



**FINAL REPORT
ADMINISTRATIVE ORDER ON
CONSENT**

**WEDRON SILICA COMPANY,
TECHNISAND, INC. AND LOCKHEED
MARTIN CORPORATION
WEDRON, ILLINOIS
EPA DOCKET NO. RCRA-05-2013-0011**

PREPARED FOR:

Wedron Silica Company and Technisand, Inc.
P.O. Box 119
Wedron, Illinois 60557-0119

and

Lockheed Martin Corporation
12999 Deer Creek Canyon Road, MS: DC5684
Littleton, Colorado 80127

PREPARED BY:

GZA GeoEnvironmental, Inc.
20900 Swenson Drive, Suite 150
Waukesha, Wisconsin 53186

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Wedron Silica Company
Technisand, Inc.
P.O. Box 119
Wedron, Illinois 60557-0119
Attention: Mr. Michael D. Melton, Corporate Environmental Manager

Lockheed Martin Corporation
12999 Deer Creek Canyon Road, MS: DC5684
Littleton, Colorado 80127
Attention: Mr. William Bath, Project Manager

Subject: Final Report
Administrative Order on Consent
Wedron Silica Company, Technisand, Inc. and Lockheed Martin Corporation
Wedron, Illinois
EPA Docket No. RCRA-05-2013-0011

20900 Swenson Drive,
Suite 150
Waukesha, Wisconsin
53186

262-754-2560
Fax: 262-754-9711

www.gza.com


Dear Messrs. Melton and Bath:

GZA GeoEnvironmental, Inc. (GZA) is providing this Final Report to Wedron Silica Company, Technisand, Inc. and Lockheed Martin Corporation. The Final Report is required under the Administrative Order on Consent (AOC), EPA Docket No. RCRA-05-2013-0011, and documents the AOC-specified scope of work conducted on various properties in the Wedron community in LaSalle County, Illinois.

If you have any questions or comments, please feel free to contact the undersigned at (262) 754-2560.

Very truly yours,

GZA GeoEnvironmental, Inc.



Bernard G. Fenelon, P.G.
Senior Project Manager
Hydrogeologist



Mark J. Krumenacher, P.G.
Principal

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cc: Mr. Steve Faryan, United States Environmental Protection Agency
Mr. David Olchawa, Wedron Silica Company

Attachments

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1.0 INTRODUCTION

In accordance with the terms of an Administrative Order on Consent (AOC), this Final Report is submitted by GZA GeoEnvironmental, Inc. (GZA) for documenting implementation and findings of the September 12, 2013 Work Plan (“Work Plan”) made part of the AOC. Pursuant to the AOC Work Plan, GZA investigated certain areas of the Wedron Silica and Technisand properties in response to USEPA’s request to evaluate whether those locations are a potential source for the petroleum compounds detected in the Wedron community water-supply wells. Based on the results of this investigation, as described below, the source of the petroleum compounds detected in the Wedron community water-supply wells is not from Wedron Silica or Technisand properties.



A specific scope of work was presented in the Work Plan, which covered the following general categories:

1. Sampling at properties currently or historically owned and/or operated by Wedron Silica Company (Wedron Silica), Technisand, Inc. (Technisand) and Martin Marietta Corporation (Martin Marietta);
2. Additional water-table piezometer installations on Wedron Silica and Technisand properties;
3. Water level monitoring in piezometers and monitoring wells installed by:
 - GZA in May and December 2013, on behalf of Wedron Silica, Technisand and Lockheed Martin;
 - The Illinois Environmental Protection Agency (IEPA) in July 2012, in Pit 2 and in September 2013, on and near the former Hoxsey gasoline station;
 - Weston Solutions, Inc. (Weston) in February 2014, on behalf of the United States Environmental Protection Agency (USEPA);
 - CDM Smith, Inc. (CDM Smith) in March 2014, on behalf of Illinois Railway, LLC (Illinois Railway);
4. Water level monitoring on area surface-water bodies at locations established by Wedron Silica; and



5. Data analyses and reporting.

The work was conducted in a phased approach comparing analytical results to Illinois Tiered Approach to Corrective Action Objectives (TACO)¹ Tier 1 Class I migration to groundwater soil remediation objectives (SROs) or TACO Tier 1 Class I Groundwater Remediation Objectives (GRO) to evaluate whether potential source areas exist which require additional characterization and/or investigation. The use of the acronym SRO throughout the Final Report refers to soil remediation objectives for the Class I migration to groundwater category only.

Wedron Silica voluntarily installed nine water table piezometers (MW-1 through MW-9) throughout the Wedron community in May 2013. The piezometers were installed to evaluate groundwater flow direction in the St. Peter Sandstone aquifer across the Wedron community. Soil boring and well construction logs for MW-1 through MW-9 are provided in Appendix B. The well construction characteristics are summarized on Table 1.

GZA conducted subsurface evaluations on the following areas of Wedron Silica or Technisand properties:

1. The area of the Tech Center wastewater treatment system;
2. Two former 4,000-gallon gasoline underground storage tanks (USTs) and dispensers closed in 1998, near the main office, which are being investigated under IEPA's oversight, pursuant to separate work plans;
3. A former 6,000-gallon gasoline UST near the current Screen House that was closed in 1982;
4. The area around Weston boring WGS-GP-10, drilled in July 2012, and IEPA monitoring well G103, installed in 1984, near the former Scale House well (referred to as the "WGS-GP-10 area"); and
5. The Pit 2 reclamation area.

Representatives of the USEPA, IEPA, Wedron Silica and Lockheed Martin developed the work scopes presented below and implemented for each of the five areas. Limitations to this Final Report are provided in Appendix A.

¹ Title 35, Subtitle G, Chapter I, Subchapter F, Part 742 of the Illinois Administrative Code.



2.0 SCOPE OF WORK

A description of the scope of work conducted in each of the areas evaluated is provided in the following sections.

2.1 SOIL BORINGS

Twenty-two Geoprobe[®] soil borings (WS-SB-GP-01 through WS-SB-GP-21 and WS-SB-GP-14A) were drilled in five areas in the Wedron area by Direct Push Analytical Corp. (Direct Push) of St. Charles, Illinois on December 3 and 4, 2013, and May 8, 9 and 14, 2014, at the locations shown on Figure 1. USEPA was present during drilling activities and was allowed to take split samples. The borings drilled in each area and the drilled depths of the borings were as follows:

- **Tech Center** - Geoprobe[®] soil borings WS-SB-GP-01 and WS-SB-GP-02 were drilled December 3, 2013, to the depth of refusal of 20 feet below grade. The soil borings were drilled adjacent to the on-site wastewater treatment system at the locations shown on Figure 1 (View 1) and Figure 2. One boring was drilled just east of the holding tank and the other boring was drilled immediately south and west of the connection to the storm sewer line located on the west side of the Jackson Street right-of-way (ROW).
- **Former 4,000-gallon gasoline UST System** - Geoprobe[®] soil borings WS-SB-GP-03 through WS-SB-GP-06 were drilled December 3, 2013, to 8 feet below grade. Soil borings WS-SB-GP-14A² and WS-SB-GP-15 through WS-SB-GP-18 were drilled May 8 and 9, 2014, to the water table depth of approximately 36 feet below grade or to the depth of refusal of 30 to 32 feet below grade. The soil borings were drilled at the locations shown on Figure 1 (View 3) and Figure 3 and targeted the area of the former dispensers and piping runs and areas 10 to 20 feet outside the former dispensers and piping runs.
- **Former 6,000-gallon gasoline UST** - Geoprobe[®] soil borings WS-SB-GP-07 through WS-SB-GP-11 were drilled on December 3, 2013, to the depth of refusal between 9 and 12 feet below grade or to the target depth of 12 feet below grade (an estimated 2 to 4 feet below the base of the former UST). The soil borings were drilled at the locations shown on Figure 1 (View 4) and Figure 4. Due to the

