S (10-12)	1.6 J	1.6 U				pg/g
	11187072-11719-KW-SJSB045-C1-S (12-14)	0.20 J	0.20 U				pg/g
	11187072-11719-KW-SJSB045-C1-S (14-16)	0.83 J	0.83 U				pg/g
	11187072-11719-KW-SJSB045-C1-S (16-18)	0.25 J	0.25 U				pg/g
	11187072-11719-KW-SJSB048-C1-S (2-4)	1.1 J	1.1 U				pg/g
	11187072-11719-KW-SJSB048-C1-S (6-8)	0.37 J	0.37 U				pg/g
	11187072-11719-KW-SJSB048-C1-S (8-10)	3.4 J	3.4 U				pg/g
	11187072-11719-KW-SJSB048-C1-S (10-12)	0.24 J	0.24 U				pg/g
11187072-11719-KW-SJSB048-C1-S (12-14)	1.5 J	1.5 U	pg/g				
11187072-11719-KW-SJSB048-C1-S (14-16)	1.5 J	1.5 U	pg/g				
11187072-11719-KW-SJSB048-C1-S (16-18)	2.3 J	2.3 U	pg/g				
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	11/13/2019	0.181J	11187072-11719-KW-SJSB045-C1-S (12-14)	0.072 J	0.072 U	pg/g	
			11187072-11719-KW-SJSB045-C1-S (14-16)	0.46 J	0.46 U	pg/g	
			11187072-11719-KW-SJSB045-C1-S (16-18)	0.087 J	0.087 U	pg/g	
			11187072-11719-KW-SJSB048-C1-S (6-8)	0.33 J	0.33 U	pg/g	
			11187072-11719-KW-SJSB048-C1-S (10-12)	0.25 J	0.25 U	pg/g	
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	11/13/2019	0.139J	11187072-11719-KW-SJSB045-C1-S (10-12)	0.32 J	0.32 U	pg/g	
			11187072-11719-KW-SJSB045-C1-S (14-16)	0.24 J	0.24 U	pg/g	
			11187072-11719-KW-SJSB048-C1-S (6-8)	0.22 J	0.22 U	pg/g	
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	11/13/2019	0.359J	11187072-110519-SS-SJSB057 (8-10)	0.94 J	0.94 U	pg/g	
			11187072-110519-SS-SJSB057 (12-14)	2.2 J	2.2 U	pg/g	
			11187072-110519-SS-SJSB057 (14-16)	0.53 J	0.53 U	pg/g	
			11187072-110519-SS-SJSB057 (16-18)	0.34 J	0.34 U	pg/g	

Table 5

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Parameter	Analyte	Extraction Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units
Diox Fur	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	11/13/2019	0.141J	11187072-110519-SS-SJSB057 (8-10)	0.36 J	0.36 U	pg/g
				11187072-110519-SS-SJSB057 (12-14)	0.65 J	0.65 U	pg/g
				11187072-110519-SS-SJSB057 (14-16)	0.11 J	0.11 U	pg/g
				11187072-110519-SS-SJSB057 (16-18)	0.096 J	0.096 U	pg/g
	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	11/13/2019	0.122J	11187072-110519-SS-SJSB057 (8-10)	0.27 J	0.27 U	pg/g
				11187072-110519-SS-SJSB057 (12-14)	0.36 J	0.36 U	pg/g
				11187072-110519-SS-SJSB057 (14-16)	0.081 J	0.081 U	pg/g
	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	11/13/2019	0.176J	11187072-110519-SS-SJSB057 (0-2)	3.6 J	3.6 U	pg/g
				11187072-110519-SS-SJSB057 (2-4)	5.6 J	5.6 U	pg/g
				11187072-110519-SS-SJSB057 (4-6)	0.64 J	0.64 U	pg/g
				11187072-110519-SS-SJSB057 (6-8)	0.25 J	0.25 U	pg/g
				11187072-110519-SS-SJSB057 (8-10)	0.35 J	0.35 U	pg/g
				11187072-110519-SS-SJSB057 (12-14)	0.27 J	0.27 U	pg/g
				11187072-110519-SS-SJSB057 (14-16)	0.33 J	0.33 U	pg/g
	11187072-110519-SS-SJSB057 (16-18)	0.25 J	0.25 U	pg/g			
	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	11/13/2019	0.0476J	11187072-110519-SS-SJSB057 (8-10)	0.25 J	0.25 U	pg/g
				11187072-110519-SS-SJSB057 (14-16)	0.083 J	0.083 U	pg/g
	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	11/13/2019	0.0576J	11187072-110519-SS-SJSB057 (2-4)	16 J	16 U	pg/g
				11187072-110519-SS-SJSB057 (6-8)	0.27 J	0.27 U	pg/g
				11187072-110519-SS-SJSB057 (8-10)	0.28 J	0.28 U	pg/g
				11187072-110519-SS-SJSB057 (12-14)	0.26 J	0.26 U	pg/g
				11187072-110519-SS-SJSB057 (14-16)	0.21 J	0.21 U	pg/g
	11187072-110519-SS-SJSB057 (16-18)	0.23 J	0.23 U	pg/g			
	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	11/13/2019	0.0696J	11187072-110519-SS-SJSB057 (8-10)	0.21 J	0.21 U	pg/g
				11187072-110519-SS-SJSB057 (12-14)	0.26 J	0.26 U	pg/g
				11187072-110519-SS-SJSB057 (14-16)	0.077 J	0.077 U	pg/g
				11187072-110519-SS-SJSB057 (16-18)	0.091 J	0.091 U	pg/g
	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	11/13/2019	0.0426J	11187072-110519-SS-SJSB057 (8-10)	0.15 J	0.15 U	pg/g
11187072-110519-SS-SJSB057 (12-14)				0.18 J	0.18 U	pg/g	
11187072-110519-SS-SJSB057 (14-16)				0.040 J	0.040 U	pg/g	
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	11/13/2019	1.04J	11187072-110919-KW-SJSB053-C1-S (0-2)	1.8 J	1.8 U	pg/g	
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	11/13/2019	0.157J	11187072-110919-KW-SJSB053-C1-S (0-2)	0.19 J	0.19 U	pg/g	
			11187072-111019-KW-SJSB053-S(16-18)	0.14 J	0.14 U	pg/g	
			11187072-110919-KW-SJSB053-C1-S (2-4)	0.40 J	0.40 U	pg/g	
			11187072-110919-KW-SJSB053-C1-S (4-6)	0.47 J	0.47 U	pg/g	
			11187072-110919-KW-SJSB053-C1-S (6-8)	0.71 J	0.71 U	pg/g	
			11187072-110919-KW-SJSB053-C1-S (8-10)	0.13 J	0.13 U	pg/g	
			11187072-110919-KW-SJSB053-C1-S (10-12)	0.13 J	0.13 U	pg/g	
			11187072-110919-KW-SJSB053-C1-S (12-14)	0.12 J	0.12 U	pg/g	
			11187072-110919-KW-SJSB053-C1-S (14-16)	0.23 J	0.23 U	pg/g	
			11187072-111019-KW-SJSB053-S(14-16)	0.25 J	0.25 U	pg/g	

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Parameter	Analyte	Extraction Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units
Diox Fur	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	11/13/2019	0.118J	11187072-110919-KW-SJSB053-C1-S (0-2)	0.12 J	0.12 U	pg/g
				11187072-111019-KW-SJSB053-S(16-18)	0.073 J	0.073 U	pg/g
				11187072-110919-KW-SJSB053-C1-S (2-4)	0.21 J	0.21 U	pg/g
				11187072-110919-KW-SJSB053-C1-S (4-6)	0.25 J	0.25 U	pg/g
				11187072-110919-KW-SJSB053-C1-S (6-8)	0.35 J	0.35 U	pg/g
				11187072-110919-KW-SJSB053-C1-S (10-12)	0.087 J	0.087 U	pg/g
				11187072-111019-KW-SJSB053-S(14-16)	0.12 J	0.12 U	pg/g
	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	11/13/2019	0.163J	11187072-110919-KW-SJSB053-C1-S (0-2)	0.31 J	0.31 U	pg/g
				11187072-111019-KW-SJSB053-S(16-18)	0.27 J	0.27 U	pg/g
				11187072-110919-KW-SJSB053-C1-S (2-4)	0.41 J	0.41 U	pg/g
				11187072-110919-KW-SJSB053-C1-S (4-6)	0.57 J	0.57 U	pg/g
				11187072-110919-KW-SJSB053-C1-S (6-8)	0.60 J	0.60 U	pg/g
				11187072-110919-KW-SJSB053-C1-S (8-10)	0.35 J	0.35 U	pg/g
				11187072-110919-KW-SJSB053-C1-S (10-12)	0.76 J	0.76 U	pg/g
				11187072-110919-KW-SJSB053-C1-S (12-14)	0.35 J	0.35 U	pg/g
				11187072-110919-KW-SJSB053-C1-S (14-16)	0.80 J	0.80 U	pg/g
				11187072-111019-KW-SJSB053-S(14-16)	0.31 J	0.31 U	pg/g
	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	11/13/2019	0.0760J	11187072-110919-KW-SJSB053-C1-S (0-2)	0.14 J	0.14 U	pg/g
				11187072-111019-KW-SJSB053-S(16-18)	0.12 J	0.12 U	pg/g
				11187072-110919-KW-SJSB053-C1-S (4-6)	0.20 J	0.20 U	pg/g
				11187072-110919-KW-SJSB053-C1-S (6-8)	0.27 J	0.27 U	pg/g
11187072-110919-KW-SJSB053-C1-S (8-10)				0.12 J	0.12 U	pg/g	
11187072-110919-KW-SJSB053-C1-S (10-12)				0.22 J	0.22 U	pg/g	
11187072-110919-KW-SJSB053-C1-S (12-14)				0.14 J	0.14 U	pg/g	
11187072-110919-KW-SJSB053-C1-S (14-16)				0.24 J	0.24 U	pg/g	
11187072-111019-KW-SJSB053-S(14-16)				0.13 J	0.13 U	pg/g	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)				11/13/2019	0.0768J	11187072-110919-KW-SJSB053-C1-S (0-2)	0.35 J
	11187072-111019-KW-SJSB053-S(16-18)	0.41 J	0.41 U			pg/g	
	11187072-111019-KW-SJSB053-S(14-16)	0.33 J	0.33 U			pg/g	
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	11/13/2019	0.0897J	11187072-111019-KW-SJSB053-S(16-18)	0.14 J	0.14 U	pg/g	
			11187072-110919-KW-SJSB053-C1-S (2-4)	0.16 J	0.16 U	pg/g	
			11187072-110919-KW-SJSB053-C1-S (4-6)	0.17 J	0.17 U	pg/g	
			11187072-110919-KW-SJSB053-C1-S (6-8)	0.14 J	0.14 U	pg/g	
			11187072-110919-KW-SJSB053-C1-S (8-10)	0.15 J	0.15 U	pg/g	
			11187072-110919-KW-SJSB053-C1-S (10-12)	0.14 J	0.14 U	pg/g	
			11187072-110919-KW-SJSB053-C1-S (14-16)	0.20 J	0.20 U	pg/g	
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	11/16/2019	0.178J	11187072-111119-KW-SJSB046-S(18-20)	0.44 J	0.44 U	pg/g	
			11187072-111219-SS-SJSB070 (14-16)	0.35 J	0.35 U	pg/g	
			11187072-111219-SS-SJSB070 (16-18)	0.22 J	0.22 U	pg/g	
			11187072-111219-SS-SJSB071 (4-6)	0.97 J	0.97 U	pg/g	
			11187072-111219-SS-SJSB071 (6-8)	0.70 J	0.70 U	pg/g	
			11187072-111219-SS-SJSB071 (8-10)	0.20 J	0.20 U	pg/g	
			11187072-111219-SS-SJSB071 (10-12)	0.23 J	0.23 U	pg/g	
			11187072-111219-SS-SJSB071 (12-14)	0.11 J	0.11 U	pg/g	

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Parameter	Analyte	Extraction Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units			
Diox Fur	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	11/16/2019	0.200J	11187072-111119-KW-SJSB046-S(18-20)	1.3 J	1.3 U	pg/g			
				11187072-111219-SS-SJSB070 (10-12)	0.38 J	0.38 U	pg/g			
				11187072-111219-SS-SJSB070 (12-14)	0.47 J	0.47 U	pg/g			
				11187072-111219-SS-SJSB070 (14-16)	0.30 J	0.30 U	pg/g			
				11187072-111219-SS-SJSB070 (16-18)	0.37 J	0.37 U	pg/g			
				11187072-111219-SS-SJSB071 (0-2)	5.3 J	5.3 U	pg/g			
				11187072-111219-SS-SJSB071 (4-6)	0.24 J	0.24 U	pg/g			
				11187072-111219-SS-SJSB071 (6-8)	0.24 J	0.24 U	pg/g			
				11187072-111219-SS-SJSB071 (8-10)	0.20 J	0.20 U	pg/g			
				11187072-111219-SS-SJSB071 (10-12)	0.30 J	0.30 U	pg/g			
				11187072-111219-SS-SJSB071 (12-14)	0.32 J	0.32 U	pg/g			
				1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	11/16/2019	0.0893J	11187072-111219-SS-SJSB070 (10-12)	0.61 J	0.61 U	pg/g
							11187072-111219-SS-SJSB070 (14-16)	0.19 J	0.19 U	pg/g
	11187072-111219-SS-SJSB070 (16-18)	0.39 J	0.39 U				pg/g			
	11187072-111219-SS-SJSB071 (4-6)	0.20 J	0.20 U				pg/g			
	11187072-111219-SS-SJSB071 (6-8)	0.12 J	0.12 U				pg/g			
	11187072-111219-SS-SJSB071 (8-10)	0.13 J	0.13 U				pg/g			
	11187072-111219-SS-SJSB071 (10-12)	0.29 J	0.29 U				pg/g			
	11187072-111219-SS-SJSB071 (12-14)	0.24 J	0.24 U				pg/g			
	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	11/16/2019	0.189J	11187072-111119-KW-SJSB046-S(18-20)	0.59 J	0.59 U	pg/g			
				11187072-111219-SS-SJSB070 (14-16)	0.64 J	0.64 U	pg/g			
				11187072-111219-SS-SJSB070 (16-18)	0.65 J	0.65 U	pg/g			
				11187072-111219-SS-SJSB071 (6-8)	0.38 J	0.38 U	pg/g			
				11187072-111219-SS-SJSB071 (8-10)	0.24 J	0.24 U	pg/g			
				11187072-111219-SS-SJSB071 (10-12)	0.30 J	0.30 U	pg/g			
	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	11/16/2019	0.934J	11187072-111219-SS-SJSB071 (8-10)	3.3 J	3.3 U	pg/g			
				11187072-111219-SS-SJSB071 (10-12)	6.1 J	6.1 U	pg/g			
				11187072-111219-SS-SJSB071 (12-14)	1.1 J	1.1 U	pg/g			
				11187072-111219-SS-SJSB058 (18-20)	0.60 J	0.60 U	pg/g			
	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	11/16/2019	0.366J	11187072-111119-KW-SJSB046-S(18-20)	2.6 J	2.6 U	pg/g			
				11187072-111219-SS-SJSB071 (6-8)	2.4 J	2.4 U	pg/g			
				11187072-111219-SS-SJSB071 (8-10)	1.4 J	1.4 U	pg/g			
				11187072-111219-SS-SJSB071 (10-12)	1.7 J	1.7 U	pg/g			
				11187072-111219-SS-SJSB071 (12-14)	0.43 J	0.43 U	pg/g			
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	12/06/2019	2.12J	11187072-120319-SS-SJSB056-C1(0-2)	7.1 J	7.1 U	pg/g			
				11187072-120319-SS-DUP-1	4.3 J	4.3 U	pg/g			
				11187072-120319-SS-SJSB056-C1(2-4)	11 J	11 U	pg/g			
11187072-120319-SS-SJSB056-C1(4-6)				4.8 J	4.8 U	pg/g				
11187072-120319-SS-SJSB056-C1(8-10)				2.4 J	2.4 U	pg/g				
11187072-120319-SS-SJSB056-C1(10-12)				3.3 J	3.3 U	pg/g				
11187072-120319-SS-SJSB056-C1(12-14)				2.5 J	2.5 U	pg/g				
11187072-120319-SS-SJSB056-C1(14-16)				2.6 J	2.6 U	pg/g				
11187072-120319-SS-SJSB056-C1(16-18)				3.2 J	3.2 U	pg/g				