² GZA inadvertently labeled the first boring drilled in May 2014, with the same label as the last boring drilled in December 2013 (WS-SB-GP-14). Therefore, we subsequently changed the boring identifier to WS-SB-GP-14A.



proximity of the proposed boring locations to the Screen House, which was constructed immediately adjacent to the former 6,000-gallon gasoline UST following its removal in 1983, the borings were moved a distance of approximately 5 to 10 feet west of the proposed locations. The adjustments in drilling locations were approved by the USEPA.

- **WGS-GP-10 Area** - Geoprobe[®] soil borings WS-SB-GP-12 through WS-SB-GP-14 were drilled December 4, 2013, to refusal at approximately 15 feet below grade. The soil borings were drilled on approximately 25-foot centers approximately equally spaced between 2012 Weston boring WGS-GP-10 and 1984 IEPA monitoring well G103 at the locations shown on Figure 1 (View 2) and Figure 5. Because of fixed process equipment in the area, the proposed borings were moved approximately 5 to 7 feet west to allow access by the Geoprobe[®] drilling rig. The adjustments in drilling locations were approved by the USEPA.
- **Pit 2 Reclamation Area** - Based on the groundwater-flow maps prepared from water levels measured in piezometers, monitoring wells, and surface water features on April 9 and 17, 2014, three soil boring locations were selected for Pit 2 and approved by the USEPA. Geoprobe[®] soil borings WS-SB-GP-19 through WS-SB-GP-21 were drilled May 14, 2014, to approximately 5 to 10 feet below the water table to depths of approximately 28 feet below grade. The soil borings were drilled along a northeast to southwest transect on the east side of Pit 2 at the locations shown on Figures 1 and 6.

Soil samples were collected continuously in acetate liners to target depths utilizing Geoprobe[®] dual-tube tooling with an outer casing to minimize sampling tube contact with shallower soil and cave of shallower soil into the borehole. Soil samples were collected for soil classification and for field screening with a photoionization detector (PID) for total organic vapor. Field screening of soil samples for organic vapors was conducted using a calibrated MiniRae 3000 PID with an 11.7 eV lamp. Field screen results were recorded as parts per million instrument units [iu]. Soil sampling and field-screening procedures were conducted in general accordance with Field Standard Operating Procedure (SOP) 1 and Field SOP 2, respectively, provided in the November 13, 2013 Quality Assurance Project Plan (QAPP) prepared under the AOC. Upon completion of the soil and groundwater sampling activities, soil borings were abandoned with bentonite chips. Soil boring logs containing geological descriptions and field-screening results are provided in Appendix B.



2.2 SOIL SAMPLE INTERVALS AND LABORATORY ANALYSES

Up to seven samples from each boring were submitted for laboratory analyses with soil samples selected based on PID field-screening and staining and/or odors noted in samples. Soil samples from each investigation area were selected as follows:

- **Tech Center** - Soil boring WS-SB-GP-01, drilled near the holding tank, was sampled from the 6- to 8-foot interval (near the base of the holding tank) and the 18- to 20-foot interval (total depth), as there were no field indicators to suggest intervals other than the Work Plan default intervals should be sampled. Soil boring WS-SB-GP-02, located near the connection with the storm sewer, was sampled from the 14- to 16-foot interval, where the highest PID reading was observed (PID reading of 20.2 iu), and from the 18- to 20-foot total depth interval. The two soil samples from each boring were submitted for laboratory analyses for volatile organic compounds (VOCs) and the two soil sample intervals from boring WS-SB-GP-2 were submitted for fraction organic compound (f_{oc}) analyses.
- **Former 4,000-gallon gasoline UST System** - Soil samples from the four soil borings drilled on December 3, 2013, were selected for laboratory analyses from the intervals with the highest PID readings, as specified in the Work Plan. Soil samples were selected from the 4- to 6- foot interval in WS-SB-GP-03 (PID reading of 1,831 iu), from the 4- to 6- foot interval in WS-SB-GP-04 (PID reading of 2,382 iu), from the 2- to 4- foot interval in WS-SB-GP-05 (PID reading of 2,114 iu) and from the 0- to 2- foot interval in WS-SB-GP-06 (PID reading of 6,109 iu). Soil samples were submitted for laboratory analyses for VOCs, lead and pH, and samples from borings WS-SB-GP-03 and WS-SB-GP-05 were submitted for f_{oc} analyses. USEPA collected a split sample from the 0- to 2-foot interval from boring WS-SB-GP-06.

Based on the analytical results obtained for the December 3, 2013 borings, a release incident was reported to the Illinois Emergency Management Agency, and Incident No. 20140173 was issued for the property. In accordance with Title 35, Subtitle G, Chapter I, Subchapter d, Part 734 of the Illinois Administrative Code, a March 17, 2014, Stage 2 Site Investigation Work Plan (“Stage 2 SI Work Plan”), Wedron Silica, 3450 East 2056th Road, Wedron, LaSalle County, Illinois was submitted to and approved by the IEPA. For the follow-up soil borings drilled on May 8 and 9, 2014, a soil sample from the highest PID interval from each 5-foot interval was selected for laboratory analyses, as required under the Stage 2 SI Work Plan. For soil borings WS-SB-GP-14A and WS-SB-GP-15 through WS-SB-GP-18, six or



seven soil samples from each boring were submitted for laboratory analyses for VOCs, lead and pH, and soil samples from four intervals from WS-SB-GP-15 were submitted for f_{oc} analyses.