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Diox Fur	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	12/06/2019	15.8	11187072-120319-SS-SJSB056-C1(0-2)	140	140 U	pg/g
				11187072-120319-SS-SJSB056-C1(2-4)	150	150 U	pg/g
				11187072-120319-SS-SJSB056-C1(4-6)	120	120 U	pg/g
				11187072-120319-SS-SJSB056-C1(8-10)	88	88 U	pg/g
				11187072-120319-SS-SJSB056-C1(10-12)	160	160 U	pg/g
	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	12/06/2019	0.244J	11187072-120319-SS-SJSB056-C1(0-2)	0.17 J	0.17 U	pg/g
				11187072-120319-SS-DUP-1	0.55 J	0.55 U	pg/g
				11187072-120319-SS-SJSB056-C1(2-4)	0.98 J	0.98 U	pg/g
				11187072-120319-SS-SJSB056-C1(4-6)	0.19 J	0.19 U	pg/g
				11187072-120319-SS-SJSB056-C1(8-10)	0.33 J	0.33 U	pg/g
				11187072-120319-SS-SJSB056-C1(10-12)	0.94 J	0.94 U	pg/g
				11187072-120319-SS-SJSB056-C1(12-14)	0.31 J	0.31 U	pg/g
				11187072-120319-SS-SJSB056-C1(14-16)	0.62 J	0.62 U	pg/g
				11187072-120319-SS-SJSB056-C1(16-18)	0.45 J	0.45 U	pg/g
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	12/06/2019	0.577J	11187072-120319-SS-SJSB056-C1(0-2)	2.5 J	2.5 U	pg/g
				11187072-120319-SS-SJSB056-C1(4-6)	3.3 J	3.3 U	pg/g
				11187072-120319-SS-SJSB056-C1(8-10)	2.7 J	2.7 U	pg/g
	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	12/06/2019	0.132J	11187072-120319-SS-SJSB056-C1(0-2)	0.25 J	0.25 U	pg/g
				11187072-120319-SS-DUP-1	0.44 J	0.44 U	pg/g
				11187072-120319-SS-SJSB056-C1(2-4)	0.27 J	0.27 U	pg/g
				11187072-120319-SS-SJSB056-C1(6-8)	0.23 J	0.23 U	pg/g
				11187072-120319-SS-SJSB056-C1(8-10)	0.25 J	0.25 U	pg/g
				11187072-120319-SS-SJSB056-C1(12-14)	0.40 J	0.40 U	pg/g
				11187072-120319-SS-SJSB056-C1(14-16)	0.26 J	0.26 U	pg/g
	11187072-120319-SS-SJSB056-C1(16-18)	0.41 J	0.41 U	pg/g			
	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	12/06/2019	0.172J	11187072-120319-SS-SJSB056-C1(0-2)	0.15 J	0.15 U	pg/g
				11187072-120319-SS-DUP-1	0.13 J	0.13 U	pg/g
				11187072-120319-SS-SJSB056-C1(2-4)	0.14 J	0.14 U	pg/g
11187072-120319-SS-SJSB056-C1(6-8)				0.13 J	0.13 U	pg/g	
11187072-120319-SS-SJSB056-C1(10-12)				0.81 J	0.81 U	pg/g	
11187072-120319-SS-SJSB056-C1(12-14)				0.16 J	0.16 U	pg/g	
11187072-120319-SS-SJSB056-C1(14-16)				0.16 J	0.16 U	pg/g	
11187072-120319-SS-SJSB056-C1(16-18)				0.21 J	0.21 U	pg/g	
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	12/06/2019	0.0838J	11187072-120319-SS-SJSB056-C1(6-8)	0.17 J	0.17 U	pg/g	
			11187072-120319-SS-SJSB056-C1(8-10)	0.13 J	0.13 U	pg/g	
			11187072-120319-SS-SJSB056-C1(10-12)	0.36 J	0.36 U	pg/g	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	12/06/2019	0.0858J	11187072-120319-SS-SJSB056-C1(4-6)	0.45 J	0.45 U	pg/g	
			11187072-120319-SS-SJSB056-C1(10-12)	0.20 J	0.20 U	pg/g	
			11187072-120319-SS-SJSB056-C1(12-14)	0.14 J	0.14 U	pg/g	
			11187072-120319-SS-SJSB056-C1(14-16)	0.086 J	0.086 U	pg/g	
			11187072-120319-SS-SJSB056-C1(16-18)	0.15 J	0.15 U	pg/g	

Table 5

**Qualified Sample Results Due to Analyte Concentrations in the Method Blanks  
San Jacinto River Waste Pits Superfund Site Investigation  
Pre-design Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Parameter	Analyte	Extraction Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units
Diox Fur	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	12/10/2019	0.656J	1187072-120519-SS-SJSB048-C1(18-20)	2.5 J	2.5 U	pg/g
				1187072-120519-SS-DUP-1	1.9 J	1.9 U	pg/g
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	12/11/2019	0.893J	11187072-120919-BN-SJSB046-C1(10-12)	2.6 J	2.6 U	pg/g
				11187072-120919-BN-SJSB046-C1(14-16)	4.9 J	4.9 U	pg/g
	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	12/11/2019	0.136J	11187072-120919-BN-SJSB046-C1(0-2)	0.66 J	0.66 U	pg/g
				11187072-120919-BN-SJSB046-C1(4-6)	1.2 J	1.2 U	pg/g
				11187072-120919-BN-SJSB046-C1(10-12)	0.64 J	0.64 U	pg/g
				11187072-120919-BN-SJSB046-C1(14-16)	0.93 J	0.93 U	pg/g
	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	12/11/2019	0.105J	11187072-120919-BN-SJSB046-C1(10-12)	0.28 J	0.28 U	pg/g
				11187072-120919-BN-SJSB046-C1(14-16)	0.56 J	0.56 U	pg/g

Notes:

- \* - Blank result adjusted for sample factors where applicable
- U - Not detected at the associated reporting limit
- J - Estimated concentration



Table 6

**Qualified Sample Data Due to Outlying of Surrogate Ion Abundance Ratios  
 San Jacinto River Waste Pits Superfund Site Investigation  
 Predesign Investigation Sampling Event - Northern Impoundment Area  
 San Jacinto, Harris County, Texas  
 September through December 2019**

Parameter	Sample ID	Surrogate	Surrogate IAR	Control Limits IAR	Analyte	Qualified Result	Units
Diox Fur	11187072-101419-BN-SJSB058-S (16-18)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	1.45	1.05-1.43	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.40 J	pg/g
	11187072-101319-SS-SJSB054 (2-4)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	0.57	0.37-0.51	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	29 J	pg/g
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	1.47	1.05-1.43	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.51 UJ	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	1.54	1.05-1.43	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.5 J	pg/g

Notes:

- J - Estimated concentration
- UJ - Not detected; associated reporting limit is estimated
- IAR - Ion Abundance Ratio

Table 7

**Qualified Sample Results Due to Outlying MS/MSD Results  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Parameter	Sample ID	Analyte	MS	MSD	RPD	Control Limits		Qualified Result	Units
			% Recovery	% Recovery	(percent)	% Recovery	RPD		
Diox Fur	11187072-090719-SS-SJSB045-S- (16-18)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	471	608	19	78-144	50	350 J	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF)	74	69	5	75-158	50	13 J	pg/g
	11187072-091019-SS-SJSB055-S (0-2)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	151	173	8	78-144	50	410 J	pg/g
	11187072-091119-SS-SJSB049-S (16-18)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	241	258	11	75-158	50	11 J	pg/g
	11187072-100819-SS-SJSB052-C1 (10-12)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	156	170	4	78-144	50	740 J	pg/g
	11187072-101319-SS-SJSB053 (14-15)	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	53	36	13	70-140	50	110 J	pg/g
	11187072-120519-SS-SJSB048-C1(18-20)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	0	99	73	78-144	50	1200 J	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF)	43	54	8	75-158	50	25 J	pg/g