- **Former 6,000-gallon gasoline UST** - Soil samples from the five soil borings were selected for laboratory analyses from the intervals with the highest PID readings and/or the base of the borings, as specified in the Work Plan. Soil samples were selected from the 2- to 4-foot interval (highest PID reading of 8 iu) and the 8- to 9-foot interval (base of soil boring) for boring WS-SB-GP-07, from the 2- to 4-foot interval (highest PID reading of 13.6 iu) and the 8- to 10-foot interval (base of soil boring) for boring WS-SB-GP-08, and from near the base of borings WS-SB-GP-09 through WS-SB-11 (the 8- to 10-foot interval for each). Soil samples were submitted for laboratory analyses for VOCs, lead and pH, and samples from borings WS-SB-GP-08 and WS-SB-GP-09 were submitted for f_{oc} analyses.
- **WGS-GP-10 Area** - Soil samples from the three soil borings were selected for laboratory analyses from the intervals with the highest PID readings or from 6-to 8-foot interval and the interval immediately above the water table, as specified in the Work Plan. Soil boring WS-SB-GP-12 was sampled from the 6- to 8-foot interval (PID reading of 7.4 iu) and the 12- to 15-foot interval (PID reading of 17.1 iu and base of boring), the intervals with the two highest PID readings. Soil boring WS-SB-GP-13 was sampled from the 6- to 8-foot interval (PID reading of 4.8 iu) and the 13- to 15-foot interval (PID reading of 22 iu and base of boring), the intervals with the two highest PID readings. Soil boring WS-SB-GP-14 was sampled from the 6- to 8-foot and the 12- to 15-foot intervals, the suggested default intervals from the Work Plan, as there were no field indications that other intervals should be sampled. The two soil samples from each boring were submitted for laboratory analyses for VOCs and the deeper sampled interval from boring WS-SB-GP-13 and WS-SB-GP-14 were submitted for f_{oc} analyses.
- **Pit 2 Reclamation Area** - Soil samples from the three borings were selected for laboratory analyses based on a PID reading for an interval above the water table and from the soil sample interval immediately above the water table. Soil boring WS-SB-GP-19 was sampled from the 12- to 14-foot (PID reading of 3.0 iu) and the 18- to 20-foot interval, soil boring WS-SB-GP-19 was sampled from the 12- to 14-foot (PID reading of 6.6 iu) and the 18- to 20-foot interval, and soil boring WS-SB-GP-21 was sampled from the 6- to 8-foot (PID reading of 3.9 iu) and the 18- to 20-foot interval. The water table was encountered at approximately 20 feet in each boring.



Soil samples selected for laboratory analyses were placed in laboratory-supplied containers, placed on ice and shipped to Environmental Chemistry Consulting Services, Inc. (ECCS) of Madison, Wisconsin under chain-of-custody procedures for VOC analyses in accordance with USEPA Method 8260B, lead in accordance with USEPA Method 6010B, soil pH in accordance with USEPA Method 9045D and f_{oc} in accordance with American Society for Testing and Materials (ASTM) Method D2974-87. Soil samples submitted for VOC analyses were preserved in methanol. Soil analyses were conducted in general accordance with the QAPP. Validation of the laboratory analytical reports was conducted by Laboratory Data Consultants, Inc. (LDC) of Carlsbad, California. Validated soil laboratory analytical reports are provided in Appendix C.

2.3 GROUNDWATER SAMPLING AND ANALYSES

Temporary 1-inch diameter PVC wells with 10-foot screens were installed to the base of soil borings WS-SB-GP-19 through WS-SB-GP-21 for the collection of groundwater samples. Prior to sampling, each well was pumped dry using a peristaltic pump attached to disposable polyethylene tubing and operating at less than 500 milliliters per minute. Each well was allowed to recover for approximately 15 minutes before a groundwater grab sample was collected with the peristaltic pump. A duplicate groundwater sample was collected from the temporary well in soil boring WS-SB-GP-21. The groundwater samples were collected in laboratory-supplied and pre-preserved vials, placed on ice and submitted to ECCS under chain-of-custody procedures for VOC analyses. Groundwater sampling procedures were conducted in general accordance with Field SOP 6 provided in the QAPP, and groundwater laboratory analyses were conducted in general accordance with the QAPP. The validated groundwater laboratory analytical report prepared by LDC is provided in Appendix C.

2.4 PIEZOMETER INSTALLATIONS AND DEVELOPMENT

Four additional water table piezometers were installed on December 3 and 4, 2013, to supplement the initial nine piezometers installed by Wedron Silica around the Wedron community in May 2013. The piezometers were installed in Pit 2 (MW-10) and in a line near the northern extent of the Wedron Silica mine operations (MW-11 through MW-13). Each of the 13 piezometer locations are shown on Figure 1. The piezometers were installed in borings drilled using sonic drilling methods. Continuous soil and rock core samples were collected for geological characterization. The piezometers were constructed of 2-inch diameter PVC casing and screen with 20-foot long, 0.010-inch slot screen placed across the water table. Filter packs were placed around and to approximately 2 feet above



the screens followed by placement of a 2-foot thick bentonite seal and bentonite grout to near grade. Piezometer MW-12 was finished with a flush-mount protective casing cemented at the surface, and piezometers MW-10, MW-11 and MW-13 were completed with stand-pipe protective casings cemented at the surface. Soil boring and piezometer construction logs are provided in Appendix B and the total depths and screened intervals of each piezometer are summarized on Table 1.

Piezometers MW-10 and MW-11 were screened across the water table in the St. Peter Sandstone bedrock. Piezometers MW-12 and MW-13 were constructed in a former sandstone quarry that was filled, and sandstone bedrock was not encountered to the 45- to 47-foot drilling depth. For piezometer MW-12, clay, clayey sand and well-graded sand are present adjacent to the well screen, and for piezometer MW-13, clayey sand is present adjacent to the well screen. The geologic units screened by each piezometer are summarized on Table 1.

The piezometers were developed to remove residual drill cuttings from the wells and to provide hydraulic connection between the aquifer and the piezometer screen. Well development was conducted by surging each well with a surge-block, bailing sediment-laden water and sediment that collected on the bottom of each well and pumping with a clean, submersible pump until clear water was pumped from the well. If the water level in a well could be bailed or pumped to the bottom of the well, the well was pumped to dryness three times. Piezometers MW-10 and MW-11 could not be bailed/pumped dry and 95 and 105 gallons of water were removed from the wells, respectively. Piezometers MW-12 and MW-13 could be bailed/pumped dry and totals of 8 and 13 gallons were removed from the well, respectively. Development water was placed in a 1,000-gallon poly tank with the development water from piezometers MW-1 through MW-9, developed in May 2013.

2.5 SURVEYING

After each round of drilling soil borings and installation of piezometers, survey coordinates and elevations of the ground surface at the soil borings and ground surface and top of casing elevations of the piezometers were provided by Vegrzyn, Sarver and Associates, Inc. (Vegrzyn Sarver) of Ottawa, Illinois. The horizontal datum is based on Wedron Silica plant-specific coordinates and the vertical Datum is based on NGVD 1929. Horizontal control was established accurate to ± 0.1 foot and vertical control was established accurate ± 0.01 foot. Vegrzyn Sarver also provided horizontal and vertical control for monitoring wells installed by the IEPA, monitoring wells installed on behalf of the USEPA and Illinois Railway and surface water level measurement locations established by Wedron



Silica. Horizontal survey coordinates and elevations of piezometer, monitoring wells surface water measurement locations are provided on Table 1.

2.6 WATER-LEVEL MONITORING

On April 9 and April 17, 2014 following the spring thaw, GZA measured water levels in 20 piezometers and monitoring wells (MW-1 through MW-13, IMW-101 through IMW-104, USEPA MW-1, USEPA MW-2 and TW-9), three surface water monitoring locations in former quarries (Pit 1, Pit 2 and Pit 3) and two monitoring locations on the Fox River (Fox River Pump House and Fox River Hwy 21 Bridge) with an electronic water level indicator. The water levels on Buck Creek were obtained from two monitoring locations (Buck Creek Staff Gage #1 and Buck Creek Staff Gage #2) by recording the water level on the installed staff gage. CDM Smith provided water levels measured on the same two days in the four Illinois Railway monitoring wells (RRMW-12 through RRMW-15). The approximate locations for each of the groundwater and surface water monitoring locations are shown on Figures 1, 7 and 8; and the water level measurements and water elevations are provided on Table 1.

2.7 INVESTIGATIVE WASTE HANDLING

Soil boring cuttings generated during the installation of piezometers and drilling of soil borings were contained to 55-gallon Department of Transportation (DOT) drums and temporarily staged on-site pending arrangements for their off-site treatment and disposal.

The development water in the poly storage tank was sampled, labeled “storage tank” and analyzed for VOCs by ECCS. The validated analytical report prepared by LDC is provided in Appendix C. The development water was discharged to the ground at the location of the poly tank in Pit 2 based on the analytical results.

3.0 FINDINGS

The soil and groundwater laboratory analytical data obtained under the AOC are summarized below. The use of the acronym SRO throughout this section refers to soil remediation objectives in the Class I migration to groundwater category only.



3.1 SOIL ANALYTICAL RESULTS

Soil analytical results are summarized for each of the evaluated areas as follows:

- **Tech Center** - VOCs were not detected in the two soil samples submitted from soil boring WS-SB-GP-01 or in the 14- to 16-foot soil sample from soil boring WS-SB-GP-02. For the 18- to 20-foot soil sample for WS-SB-GP-02, the detected VOC constituents were at concentrations less than the TACO Tier 1 SROs. Soil VOC analytical results are presented on Table 2 and shown in comparison to TACO Tier 1 SROs on Figure 2.
- **Former 4,000-gallon gasoline UST System** - For the December 2013 soil analytical results, TACO Tier 1 SROs were exceeded for the soil sample for each of the four borings for up to six petroleum constituents consisting of benzene; ethylbenzene; naphthalene; toluene; 1,3,5-trimethylbenzene (TMB) and total xylenes. VOCs were not detected at concentrations greater than a TACO Tier 1 SRO in the split sample collected by the USEPA from the 0- to 2-foot sample from soil boring WS-SB-GP-06.

For the Stage 2 SI Work Plan borings drilled in May 2014, at least one TACO Tier 1 SRO was exceeded for a petroleum constituent in a soil sample from each boring. Methylene chloride was reported as detected in two soil borings (WS-SB-GP-17 and WS-SB-GP-18) at concentrations greater than its TACO Tier 1 SRO. However, GZA does not believe that the reported methylene chloride detections are representative of soil quality based on the uniform concentrations detected, the detections being reported at concentrations below the analytical reporting limit (J-flag concentrations), lack of potential source and because methylene chloride is considered a common laboratory contaminant. Soil VOC analytical results are provided on Table 3 and lead, pH and f_{oc} analytical results are provided on Table 4. Soil VOC analytical results presented in comparison to TACO Tier 1 SROs are shown on Figure 3.

- **Former 6,000-gallon gasoline UST** - VOCs were not detected at concentrations greater than TACO Tier 1 SROs in the seven soil samples collected for laboratory analyses from the five soil borings drilled near the former 6,000-gallon gasoline UST. Soil VOC analytical results are provided on Table 5, and lead, pH and f_{oc} analytical results are provided on Table 6. Soil VOC analytical results presented in comparison to TACO Tier 1 SROs are shown on Figure 4.



- **WGS-GP-10 Area** - VOCs were not detected at concentrations greater than TACO Tier 1 SROs in the two soil samples collected from soil borings WS-SB-GP-12 and WS-SB-GP-14 or in the 6- to 8-foot sample collected from soil boring WS-SB-GP-13. Benzene was detected at the TACO Tier 1 SRO concentration of 0.03 milligrams per kilogram (mg/kg) in the 13- to 15-foot deep water table soil sample from soil boring WS-SB-GP-13 and at an estimated concentration (0.098 J mg/kg) in the duplicate 13- to 15-foot deep water table soil sample from soil boring WS-SB-GP-13. Benzene was not detected (<0.0042 mg/kg) in the split sample collected by the USEPA from the 13- to 15-foot sample from soil boring WS-SB-GP-13. Soil VOC analytical results are provided on Table 7 and shown in comparison to TACO Tier 1 SROs on Figure 5.
- **Pit 2 Reclamation Area** - VOCs were not detected in the two soil samples submitted from soil borings WS-SB-GP-19 and WS-SB-GP-21 or in the 10- to 12-foot soil sample from soil boring WS-SB-GP-20. One VOC was detected in the 18- to 20-foot deep water-table soil sample from soil boring WS-SB-GP-20 at a concentration less than the TACO Tier 1 SRO. Soil VOC analytical results are provided on Table 8 and shown in comparison to TACO Tier 1 SROs on Figure 6.

The analytical results for the equipment blanks, methanol blanks and trip blank are summarized on Table 9, and the notes for Tables 2 through 9 are provided on Table 9.

3.2 GROUNDWATER ANALYTICAL RESULTS

In the groundwater samples collected from the Pit 2 borings, VOCs were not detected at concentrations greater than TACO Tier 1 Class I groundwater remediation objectives (GROs). The concentrations of each of the detected VOC constituents were at least one order of magnitude lower than its TACO Tier 1 Class I GRO. The analytical results for the groundwater samples collected from the three temporary wells installed in the Pit 2 borings are provided on Table 10.

3.3 GROUNDWATER FLOW CONDITIONS

Groundwater equipotential maps for the water levels measured on April 9 and 17, 2014, are provided as Figures 7 and 8, respectively. For both sets of data, there is a groundwater divide caused by a northeast-southwest oblong mound that exists within the railroad corridor west of Pit 2. The highest groundwater elevation for both water-level rounds was measured in monitoring well RRMW-15. In general, groundwater flow was west on the west side of the railroad grade and east on the east side of the railroad grade.



4.0 TACO TIER 2 SRO CALCULATION

The Work Plan states, “If TACO Tier 1 Class I migration to groundwater SROs are exceeded, additional activities such as development of Tier 2 TACO levels and/or additional soil investigations and possible investigation of groundwater will be considered.” As stated in Section 3.1, for five of the six samples collected from the three borings drilled in the WGS-GP-10 area, all the VOCs met their respective TACO Tier 1 SROs. For the 13- to 15-foot soil sample from WS-SB-GP-13, a single VOC constituent, benzene, equaled the TACO Tier 1 SRO of 0.030 mg/kg, but was exceeded in the duplicate sample (at 0.098 mg/kg with a J flag for benzene) and was not detected (<0.0042 mg/kg) in the USEPA split sample. At WS-SB-GP-12, located approximately 20 feet northeast of WS-SB-GP-13 and WS-SB-GP-14, located approximately 28 feet southwest of WS-SB-GP-13, there were no TACO Tier 1 SROs exceeded at the 12- to 15-foot or for the 6- to 8-foot samples for all three borings drilled in the WGS-GP-10 area. Additionally, VOCs were reported at concentrations below TACO Tier 1 migration to groundwater SROs in the 2012 soil sample collected from a depth of 15.5 feet (estimated to be from a depth at or below the water table) in boring WGS-GP-10. Refusal was encountered at a depth of 18 feet in boring WGS-GP-10, which is estimated have been drilled at a location approximately 25 feet to the northeast of WS-SB-GP-13.

Based on a records search, there is no evidence of storage or disposal of petroleum products in the WGS-GP-10 area. This is consistent with the lack of TACO Tier 1 exceedances and the low estimated value of 0.098 J mg/kg for benzene, which is not suggestive of a petroleum source. WGS-GP-10, WS-SB-GP-12, WS-SB-GP-13, and WS-SB-GP-14 are located between the railroad tracks and the Fox River in an area that is hydraulically down gradient of documented petroleum sources on both sides of County Highway 11 (E 2153rd Road). Such a migration pathway could easily result in the low estimated detection of benzene at or near the water table at WS-SB-GP-13 and is consistent with a lack of evidence of a petroleum source.