## Notes:

- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- RPD - Relative Percent Difference
- J - Estimated concentration

Table 8

**Qualified Sample Data Due to Variability in Field Duplicate Results  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Parameter	Analyte	RPD/Diff	Sample ID	Qualified Result	Field Duplicate Sample ID	Qualified Result	Units
Diox Fur	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	124	11187072-091119-SS-SJSB045-S (6-8)	2.8 J	11187072-091119-SS-DUP-3	12 J	pg/g
	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	192	11187072-091219-SS-SJSB052-S (16-18)	49 J	11187072-091219-SS-DUP-4	1.0 J	pg/g
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	117	11187072-100919-SS-SJSB050C1(16-18)	960 J	11187072-101019-SS-DUP-7	250 J	pg/g
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	130	11187072-100919-SS-SJSB050C1(16-18)	41 J	11187072-101019-SS-DUP-7	8.7 J	pg/g

## Notes:

- Diff - Difference (i.e., >1X RL for waters or >2XRL for soils)  
 RPD - Relative Percent Difference  
 J - Estimated concentration

Table 9

**Qualified Sample Data Due to Exceedance of Calibration Range  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Parameter	Sample ID	Analyte	Qualified Result	Units
Diox Fur	11187072-091119-SS-SJSB049-S (0-2)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	20000 J	pg/g
	11187072-091119-SS-SJSB049-S (0-2)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	27000 J	pg/g
	11187072-091119-SS-SJSB049-S (2-4)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	5000 J	pg/g
	11187072-091119-SS-SJSB049-S (2-4)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	14000 J	pg/g
	11187072-091119-SS-SJSB049-S (4-6)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1700 J	pg/g
	11187072-091119-SS-SJSB049-S (4-6)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	5700 J	pg/g
	11187072-091119-SS-SJSB049-S (8-10)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	720 J	pg/g
	11187072-101319-SS-SJSB054 (0-2)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	50000 J	pg/g
	11187072-101419-BN-SJSB058-S (2-4)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	100000 J	pg/g
	11187072-101419-BN-SJSB058-S (2-4)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	24000 J	pg/g
	11187072-101419-BN-SJSB058-S (4-6)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	150000 J	pg/g
	11187072-101419-BN-SJSB058-S (4-6)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	31000 J	pg/g
	11187072-101719-SS-SJSB047-C1-(0-2)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	14000 J	pg/g
	11187072-100719-SS-SJSB046 (6-8)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	24000 J	pg/g
	11187072-110519-SS-SJSB057 (0-2)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	31000 J	pg/g
	11187072-110519-SS-SJSB057 (2-4)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51000 J	pg/g
	11187072-111219-SS-SJSB070 (0-2)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	27000 J	pg/g
	11187072-111219-SS-SJSB070 (0-2)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	39000 J	pg/g
	11187072-111219-SS-SJSB070 (2-4)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	35000 J	pg/g
	11187072-111219-SS-SJSB070 (2-4)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	62000 J	pg/g
	11187072-111219-SS-SJSB070 (4-6)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	41000 J	pg/g
	11187072-111219-SS-SJSB070 (6-8)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	22000 J	pg/g
	11187072-111219-SS-SJSB070 (8-10)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	15000 J	pg/g
	11187072-111219-SS-SJSB071 (0-2)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	31000 J	pg/g
	11187072-111219-SS-SJSB071 (2-4)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	41000 J	pg/g

## Notes:

J - Estimated concentration

Table 10

**Qualified Sample Results Due to Diphenyl Ether Interference  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Parameter	Sample ID	Analyte	Qualified Result	Units
Diox Fur	11187072-101419-BN-SJSB058-S (2-4)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	2000 J	pg/g
	11187072-101419-BN-SJSB058-S (4-6)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	1800 J	pg/g
	11187072-101419-BN-SJSB058-S (8-10)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	4.3 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (2-4)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	3.8 J	pg/g

## Notes:

J - Estimated concentration

Table 11

**Qualified Sample Results Due to Outlying Identification Criteria  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Parameter	Sample ID	Analyte	Qualified Result	Units
Diox Fur	11187072-090719-SS-SJSB045-S- (10-12)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.52 J	pg/g
	11187072-090719-SS-SJSB045-S- (10-12)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.67 J	pg/g
	11187072-090719-SS-SJSB045-S- (12-14)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.81 J	pg/g
	11187072-090719-SS-SJSB045-S- (12-14)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	1.3 J	pg/g
	11187072-090719-SS-SJSB045-S- (12-14)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	1.0 J	pg/g
	11187072-090719-SS-SJSB045-S- (14-16)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.95 J	pg/g
	11187072-090719-SS-SJSB045-S- (14-16)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.25 J	pg/g
	11187072-090719-SS-SJSB045-S- (16-18)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.67 J	pg/g
	11187072-090719-SS-SJSB045-S- (16-18)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.27 J	pg/g
	11187072-090719-SS-SJSB045-S- (16-18)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.44 J	pg/g
	11187072-090719-SS-SJSB045-S- (8-10)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.53 J	pg/g
	11187072-090719-SS-SJSB045-S- (8-10)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.37 J	pg/g
	11187072-090719-SS-SJSB045-S- (8-10)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.57 J	pg/g
	11187072-090719-SS-SJSB045-S- (8-10)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.80 J	pg/g
	11187072-090819-SS-SJSB048-S- (10-12)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.69 J	pg/g
	11187072-090819-SS-SJSB048-S- (12-14)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1.2 J	pg/g
	11187072-090819-SS-SJSB048-S- (12-14)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.63 J	pg/g
	11187072-090819-SS-SJSB048-S- (12-14)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.38 J	pg/g
	11187072-090819-SS-SJSB048-S- (14-16)	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.62 J	pg/g
	11187072-090819-SS-SJSB048-S- (14-16)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.56 J	pg/g
	11187072-090819-SS-SJSB048-S- (14-16)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.93 J	pg/g
	11187072-090819-SS-SJSB048-S- (16-18)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1.3 J	pg/g
	11187072-090819-SS-SJSB048-S- (16-18)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.55 J	pg/g
	11187072-090819-SS-SJSB048-S- (16-18)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.83 J	pg/g
	11187072-090819-SS-SJSB048-S- (2-4)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1.5 J	pg/g
	11187072-090819-SS-SJSB048-S- (2-4)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.73 J	pg/g
	11187072-090819-SS-SJSB048-S- (4-6)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.71 J	pg/g
	11187072-090819-SS-SJSB048-S- (6-8)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1.3 J	pg/g
	11187072-090819-SS-SJSB048-S- (8-10)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1.2 J	pg/g
	11187072-090819-SS-SJSB048-S- (8-10)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.79 J	pg/g
	11187072-090819-SS-SJSB048-S- (8-10)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.7 J	pg/g
	11187072-091019-SS-DUP-1	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.61 J	pg/g

Table 11

**Qualified Sample Results Due to Outlying Identification Criteria  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Parameter	Sample ID	Analyte	Qualified Result	Units
Diox Fur	11187072-091019-SS-DUP-1	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.56 J	pg/g
	11187072-091019-SS-DUP-1	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.74 J	pg/g
	11187072-091019-SS-DUP-1	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.19 J	pg/g
	11187072-091019-SS-DUP-1	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.24 J	pg/g
	11187072-091019-SS-DUP-1	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.096 J	pg/g
	11187072-091019-SS-DUP-1	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.17 J	pg/g
	11187072-091019-SS-SJSB051-S (0-2)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.62 J	pg/g
	11187072-091019-SS-SJSB051-S (10-12)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.12 J	pg/g
	11187072-091019-SS-SJSB051-S (10-12)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.14 J	pg/g
	11187072-091019-SS-SJSB051-S (12-14)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.17 J	pg/g
	11187072-091019-SS-SJSB051-S (12-14)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.28 J	pg/g
	11187072-091019-SS-SJSB051-S (12-14)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.25 J	pg/g
	11187072-091019-SS-SJSB051-S (14-16)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.90 J	pg/g
	11187072-091019-SS-SJSB051-S (14-16)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.14 J	pg/g
	11187072-091019-SS-SJSB051-S (14-16)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.17 J	pg/g
	11187072-091019-SS-SJSB051-S (14-16)	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.083 J	pg/g
	11187072-091019-SS-SJSB051-S (14-16)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.17 J	pg/g
	11187072-091019-SS-SJSB051-S (14-16)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.11 J	pg/g
	11187072-091019-SS-SJSB051-S (16-18)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.75 J	pg/g
	11187072-091019-SS-SJSB051-S (16-18)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.11 J	pg/g
	11187072-091019-SS-SJSB051-S (16-18)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.19 J	pg/g
	11187072-091019-SS-SJSB051-S (4-6)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.73 J	pg/g
	11187072-091019-SS-SJSB051-S (4-6)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.34 J	pg/g
	11187072-091019-SS-SJSB051-S (6-8)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.76 J	pg/g
	11187072-091019-SS-SJSB051-S (6-8)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.5 J	pg/g
	11187072-091019-SS-SJSB051-S (6-8)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.17 J	pg/g
	11187072-091019-SS-SJSB051-S (6-8)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.23 J	pg/g
	11187072-091019-SS-SJSB051-S (8-10)	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.50 J	pg/g
	11187072-091019-SS-SJSB051-S (8-10)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.76 J	pg/g
	11187072-091019-SS-SJSB051-S (8-10)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.17 J	pg/g
	11187072-091019-SS-SJSB051-S (8-10)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.15 J	pg/g
	11187072-091019-SS-SJSB051-S (8-10)	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.18 J	pg/g

Table 11

**Qualified Sample Results Due to Outlying Identification Criteria  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
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Parameter	Sample ID	Analyte	Qualified Result	Units	
Diox Fur	11187072-091019-SS-SJSB051-S (8-10)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.93 J	pg/g	
	11187072-091019-SS-SJSB055-S (0-2)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.63 J	pg/g	
	11187072-091019-SS-SJSB055-S (0-2)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.22 J	pg/g	
	11187072-091019-SS-SJSB055-S (10-12)	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.32 J	pg/g	
	11187072-091019-SS-SJSB055-S (10-12)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.17 J	pg/g	
	11187072-091019-SS-SJSB055-S (10-12)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.26 J	pg/g	
	11187072-091019-SS-SJSB055-S (12-14)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.25 J	pg/g	
	11187072-091019-SS-SJSB055-S (14-16)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.63 J	pg/g	
	11187072-091019-SS-SJSB055-S (14-16)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.20 J	pg/g	
	11187072-091019-SS-SJSB055-S (14-16)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.29 J	pg/g	
	11187072-091019-SS-SJSB055-S (14-16)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.075 J	pg/g	
	11187072-091019-SS-SJSB055-S (14-16)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.15 J	pg/g	
	11187072-091019-SS-SJSB055-S (16-18)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.58 J	pg/g	
	11187072-091019-SS-SJSB055-S (16-18)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.12 J	pg/g	
	11187072-091019-SS-SJSB055-S (16-18)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.47 J	pg/g	
	11187072-091019-SS-SJSB055-S (16-18)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.19 J	pg/g	
	11187072-091019-SS-SJSB055-S (16-18)	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.085 J	pg/g	
	11187072-091019-SS-SJSB055-S (2-4)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.16 J	pg/g	
	11187072-091019-SS-SJSB055-S (2-4)	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.089 J	pg/g	
	11187072-091019-SS-SJSB055-S (2-4)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.12 J	pg/g	
	11187072-091019-SS-SJSB055-S (2-4)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.38 J	pg/g	
	11187072-091019-SS-SJSB055-S (4-6)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.31 J	pg/g	
	11187072-091019-SS-SJSB055-S (4-6)	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.091 J	pg/g	
	11187072-091019-SS-SJSB055-S (4-6)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.22 J	pg/g	
	11187072-091019-SS-SJSB055-S (6-8)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.79 J	pg/g	
	11187072-091019-SS-SJSB055-S (6-8)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.64 J	pg/g	
	11187072-091019-SS-SJSB055-S (6-8)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.14 J	pg/g	
	11187072-091019-SS-SJSB055-S (6-8)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.13 J	pg/g	
	11187072-091019-SS-SJSB055-S (8-10)	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.28 J	pg/g	
	11187072-091019-SS-SJSB055-S (8-10)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.37 J	pg/g	
		11187072-091119-SS-DUP-2	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.87 J	pg/g
		11187072-091119-SS-DUP-2	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.26 J	pg/g



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Parameter	Sample ID	Analyte	Qualified Result	Units
Diox Fur	11187072-091119-SS-SJSB045-S (0-2)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.53 J	pg/g
	11187072-091119-SS-SJSB045-S (0-2)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.27 J	pg/g
	11187072-091119-SS-SJSB045-S (0-2)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.62 J	pg/g
	11187072-091119-SS-SJSB045-S (6-8)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.47 J	pg/g
	11187072-091119-SS-SJSB049-S (10-12)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	2.0 J	pg/g
	11187072-091119-SS-SJSB049-S (12-14)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.89 J	pg/g
	11187072-091119-SS-SJSB049-S (14-16)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1.8 J	pg/g
	11187072-091119-SS-SJSB049-S (14-16)	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	1.1 J	pg/g
	11187072-091119-SS-SJSB049-S (16-18)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.83 J	pg/g
	11187072-091119-SS-SJSB049-S (16-18)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.5 J	pg/g
	11187072-091119-SS-SJSB049-S (16-18)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	2.1 J	pg/g
	11187072-091119-SS-SJSB049-S (2-4)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.7 J	pg/g
	11187072-091119-SS-SJSB049-S (4-6)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.7 J	pg/g
	11187072-091119-SS-SJSB049-S (4-6)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	12 J	pg/g
	11187072-091119-SS-SJSB049-S (6-8)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.57 J	pg/g
	11187072-091119-SS-SJSB049-S (8-10)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.62 J	pg/g
	11187072-091219-SS-DUP-4	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.90 J	pg/g
	11187072-091219-SS-DUP-4	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	1.0 J	pg/g
	11187072-091219-SS-SJSB052-S (0-2)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.70 J	pg/g
	11187072-091219-SS-SJSB052-S (0-2)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.90 J	pg/g
	11187072-091219-SS-SJSB052-S (0-2)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.33 J	pg/g
	11187072-091219-SS-SJSB052-S (0-2)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	1.5 J	pg/g
	11187072-091219-SS-SJSB052-S (0-2)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.57 J	pg/g
	11187072-091219-SS-SJSB052-S (0-2)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.58 J	pg/g
	11187072-091219-SS-SJSB052-S (10-12)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.22 J	pg/g
	11187072-091219-SS-SJSB052-S (10-12)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.38 J	pg/g
	11187072-091219-SS-SJSB052-S (10-12)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.40 J	pg/g
	11187072-091219-SS-SJSB052-S (12-14)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.33 J	pg/g
	11187072-091219-SS-SJSB052-S (16-18)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.59 J	pg/g
	11187072-091219-SS-SJSB052-S (4-6)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.46 J	pg/g
	11187072-091219-SS-SJSB052-S (6-8)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.67 J	pg/g
	11187072-091219-SS-SJSB052-S (6-8)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.1 J	pg/g