Part 742 provides a tiered approach to corrective action objectives. In particular, Section 742.710 sets forth the equations and parameters used to develop Tier 2 soil remediation objectives, including for the soil component of the groundwater ingestion exposure route. For this approach, two equations may be used. The first equation is based on the assumption of a continuing “infinite source of contamination.” Because there is no record or chemical evidence of a petroleum source, the equation based on an infinite source of contamination is not used.



Instead, mass limit considerations will be used to calculate the remediation objective for this exposure route using Equation S28 from Table A - SSL Equations. Parameters and default values for Equation S28 are listed in Appendix C, Table B - SSL Parameters. Equation S28 is:

$$\text{TACO Tier 2 value} = [(C_w)(I_{M-L})(ED_{M-L})]/[(\rho_b)(d_s)]$$

where the target soil leachate concentration (C_w) from Equation S18 from Table A - SSL Equations is:

$$C_w = (DF)(GW_{obj})$$

and where the other parameters are defined as follows:

Parameter	Value	Source
DF, Dilution Factor	20	Table B
GW_{obj} , Groundwater Remediation Objective	0.005 mg/l	Table E (benzene, Class I)
d_s , Source Depth (Vertical Source Thickness)	7 feet	WS-SB-GP-13 (between 8 and 15 feet)
ED_{M-L} , Exposure Duration	70 yr	Table B
I_{M-L} , Infiltration Rate	0.18 m/yr	Table B
ρ_b , Dry Soil Bulk Density	1.8 kg/l	Table B (sand)

TACO default values are used for each of the inputs except for the thickness of the source. The thickness was set at 7 feet, from the base of the samples without a TACO Tier 1 SRO exceedance to 15 feet, the base of the sampled interval with the TACO Tier 1 SRO exceedance and the water table which limits further downward migration of petroleum source material. Making the proper conversions and using Equation S28 above results in a benzene TACO Tier 2 value for the soil component of the groundwater ingestion exposure route of 0.33 mg/kg. Consequently, the estimated benzene value of 0.098 J mg/kg detected in the duplicate 13- to 15-foot sample from WS-SB-GP-13 is less than the TACO Tier 2 value.

5.0 CONCLUSIONS

Based on the results of the investigation of certain locations on Wedron Silica and Technisand properties, the source of the petroleum compounds detected in the Wedron community water-supply wells is not from Wedron Silica or Technisand properties. The



justifications for this conclusion and the findings from implementation of the AOC Work Plan and Stage 2 SI Work Plan are provided below.

5.1 TECH CENTER

As TACO Tier 1 Class I migration to groundwater SROs were not exceeded in the four soil samples collected from the area of the on-site wastewater treatment system at the Tech Center, additional investigation is unnecessary as specified in the AOC.

5.2 FORMER 4,000-GALLON GASOLINE USTS

The presence of petroleum compounds in soil near the water table in the area of the former 4,000-gallon gasoline USTs is unrelated to the petroleum compounds detected in Wedron community residential water-supply wells based on the following:

1. VOCs were not detected in samples collected from three water-table piezometers (MW-2, MW-3 and MW-12) that exist between the two former 4,000-gallon gasoline USTs and the affected Wedron community homes.
2. During the September 2013 public meeting in Wedron, the USEPA provided a Wedron community map, which is attached as Appendix D, of benzene, toluene, ethylbenzene, and xylene (BTEX) detections in groundwater. BTEX constituents were not detected in a line of eight water-supply wells at locations between the former USTs and water-supply wells in the Wedron community containing BTEX constituents. A similar map depicting the locations of BTEX detections relative to the former 4,000-gallon gasoline UST system and including the April 17, 2014 groundwater equipotential lines is provided as Figure G-1 in Appendix G.
3. The documented presence of petroleum compounds in Wedron area water-supply wells producing from the shallow St. Peter Sandstone aquifer was first noted in 1982. The two former 4,000-gallon gasoline USTs were not installed until 1984 or approximately two years after the petroleum compounds were noted in Wedron area water-supply wells. Documentation of the approximate time of installation of the two former 4,000-gallon gasoline USTs is provided in the USEPA Notification for Underground Storage Tanks form signed on February 14, 1987 and provided as Appendix E. The form states that the two 4,000-gallon gasoline USTs were 3 years old at the time the form was completed on February 14, 1987.



4. Because groundwater flow in the Wedron community is primarily toward the west and the area of the former 4,000-gallon gasoline USTs is more than 400 feet south of the southernmost homes in the Wedron community (which are not impacted by petroleum constituents), and at least 700 feet from the closest water-supply well with detected BTEX constituents, groundwater in the vicinity of the two former 4,000-gallon gasoline USTs does not flow into the Wedron community.

5. The primarily westerly groundwater flow in the Wedron community is a result of lower water elevation (below elevation 490 feet) maintained in Pit 3 than the surrounding groundwater elevations. A time series of aerial photographs and a 1970 USGS Wedron, IL 7.5-minute topographic quadrangle map are provided in Appendix F. Based on the 1970 USGS Wedron, IL 7.5-minute topographic quadrangle map of the Pit 3 area, the Pit 3 water elevation was below 490 feet. Water levels in Pit 3 have remained generally the same since at least 1967 as can be observed in the 1967, 1974, 1983, 1999 and 2011 aerial photographs of the Pit 3 area. As seen in the November 1968 Wedron Silica aerial photograph of the Pit 3 area, the current location of the Pit 3 pumping platform had already been established in 1968 shortly after mining activities in Pit 3 ceased. Therefore, one of the primary controls for groundwater flow direction in Wedron, the lowered water level in Pit 3, was established more than 45 years ago and before the installation of the two former 4,000-gallon gasoline USTs and before petroleum compounds were noted in Wedron area water-supply wells.

A groundwater investigation work plan will be prepared in accordance with Title 35, Subtitle G, Chapter I, Subchapter d, Part 734 [Section 734.315(a)(2)] of the Illinois Administrative Code and submitted to the IEPA for approval. The groundwater investigation work plan will also include additional soil borings and soil sampling to further evaluate the horizontal and vertical extents of soil exhibiting TACO Tier 1 SRO exceedances in soil. The additional work related to the former 4,000-gallon gasoline USTs will be conducted under the authority of the IEPA in accordance with the Illinois leaking underground storage tank rules. Copies of future documents related to the former 4,000-gallon gasoline USTs will be provided to the USEPA.

5.3 FORMER 6,000-GALLON GASOLINE UST

As TACO Tier 1 SROs were not exceeded in the seven soil samples collected from the former 6,000-gallon gasoline UST area, additional investigation is unnecessary as specified in the AOC.



5.4 WGS-GP-10 AREA

Although a TACO Tier 1 SRO was exceeded for one VOC constituent, benzene, in the duplicate 13- to 15-foot deep soil sample from soil boring WS-SB-GP-13, the detected benzene concentration is less than the TACO Tier 2 Class I migration to groundwater SRO. Benzene detected in the initial 13- to 15-foot soil sample from WS-SB-GP-13 did not exceed the TACO Tier 1 SRO and benzene was not detected (<0.0042) in the USEPA split 13- to 15-foot deep soil sample from WS-SB-GP-13. The presence of benzene at a concentration greater than the TACO Tier 1 SRO but less than the TACO Tier 2 Class I SRO does not indicate that a release of hazardous wastes and/or hazardous constituents occurred in the WGS-GP-10 area based on the following:

- There is no evidence of storage or disposal of petroleum products in the WGS-GP-10 area.
- Based on water levels measured in monitoring well RRMW-15, the closest monitoring well to the WGS-GP-10 area, and the groundwater elevation presented on Figures 7 and 8, the water table elevation is approximately 506 feet or approximately 14 feet below grade for the three WGS-GP-10 area borings.
- With a 14-foot water table depth, the TACO Tier 1 SRO exceedance in the 13- to 15-foot deep soil sample occurs in a soil sample collected at the water table.
- Because the soil sample was collected from a depth near the water table, the presence of VOCs in the soil sample can be attributed to VOCs migrating in groundwater from upgradient locations.
- TACO Tier 1 SROs were not exceeded in the three soil samples collected from depths of 6 to 8 feet above the water table in soil borings WS-SB-GP-12 through WS-SB-GP-14.
- For borings WS-SB-GP-12 and WS-SB-GP-13, VOCs were detected at higher concentrations in the deeper 12- to 15-foot or 13- to 15-foot water table soil samples than in the shallower 6- to 8- foot samples indicating a groundwater source to the VOCs (for soil boring WS-SB-GP-14, the detected VOC concentrations were similar between the two sampled depths



and overall VOC concentrations were much lower than those detected in WS-SB-GP-12 and WS-SB-GP-13).

- Although TACO Tier 1 SROs were not exceeded in the 15.5-foot water table soil sample collected from Weston boring WGS-GP-10 drilled in July 2012, a similar pattern of increasing VOC concentrations with depth was documented by Weston³.
- Similar to the observation of Weston for soil boring WGS-GP-10, IEPA recorded the first presence of staining and odor upon encountering saturated soil at 14.7 feet in soil boring B4 drilled in April 1984, at the location of monitoring well G103.⁴
- A source of benzene and other petroleum constituents is present in groundwater immediately upgradient of the WGS-GP-10 area based on the detection of benzene, ethylbenzene, 2-methylnaphthalene and naphthalene at concentrations greater than the TACO Tier 1 Class I groundwater remediation objectives in groundwater collected from RRMW-15. This well also contained toluene and xylenes.
- Based on the groundwater flow direction exhibited in Figures 7 and 8, groundwater analytical results of samples from monitoring well RRMW-15 provide a good indication of VOCs migrating to the WGS-GP-10 area and the source of VOCs detected in the water table samples from the WGS-GP-10 area borings.
- Four cross sections, prepared for the profile locations shown on Figure G-2 in Appendix G and provided as Figure G-3 (cross section A-A' and B-B') and Figure G-4 (cross sections C-C' and D-D') in Appendix G document the lack of a petroleum source in the WGS-GP-10 area and presence of a petroleum source upgradient of the WGS-GP-10 area.

Based on these factors, analytical results for WS-SB-GP-13 soil indicate migration of benzene from an upgradient source not on the Technisand Wedron property. Therefore, additional investigation is unnecessary at this location.

³ September 21, 2012, Weston report titled, "Final Letter Report, Wedron Groundwater Site, Wedron, LaSalle County, Illinois, Contract No.: EP-S5-06-04, Technical Direction Document No. S05-0001-1112-004, Document Control, No. 1698-2A-BABE."

⁴ October 31, 1984, Illinois Environmental Protection Agency letter titled, "Preliminary Hydrogeologic Investigation of Wedron/Hoxsey, L09982903."



5.5 PIT 2 RECLAMATION AREA

Additional evaluation or follow-up actions are not required for the Pit 2 reclamation area due to the following:

1. TACO Tier 1 SROs were not exceeded in the six soil samples collected from the Pit 2 reclamation area;
2. TACO Tier 1 Class I groundwater remediation objectives were not exceeded in groundwater samples collected from temporary wells installed in soil borings WS-SB-GP-19 through WS-SB-GP-21;
3. TACO Tier 1 Class I groundwater remediation objectives were not exceeded in the groundwater sample collected from piezometer MW-10 by the USEPA; and
4. Soil borings WS-SB-GP-19 through WS-SB-GP-21 and piezometer MW-10 are on the downgradient side of Pit 2 (and down gradient of RRMW-15) and, in GZA's opinion, provide a direct indication of the potential for the presence and/or release of hazardous wastes and/or hazardous constituents in the Pit 2 reclamation material. The analytical results of the groundwater samples from WS-SB-GP-19 through WS-SB-GP-21 and piezometer MW-10 are all below TACO Tier 1 Class I GROs.

Based on these factors, Pit 2 is not a source of hazardous constituents, and, as specified in the AOC, additional investigation is unnecessary in Pit 2.