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Parameter	Sample ID	Analyte	Qualified Result	Units
Diox Fur	11187072-091219-SS-SJSB052-S (8-10)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.66 J	pg/g
	11187072-091619-SS-DUP-5	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1.0 J	pg/g
	11187072-091619-SS-SJSB050-(0-2)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.1 J	pg/g
	11187072-091619-SS-SJSB050-(0-2)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	2.5 J	pg/g
	11187072-091619-SS-SJSB050-(12-14)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.44 J	pg/g
	11187072-091619-SS-SJSB050-(12-14)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.97 J	pg/g
	11187072-091619-SS-SJSB050-(12-14)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.25 J	pg/g
	11187072-091619-SS-SJSB050-(14-16)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.61 J	pg/g
	11187072-091619-SS-SJSB050-(16-18)	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.94 J	pg/g
	11187072-091619-SS-SJSB050-(2-4)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.54 J	pg/g
	11187072-091619-SS-SJSB050-(2-4)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.97 J	pg/g
	11187072-091619-SS-SJSB050-(4-6)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.62 J	pg/g
	11187072-091619-SS-SJSB050-(6-8)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.42 J	pg/g
	11187072-091619-SS-SJSB050-(6-8)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.78 J	pg/g
	11187072-091619-SS-SJSB050-(8-10)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.1 J	pg/g
	11187072-091619-SS-SJSB050-(8-10)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.30 J	pg/g
	11187072-100819-SS-SJSB052-C1 (0-2)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.28 J	pg/g
	11187072-100819-SS-SJSB052-C1 (0-2)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.13 J	pg/g
	11187072-100819-SS-SJSB052-C1 (10-12)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.24 J	pg/g
	11187072-100819-SS-SJSB052-C1 (10-12)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.11 J	pg/g
	11187072-100819-SS-SJSB052-C1 (10-12)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.25 J	pg/g
	11187072-100819-SS-SJSB052-C1 (12-14)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.099 J	pg/g
	11187072-100819-SS-SJSB052-C1 (12-14)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.15 J	pg/g
	11187072-100819-SS-SJSB052-C1 (14-16)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.076 J	pg/g
	11187072-100819-SS-SJSB052-C1 (14-16)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.088 J	pg/g
	11187072-100819-SS-SJSB052-C1 (14-16)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.092 J	pg/g
	11187072-100819-SS-SJSB052-C1 (14-16)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.083 J	pg/g
	11187072-100819-SS-SJSB052-C1 (14-16)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.22 J	pg/g
	11187072-100819-SS-SJSB052-C1 (14-16)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.17 J	pg/g
	11187072-100819-SS-SJSB052-C1 (16-18)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.065 J	pg/g
11187072-100819-SS-SJSB052-C1 (16-18)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.17 J	pg/g	
11187072-100819-SS-SJSB052-C1 (2-4)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.075 J	pg/g	

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**Qualified Sample Results Due to Outlying Identification Criteria**  
**San Jacinto River Waste Pits Superfund Site Investigation**  
**Pre-design Investigation Sampling Event - Northern Impoundment Area**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

Parameter	Sample ID	Analyte	Qualified Result	Units
Diox Fur	11187072-100819-SS-SJSB052-C1 (2-4)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.066 J	pg/g
	11187072-100819-SS-SJSB052-C1 (2-4)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.15 J	pg/g
	11187072-100819-SS-SJSB052-C1 (2-4)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.044 J	pg/g
	11187072-100819-SS-SJSB052-C1 (2-4)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.11 J	pg/g
	11187072-100819-SS-SJSB052-C1 (4-6)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.088 J	pg/g
	11187072-100819-SS-SJSB052-C1 (4-6)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.24 J	pg/g
	11187072-100819-SS-SJSB052-C1 (6-8)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.25 J	pg/g
	11187072-100819-SS-SJSB052-C1 (6-8)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.072 J	pg/g
	11187072-100819-SS-SJSB052-C1 (6-8)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.30 J	pg/g
	11187072-100819-SS-SJSB052-C1 (8-10)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.12 J	pg/g
	11187072-100819-SS-SJSB052-C1 (8-10)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.12 J	pg/g
	11187072-100819-SS-SJSB052-C1 (8-10)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.13 J	pg/g
	11187072-100819-SS-SJSB052-C1 (8-10)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.5 J	pg/g
	11187072-100819-SS-SJSB052-C1 (8-10)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.33 J	pg/g
	11187072-100819-SS-SJSB052-C1 (8-10)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.32 J	pg/g
	11187072-101019-SS-SJSB047(0-2)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.11 J	pg/g
	11187072-101019-SS-SJSB047(0-2)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.38 J	pg/g
	11187072-101019-SS-SJSB047(0-2)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.36 J	pg/g
	11187072-101019-SS-SJSB047(2-4)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.16 J	pg/g
	11187072-101019-SS-SJSB047(2-4)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.47 J	pg/g
	11187072-101019-SS-SJSB047(2-4)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.11 J	pg/g
	11187072-101019-SS-SJSB047(2-4)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.094 J	pg/g
	11187072-101019-SS-SJSB047(2-4)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.27 J	pg/g
	11187072-101019-SS-SJSB047(2-4)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.10 J	pg/g
	11187072-101019-SS-SJSB047(4-6)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.085 J	pg/g
	11187072-101019-SS-SJSB047(4-6)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.14 J	pg/g
	11187072-101019-SS-SJSB047(4-6)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.18 J	pg/g
	11187072-101019-SS-SJSB047(4-6)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.35 J	pg/g
	11187072-101019-SS-SJSB047(6-8)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.33 J	pg/g
	11187072-101019-SS-SJSB047(6-8)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.23 J	pg/g
	11187072-101319-SS-SJSB053 (0-2)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.57 J	pg/g
	11187072-101319-SS-SJSB053 (10-12)	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.11 J	pg/g

Table 11

**Qualified Sample Results Due to Outlying Identification Criteria  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Parameter	Sample ID	Analyte	Qualified Result	Units
Diox Fur	11187072-101319-SS-SJSB053 (10-12)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.51 J	pg/g
	11187072-101319-SS-SJSB053 (12-14)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.12 J	pg/g
	11187072-101319-SS-SJSB053 (12-14)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.18 J	pg/g
	11187072-101319-SS-SJSB053 (14-15)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.24 J	pg/g
	11187072-101319-SS-SJSB053 (2-4)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.22 J	pg/g
	11187072-101319-SS-SJSB053 (2-4)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.18 J	pg/g
	11187072-101319-SS-SJSB053 (4-6)	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.15 J	pg/g
	11187072-101319-SS-SJSB053 (4-6)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.42 J	pg/g
	11187072-101319-SS-SJSB053 (6-8)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.79 J	pg/g
	11187072-101319-SS-SJSB053 (6-8)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.094 J	pg/g
	11187072-101319-SS-SJSB053 (6-8)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.29 J	pg/g
	11187072-101319-SS-SJSB053 (8-10)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.42 J	pg/g
	11187072-101319-SS-SJSB053 (8-10)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.23 J	pg/g
	11187072-101319-SS-SJSB053 (8-10)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.21 J	pg/g
	11187072-101419-SS-SJSB055 C1 (0-2)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.88 J	pg/g
	11187072-101419-SS-SJSB055 C1 (10-12)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.083 J	pg/g
	11187072-101419-SS-SJSB055 C1 (10-12)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.41 J	pg/g
	11187072-101419-SS-SJSB055 C1 (10-12)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.22 J	pg/g
	11187072-101419-SS-SJSB055 C1 (12-14)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.074 J	pg/g
	11187072-101419-SS-SJSB055 C1 (12-14)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.24 J	pg/g
	11187072-101419-SS-SJSB055 C1 (14-16)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.056 J	pg/g
	11187072-101419-SS-SJSB055 C1 (14-16)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.22 J	pg/g
	11187072-101419-SS-SJSB055 C1 (16-18)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.11 J	pg/g
	11187072-101419-SS-SJSB055 C1 (2-4)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.17 J	pg/g
	11187072-101419-SS-SJSB055 C1 (2-4)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.098 J	pg/g
	11187072-101419-SS-SJSB055 C1 (4-6)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.071 J	pg/g
	11187072-101419-SS-SJSB055 C1 (4-6)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.48 J	pg/g
	11187072-101419-SS-SJSB055 C1 (4-6)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.49 J	pg/g
	11187072-101419-SS-SJSB055 C1 (6-8)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.094 J	pg/g
	11187072-101419-SS-SJSB055 C1 (6-8)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.092 J	pg/g
	11187072-101419-SS-SJSB055 C1 (6-8)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.19 J	pg/g
	11187072-101419-SS-SJSB055 C1 (8-10)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.43 J	pg/g