TABLES



**TABLE 1
PIEZOMETER/MONITORING WELL CONSTRUCTION AND GROUNDWATER ELEVATION SUMMARY
Wedron, Illinois**

Northing	Easting	Well ID/Water-Level Monitoring Location	Date of Well Installation	Geological Units Screened	Reported Bedrock Depth (ft bg)	Approx. Bedrock Elevation (ft)	TOC/ Measurement Elevation (ft)	GS Elevation (ft)	Top of Well Screen (bg)	Well Screen Length (ft)	Top of Well Screen (elevation)	to	Bottom of Well Screen (elevation)	9-Apr-14		17-Apr-14	
														Water Depth (ft TOC)	Water Elevation (ft)	Water Depth (ft TOC)	Water Elevation (ft)
Piezometers																	
25958.2186	22354.044	MW-1	7-May-13	SS	16.5	513	528.72	529.3	29	15	500.3	to	485.3	35.11	493.61	35.77	492.95
25515.8968	22542.9301	MW-2	14-May-13	SS	25	513	537.39	537.8	39	15	498.8	to	483.8	41.38	496.01	41.30	496.09
25426.8683	22951.9845	MW-3	14-May-13	SS	25.5	510	534.93	535.3	31	15	504.3	to	489.3	34.82	500.11	34.84	500.09
25972.6137	23520.3442	MW-4	14-May-13	SS	25.5	503	528.14	528.6	31	15	497.6	to	482.6	26.60	501.54	26.60	501.54
26348.9041	23706.6257	MW-5	16-May-13	SS	21	509	529.85	530.4	25	15	505.4	to	490.4	27.60	502.25	27.58	502.27
26086.4306	23172.098	MW-6	17-May-13	SS	16	520	536.03	536.3	32	15	504.3	to	489.3	36.25	499.78	36.20	499.83
26090.4419	22914.9758	MW-7	16-May-13	SS	28	535	562.10	562.5	62	15	500.5	to	485.5	64.20	497.90	64.14	497.96
26323.5465	22497.6483	MW-8	15-May-13	SS	7	536	542.14	542.5	45	15	497.5	to	482.5	47.05	495.09	46.81	495.33
26420.8881	22493.7483	MW-9	17-May-13	SS	7	536	542.24	542.7	45	10	497.7	to	487.7	46.62	495.62	46.40	495.84
25296.6048	23656.1525	MW-10	3-Dec-13	SS	13.5	507	522.98	520.6	12	20	508.6	to	488.6	21.67	501.31	21.86	501.12
25053.5418	23068.2209	MW-11	3-Dec-13	SS	13.5	507	523.18	520.9	13	20	507.9	to	487.9	21.34	501.84	21.63	501.55
25189.7154	22638.2322	MW-12	4-Dec-13	CL/SW/SC	>45	<487	532.24	532.6	24	20	508.6	to	488.6	33.35	498.89	33.28	498.96
25230.7685	22108.7992	MW-13	4-Dec-13	SC	>47	<486	535.12	532.8	26	20	506.8	to	486.8	35.72	499.40	35.84	499.28
25413.437	23254.5954	RRMW-12	27-Mar-14	SP/CL/SP-GP/SS	17	504	520.88	521.3	9.6	10	511.7	to	501.7	17.34	503.54	17.65	503.23
25889.2306	23479.425	RRMW-13	28-Mar-14	SP/CL-SP/SS	24	505	528.91	529.1	19.7	10	509.4	to	499.4	27.41	501.50	27.84	501.07
25787.3443	23428.0667	RRMW-14	28-Mar-14	CL/SS	25	504	528.97	529.0	23.7	10	505.3	to	495.3	23.19	505.78	25.78	503.19
25396.968	23373.1758	RRMW-15	27-Mar-14	SM/SC/SP-GP/SS	17	504	520.98	521.3	19.6	10	501.7	to	491.7	13.82	507.16	13.85	507.13
25643.2438	23349.3387	IMW-101	9-Sep-13	SS	25	504	528.12	528.6	29.5	15	499.1	to	484.1	26.90	501.22	26.96	501.16
25676.4275	23292.0874	IMW-102	10-Sep-13	SS	24	506	529.87	530.4	30	15	500.4	to	485.4	28.90	500.97	28.95	500.92
25779.9141	23202.1129	IMW-103	11-Sep-13	SS	24	509	532.49	533.0	30	15	503.0	to	488.0	32.30	500.19	32.03	500.46
25713.021	23198.3666	IMW-104	10-Sep-13	SS	24	508	531.61	532.1	30	15	502.1	to	487.1	30.95	500.66	31.05	500.56
25788.3814	22876.764	USEPA MW-1	14-Feb	SS	18	523	540.26	540.6	40	10	500.6	to	490.6	43.81	496.45	43.71	496.55
25794.485	22625.8003	USEPA MW-2	14-Feb	SS	7	532	539.18	539.5	40	10	499.5	to	489.5	42.15	497.03	42.12	497.06
25596.4432	23724.6466	TW-9	Jul-12	Unk (Unconsol?)	Unk	Unk	517.42	517.8	18.4	10	499.4	to	489.4	14.92	502.50	14.83	502.59
Surface Water Locations																	
25531.9231	21275.1404	Pit 1	NA	NA	NA	NA	522.66	NA	NA	NA	NA		NA	7.12	515.54	7.86	514.80
25880.5394	24309.9352	Pt 2	NA	NA	NA	NA	521.69	NA	NA	NA	NA		NA	19.30	502.39	19.34	502.35
25439.0979	21811.4691	Pit 3	NA	NA	NA	NA	492.31	NA	NA	NA	NA		NA	7.88	484.43	6.15	486.16
24291.9038	22927.8817	Fox River Pump House	NA	NA	NA	NA	515.67	NA	NA	NA	NA		NA	14.50	501.17	14.45	501.22
24879.017	23410.047	Fox River Hwy 21 Bridge	NA	NA	NA	NA	523.37	NA	NA	NA	NA		NA	22.94	500.43	22.62	500.75
25647.101	21328.221	Buck Creek Staff Gage #1	NA	NA	NA	NA	516.41	NA	NA	NA	NA		NA	0.80	509.18	0.52	508.90
24026.883	22499.174	Buck Creek Staff Gage #2	NA	NA	NA	NA	505.34	NA	NA	NA	NA		NA	0.83	499.50	0.90	499.57

Notes:

- Survey coordinates and elevations of the wells were provided by Vegrzyn, Sarver and Associates, Inc. of Ottawa, Illinois. The horizontal datum is based on Plant-Specific coordinates and the Vertical Datum is based on NGVD 1929.
- Piezometers designated MW-# were installed by GZA GeoEnvironmental, Inc., wells designated RRMW-# were installed by CD Smith, wells designated IMW-# were installed by the Illinois EPA, and wells designated USEPA MW-# were installed by Weston Solutions.
- "SS" denotes St. Peter Sandstone, "CL" denotes clay, "SW" denotes well-graded sand, "SC" denotes sandy clay, "SP" denotes poorly-graded sand, "GP" denotes poorly-graded gravel, and "SM" denotes silty sand.
- "TOC" denotes top of casing, "GS" denoted ground surface, "bg" denotes below grade, "ft TOC" denotes feet below top of casing, "NA" denotes not applicable and "Unk" denotes unknown.
- Perched groundwater was logged within the well-screen interval for piezometers MW-12, RRMW-13 and RRMW-4 which may bias high the recorded water-levels in the three wells.
- Depths to bedrock were obtained from boring logs and the bedrock elevations were obtained by subtracting the reported depth to bedrock from the surveyed surface elevation at the boring and rounding to the nearest foot.
- "NE" denotes Not Encountered.
- Water levels for monitoring wells RRMW-12 through RRMW-15 were measured by CDM Smith and the measurements provided to GZA.
- Water levels measured on the Fox River were inconsistent. The water levels measured at the Fox River Pump House appear high based on the levels measured at the Hwy 21 Bridge and in Buck Creek near its confluence with the Fox River.