Table 11

**Qualified Sample Results Due to Outlying Identification Criteria  
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Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Parameter	Sample ID	Analyte	Qualified Result	Units
Diox Fur	11187072-101419-SS-SJSB055 C1 (8-10)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.59 J	pg/g
	11187072-101319-SS-SJSB054 (10-12)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.27 J	pg/g
	11187072-101319-SS-SJSB054 (10-12)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	3.3 J	pg/g
	11187072-101319-SS-SJSB054 (10-12)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.18 J	pg/g
	11187072-101319-SS-SJSB054 (10-12)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.38 J	pg/g
	11187072-101319-SS-SJSB054 (12-14)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	1.3 J	pg/g
	11187072-101319-SS-SJSB054 (14-16)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.15 J	pg/g
	11187072-101319-SS-SJSB054 (14-16)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.21 J	pg/g
	11187072-101319-SS-SJSB054 (14-16)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.30 J	pg/g
	11187072-101319-SS-SJSB054 (16-18)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.21 J	pg/g
	11187072-101319-SS-SJSB054 (16-18)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.12 J	pg/g
	11187072-101319-SS-SJSB054 (2-4)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	2.5 J	pg/g
	11187072-101319-SS-SJSB054 (4-6)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.59 J	pg/g
	11187072-101319-SS-SJSB054 (4-6)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.17 J	pg/g
	11187072-101319-SS-SJSB054 (4-6)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.28 J	pg/g
	11187072-101319-SS-SJSB054 (6-8)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.4 J	pg/g
	11187072-101319-SS-SJSB054 (6-8)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.14 J	pg/g
	11187072-101319-SS-SJSB054 (6-8)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	3.5 J	pg/g
	11187072-101319-SS-SJSB054 (6-8)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.24 J	pg/g
	11187072-101319-SS-SJSB054 (6-8)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.27 J	pg/g
	11187072-101319-SS-SJSB054 (6-8)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	2.8 J	pg/g
	11187072-101319-SS-SJSB054 (8-10)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	1.0 J	pg/g
	11187072-101319-SS-SJSB054 (8-10)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.56 J	pg/g
	11187072-101319-SS-SJSB054 (8-10)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.29 J	pg/g
	11187072-101419-BN-SJSB058-S (0-2)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.62 J	pg/g
	11187072-101419-BN-SJSB058-S (0-2)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.25 J	pg/g
	11187072-101419-BN-SJSB058-S (0-2)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.78 J	pg/g
	11187072-101419-BN-SJSB058-S (0-2)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.32 J	pg/g
	11187072-101419-BN-SJSB058-S (10-12)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.92 J	pg/g
	11187072-101419-BN-SJSB058-S (12-14)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	3.2 J	pg/g
	11187072-101419-BN-SJSB058-S (14-16)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.13 J	pg/g
	11187072-101419-BN-SJSB058-S (14-16)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.23 J	pg/g

Table 11

**Qualified Sample Results Due to Outlying Identification Criteria  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Parameter	Sample ID	Analyte	Qualified Result	Units
Diox Fur	11187072-101419-BN-SJSB058-S (14-16)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.66 J	pg/g
	11187072-101419-BN-SJSB058-S (16-18)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.40 J	pg/g
	11187072-101419-BN-SJSB058-S (16-18)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.94 J	pg/g
	11187072-101419-BN-SJSB058-S (16-18)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	1.7 J	pg/g
	11187072-101419-BN-SJSB058-S (8-10)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.95 J	pg/g
	11187072-101419-BN-SJSB058-S (8-10)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	8.7 J	pg/g
	11187072-101719-SS-SJSB047-C1-(14-16)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.53 J	pg/g
	11187072-101719-SS-SJSB047-C1-(16-18)	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.27 J	pg/g
	11187072-101719-SS-SJSB047-C1-(16-18)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.46 J	pg/g
	11187072-101719-SS-SJSB047-C1-(6-8)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.18 J	pg/g
	11187072-100719-SS-SJSB046 (0-2)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.53 J	pg/g
	11187072-100719-SS-SJSB046 (10-12)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.79 J	pg/g
	11187072-100719-SS-SJSB046 (10-12)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.44 J	pg/g
	11187072-100919-SS-SJSB047(10-12)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.20 J	pg/g
	11187072-100919-SS-SJSB047(10-12)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.31 J	pg/g
	11187072-100919-SS-SJSB047(10-12)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.22 J	pg/g
	11187072-100919-SS-SJSB047(12-14)	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.65 J	pg/g
	11187072-100919-SS-SJSB047(12-14)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.23 J	pg/g
	11187072-100919-SS-SJSB047(12-14)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.27 J	pg/g
	11187072-100919-SS-SJSB047(14-16)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.5 J	pg/g
	11187072-100919-SS-SJSB047(16-18)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.20 J	pg/g
	11187072-100919-SS-SJSB047(8-10)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.10 J	pg/g
	11187072-100919-SS-SJSB047(8-10)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.19 J	pg/g
	11187072-100919-SS-SJSB047(8-10)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.17 J	pg/g
	11187072-100919-SS-SJSB047(8-10)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.27 J	pg/g
	11187072-100919-SS-SJSB050C1(0-2)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.39 J	pg/g
	11187072-100919-SS-SJSB050C1(0-2)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.11 J	pg/g
	11187072-100919-SS-SJSB050C1(14-16)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.24 J	pg/g
	11187072-100919-SS-SJSB050C1(14-16)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.24 J	pg/g
	11187072-100919-SS-SJSB050C1(6-8)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.44 J	pg/g
	11187072-100919-SS-SJSB050C1(8-10)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.70 J	pg/g
	11187072-101019-SS-DUP-7	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.11 J	pg/g

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**Predesign Investigation Sampling Event - Northern Impoundment Area**  
**San Jacinto, Harris County, Texas**  
**September through December 2019**

Parameter	Sample ID	Analyte	Qualified Result	Units
Diox Fur	11187072-101019-SS-DUP-7	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.39 J	pg/g
	11187072-110519-SS-SJSB057 (10-12)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.59 J	pg/g
	11187072-110519-SS-SJSB057 (10-12)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.21 J	pg/g
	11187072-110519-SS-SJSB057 (12-14)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.19 J	pg/g
	11187072-110519-SS-SJSB057 (14-16)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.92 J	pg/g
	11187072-110519-SS-SJSB057 (16-18)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.12 J	pg/g
	11187072-110519-SS-SJSB057 (16-18)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.24 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (0-2)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.22 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (0-2)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.13 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (0-2)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.37 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (10-12)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.25 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (10-12)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.048 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (10-12)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.18 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (12-14)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.39 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (14-16)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.31 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (14-16)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.22 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (2-4)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.14 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (2-4)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.11 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (4-6)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.092 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (6-8)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.14 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (6-8)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.14 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (6-8)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.074 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (6-8)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.15 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (8-10)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.35 J	pg/g
	11187072-110919-KW-SJSB053-C1-S (8-10)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.29 J	pg/g
	11187072-111019-KW-SJSB053-S(14-16)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.16 J	pg/g
	11187072-111019-KW-SJSB053-S(14-16)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.068 J	pg/g
	11187072-111019-KW-SJSB053-S(16-18)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.069 J	pg/g
	11187072-111019-KW-SJSB053-S(16-18)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.057 J	pg/g
	11187072-111119-SS-SJSB056 (0-2)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.35 J	pg/g
11187072-111119-SS-SJSB056 (0-2)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.56 J	pg/g	
11187072-111119-SS-SJSB056 (10-12)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.12 J	pg/g	

Table 11

**Qualified Sample Results Due to Outlying Identification Criteria  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
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Parameter	Sample ID	Analyte	Qualified Result	Units
Diox Fur	11187072-111119-SS-SJSB056 (10-12)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.57 J	pg/g
	11187072-111119-SS-SJSB056 (12-14)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.54 J	pg/g
	11187072-111119-SS-SJSB056 (12-14)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.31 J	pg/g
	11187072-111119-SS-SJSB056 (12-14)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.48 J	pg/g
	11187072-111119-SS-SJSB056 (12-14)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.24 J	pg/g
	11187072-111119-SS-SJSB056 (14-16)	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.19 J	pg/g
	11187072-111119-SS-SJSB056 (16-18)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1.1 J	pg/g
	11187072-111119-SS-SJSB056 (16-18)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.31 J	pg/g
	11187072-111119-SS-SJSB056 (16-18)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.28 J	pg/g
	11187072-111119-SS-SJSB056 (2-4)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.83 J	pg/g
	11187072-111119-SS-SJSB056 (4-6)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.33 J	pg/g
	11187072-111119-SS-SJSB056 (4-6)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.14 J	pg/g
	11187072-111119-SS-SJSB056 (4-6)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.27 J	pg/g
	11187072-111119-SS-SJSB056 (6-8)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.37 J	pg/g
	11187072-111119-SS-SJSB056 (6-8)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.32 J	pg/g
	11187072-111119-SS-SJSB056 (8-10)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1.0 J	pg/g
	11187072-111119-SS-SJSB056 (8-10)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	2.5 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (0-2)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.38 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (0-2)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.75 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (10-12)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.67 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (12-14)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.094 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (12-14)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.37 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (12-14)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.56 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (14-16)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.1 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (14-16)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	2.2 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (14-16)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.84 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (14-16)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.46 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (16-18)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.17 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (16-18)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.091 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (16-18)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.17 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (16-18)	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.098 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (2-4)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.15 J	pg/g



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Parameter	Sample ID	Analyte	Qualified Result	Units
Diox Fur	11187072-11719-KW-SJSB045-C1-S (2-4)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.31 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (2-4)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	1.2 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (2-4)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.46 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (6-8)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.46 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (6-8)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.80 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (6-8)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	1.8 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (8-10)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.38 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (8-10)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.32 J	pg/g
	11187072-11719-KW-SJSB045-C1-S (8-10)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.17 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (0-2)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.40 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (10-12)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.41 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (10-12)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.86 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (10-12)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.18 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (10-12)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.31 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (10-12)	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.26 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (12-14)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	1.4 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (14-16)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.86 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (16-18)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.30 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (2-4)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.59 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (2-4)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.13 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (4-6)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.28 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (4-6)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.38 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (6-8)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.51 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (6-8)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.15 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (6-8)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.93 J	pg/g
	11187072-11719-KW-SJSB048-C1-S (8-10)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.36 J	pg/g
	11187072-111219-SS-SJSB058 (18-20)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.38 J	pg/g
	11187072-111219-SS-SJSB070 (0-2)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	46 J	pg/g
	11187072-111219-SS-SJSB070 (0-2)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	5.9 J	pg/g
	11187072-111219-SS-SJSB070 (10-12)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.45 J	pg/g
11187072-111219-SS-SJSB070 (10-12)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.73 J	pg/g	
11187072-111219-SS-SJSB070 (14-16)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.094 J	pg/g	

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San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
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Parameter	Sample ID	Analyte	Qualified Result	Units	
Diox Fur	11187072-111219-SS-SJSB070 (16-18)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.41 J	pg/g	
	11187072-111219-SS-SJSB070 (16-18)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.19 J	pg/g	
	11187072-111219-SS-SJSB070 (16-18)	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.29 J	pg/g	
	11187072-111219-SS-SJSB070 (8-10)	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	2.0 J	pg/g	
	11187072-111219-SS-SJSB071 (10-12)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.38 J	pg/g	
	11187072-111219-SS-SJSB071 (12-14)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.24 J	pg/g	
	11187072-111219-SS-SJSB071 (12-14)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.089 J	pg/g	
	11187072-111219-SS-SJSB071 (12-14)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.48 J	pg/g	
	11187072-111219-SS-SJSB071 (14-16)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.21 J	pg/g	
	11187072-111219-SS-SJSB071 (16-18)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1.8 J	pg/g	
	11187072-111219-SS-SJSB071 (16-18)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.47 J	pg/g	
	11187072-111219-SS-SJSB071 (16-18)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.43 J	pg/g	
	11187072-111219-SS-SJSB071 (16-18)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	2.4 J	pg/g	
	11187072-111219-SS-SJSB071 (4-6)	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	3.5 J	pg/g	
	11187072-111219-SS-SJSB071 (4-6)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.23 J	pg/g	
	11187072-111219-SS-SJSB071 (4-6)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.24 J	pg/g	
	11187072-111219-SS-SJSB071 (8-10)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.39 J	pg/g	
	11187072-120319-SS-SJSB056-C1(0-2)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.48 J	pg/g	
	11187072-120319-SS-SJSB056-C1(10-12)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.53 J	pg/g	
	11187072-120319-SS-SJSB056-C1(10-12)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.23 J	pg/g	
	11187072-120319-SS-SJSB056-C1(14-16)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.10 J	pg/g	
	11187072-120319-SS-SJSB056-C1(14-16)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.15 J	pg/g	
	11187072-120319-SS-SJSB056-C1(16-18)	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.18 J	pg/g	
	11187072-120319-SS-SJSB056-C1(2-4)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.15 J	pg/g	
	11187072-120319-SS-SJSB056-C1(2-4)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.33 J	pg/g	
	11187072-120319-SS-SJSB056-C1(4-6)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.26 J	pg/g	
	11187072-120319-SS-SJSB056-C1(6-8)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.40 J	pg/g	
	11187072-120319-SS-SJSB056-C1(8-10)	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.16 J	pg/g	
	11187072-120319-SS-SJSB056-C1(8-10)	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.18 J	pg/g	
		1187072-120519-SS-DUP-1	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.19 J	pg/g
		1187072-120519-SS-DUP-1	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.14 J	pg/g
		1187072-120519-SS-DUP-1	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.28 J	pg/g

Table 11

**Qualified Sample Results Due to Outlying Identification Criteria  
San Jacinto River Waste Pits Superfund Site Investigation  
Predesign Investigation Sampling Event - Northern Impoundment Area  
San Jacinto, Harris County, Texas  
September through December 2019**

Parameter	Sample ID	Analyte	Qualified Result	Units
Diox Fur	1187072-120519-SS-DUP-1	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.11 J	pg/g
	1187072-120519-SS-DUP-1	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.56 J	pg/g
	1187072-120519-SS-SJSB048-C1(18-20)	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.60 J	pg/g
	1187072-120519-SS-SJSB048-C1(18-20)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.23 J	pg/g
	11187072-120919-BN-SJSB046-C1(0-2)	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	1.2 J	pg/g
	11187072-120919-BN-SJSB046-C1(10-12)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.24 J	pg/g

## Notes:

J - Estimated concentration

**Appendix A-7**  
**Second Phase Pre-Design Investigation**  
**Photographic Log**



Photo 1 - View from airboat - divers, drill crew working to collect samples.



Photo 2 - View of North Impoundment from San Jacinto River.



## North Impoundment PID-2 Photos





Photo 3 - Drill crew working from airboats, collecting samples.



Photo 4 - Drill crew performing surface completion.





Photo 5 - Drill crew collecting samples using hollow-stem auger method.



Photo 6 - View of drilling rig on barge.







Photo 7 - View of spud barge mobilization from North Impoundment.



Photo 8 - Drill crew performing geotechnical sampling on barge, GHD oversight.







Photo 9 - Drill Crew collecting sample at location SJSB071.



Photo 10 - Drill crew working to anchor, stabilize barge for sample collection.





Photo 11 - Drill crew collecting samples from barge using rotary method.



Photo 12 - Crew drilling borehole from barge using rotary method.





Photo 13 - View of geotechnical sample.



Photo 14 - View of barge anchored to excavator.



Photo 15 - View of spud barge anchoring drilling rig.



Photo 16 - Preparing transfer of drilling rig to barge.







Photo 17 - View from land, airboat drilling crew collecting samples.



Photo 18 - View from San Jacinto River, airboat drilling crew collecting samples.





Photo 19 - Airboat drilling crew and diver support boat.