TABLE 2
SOIL ANALYTICAL RESULTS
TECH CENTER
Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives	Tech Center			
			WS-SB-GP-01 (6'-8')	WS-SB-GP-01 (18'-20')	WS-SB-GP-02 (14'-16')	WS-SB-GP-02 (18'-20')
Date			12/3/2013	12/3/2013	12/3/2013	12/3/2013
VOCs (8260B)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Acetone	67-64-1	25	<1.1 J	<1 J	<1.1 J	<1.2 J
Benzene	71-43-2	0.03	<0.028	<0.026	<0.028	0.0077 J
Bromochloromethane	74-97-5	NE	<0.028 J	<0.026	<0.028	<0.03
Bromodichloromethane	75-27-4	0.6	<0.028	<0.026	<0.028	<0.03
Bromoform	75-25-2	0.8	<0.028 J	<0.026 J	<0.028 J	<0.03 J
Bromomethane (methyl bromide)	74-83-9	0.2	<0.28	<0.26 J	<0.28 J	<0.3 J
2-Butanone (Methyl ethyl ketone)	78-93-3	17	<1.1 J	<1 J	<1.1 J	<1.2 J
n-Butyl Benzene	104-51-8	52	<0.028	<0.026 J	<0.028 J	<0.03 J
sec-Butyl Benzene	135-98-8	NE	<0.028	<0.026 J	<0.028 J	<0.03 J
tert-Butylbenzene	98-06-6	NE	<0.028	<0.026 J	<0.028 J	<0.03 J
Carbon disulfide	75-15-0	32	<0.028	<0.026	<0.028	<0.03
Carbon tetrachloride	56-23-5	0.07	<0.028	<0.026	<0.028	<0.03
Chlorobenzene	108-90-7	1	<0.028	<0.026	<0.028	<0.03
Chloroethane	75-00-3	NE	<0.28	<0.26	<0.28	<0.3
Chloroform	67-66-3	0.6	<0.028	<0.026	<0.028	<0.03
Chloromethane (methyl chloride)	74-87-3	NE	<0.057	<0.052	<0.056	<0.06
2-Chlorotoluene	95-49-8	4	<0.028	<0.026 J	<0.028 J	<0.03 J
4-Chlorotoluene	106-43-4	NE	<0.028	<0.026 J	<0.028 J	<0.03 J
1,2-Dibromo-3-chloropropane	96-12-8	0.002	<0.028	<0.026	<0.028	<0.03
Dibromochloromethane	124-48-1	0.4	<0.028	<0.026	<0.028	<0.03
1,2-Dibromoethane (EDB)	106-93-4	0.0004	<0.028	<0.026	<0.028	<0.03
Dibromomethane	74-95-3	NE	<0.028	<0.026	<0.028	<0.03
1,2-Dichlorobenzene	95-50-1	17	<0.028	<0.026	<0.028	<0.03
1,4-Dichlorobenzene	106-46-7	NE	<0.028	<0.026	<0.028	<0.03
1,3-Dichlorobenzene	541-73-1	NE	<0.028	<0.026 J	<0.028 J	<0.03 J
Dichlorodifluoromethane	75-71-8	43	<0.028	<0.026	<0.028	<0.03
1,1-Dichloroethane	75-34-3	23	<0.028	<0.026 J	<0.028 J	<0.03 J
1,2-Dichloroethane	107-06-2	0.02	<0.028	<0.026	<0.028	<0.03
trans-1,2-Dichloroethene	156-60-5	0.7	<0.028	<0.026	<0.028	<0.03
cis-1,2-Dichloroethene	156-59-2	0.4	<0.028	<0.026	<0.028	<0.03
1,1-Dichloroethene	75-35-4	0.06	<0.028	<0.026	<0.028	<0.03
2,2-Dichloropropane	594-20-7	NE	<0.028	<0.026	<0.028	<0.03
1,2-Dichloropropane	78-87-5	0.03	<0.028	<0.026	<0.028	<0.03
1,3-Dichloropropane	142-28-9	0.83	<0.028	<0.026	<0.028	<0.03
cis-1,3-Dichloropropene ⁽⁴⁾	10061-01-5	0.004 ⁽⁵⁾	<0.028	<0.026	<0.028	<0.03
trans-1,3-Dichloropropene ⁽⁴⁾	10061-02-6	0.004 ⁽⁵⁾	<0.028	<0.026	<0.028	<0.03
1,1-Dichloropropene	563-58-6	NE	<0.028	<0.026	<0.028	<0.03
Diisopropyl Ether	108-20-3	NE	<0.028	<0.026	<0.028	<0.03
Ethylbenzene	100-41-4	13	<0.028	<0.026	<0.028	0.0077 J
Hexachlorobutadiene	87-68-3	2.2	<0.11	<0.1 J	<0.11 J	<0.12 J
n-Hexane	110-54-3	82	<0.028 J	<0.026 J	<0.028 J	<0.03 J
2-Hexanone	591-78-6	0.16	<1.1	<1	<1.1	<1.2
Isopropylbenzene	98-82-8	91	<0.028	<0.026	<0.028	<0.03
p-Isopropyltoluene	99-87-6	NE	<0.028	<0.026 J	<0.028 J	<0.03 J
Methylene chloride	75-09-2	0.02	<0.11	<0.1	<0.11	<0.12
4-Methyl-2-pentanone	108-10-1	2.5	<1.1	<1	<1.1	<1.2
Methyl t-Butyl Ether	1634-04-4	NE	<0.028 J	<0.026 J	<0.028 J	<0.03 J
Naphthalene	91-20-3	12	<0.28 J	<0.26 J	<0.28 J	<0.3 J,B
n-Propylbenzene	103-65-1	56	<0.028	<0.026 J	<0.028 J	<0.03
Styrene	100-42-5	4	<0.028	<0.026	<0.028	<0.03
1,1,2,2-Tetrachloroethane	79-34-5	0.0035	<0.028	<0.026	<0.028	<0.03
Tetrachloroethene	127-18-4	0.06	<0.028	<0.026	<0.028	<0.03
Tetrahydrofuran	109-99-9	NE	<0.57	<0.52	<0.56	<0.6
Toluene	108-88-3	12	<0.028	<0.026	<0.028	0.025 J
1,2,3-Trichlorobenzene	87-61-6	0.46	<0.11	<0.1	<0.11	<0.12
1,2,4-Trichlorobenzene	120-82-1	5	<0.11	<0.1	<0.11	<0.12
1,1,1-Trichloroethane	71-55-6	2	<0.028	<0.026	<0.028	<0.03
1,1,2-Trichloroethane	79-00-5	0.02	<0.028	<0.026 J	<0.028 J	<0.03 J
Trichloroethene	79-01-6	0.06	<0.028	<0.026	<0.028	<0.03
Trichlorofluoromethane	75-69-4	34	<0.028	<0.026 J	<0.028 J	<0.03 J
1,2,3-Trichloropropane	96-18-4	0.000017	<0.057	<0.052	<0.056	<0.06
1,1,2-Trichlorotrifluoroethane	76-13-1	450	<0.028	<0.026 J	<0.028 J	<0.03 J
1,3,5-Trimethylbenzene	108-67-8	2	<0.028	<0.026 J	<0.028 J	<0.03 J
1,2,4-Trimethylbenzene	95-63-6	NE	<0.028	<0.026 J	<0.028 J	0.0054 J
Vinyl chloride	75-01-4	0.1	<0.028	<0.026	<0.028	<0.03
m,p-Xylene	108-38-3, 106-42-3	210	<0.057	<0.052	<0.056	<0.06 J,B
o-Xylene	95-47-6	190	<0.028	<0.026	<0.028	<0.03 J
Total Xylene	1330-20-7	150	NR	NR	NR	NR
F _{oc}	NA	NE	NT	NT	1.1 FOC	1 FOC



TABLE 3
SOIL ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS
FORMER 4,000-GALLON GASOLINE UST SYSTEM
Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives	WS-SB-GP-03 (4'-6')	WS-SB-GP-04 (4'-6')	WS-SB-GP-05 (2'-4')	WS-SB-GP-06 (0'-2')	WS-SB-GP-06 (0'-2') (Duplicate 1)	WS-SB-GP-06 (0'-24") (USEPA Split)	WS-SB-GP-14A (3.3'-5')
			12/3/2013	12/3/2013	12/3/2013	12/3/2013	12/3/2013	12/3/2013	5/8/2014
Date			12/3/2013	12/3/2013	12/3/2013	12/3/2013	12/3/2013	12/3/2013	5/8/2014
VOCs (8260B)			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Acetone	67-64-1	25	<0.99 J	<1.1 J	<1 J	<20	<19 J	0.015 J	<21
Benzene	71-43-2	0.03	3.4	3.8 J	8.2	18	13	<0.0055	0.65
Bromochloromethane	74-97-5	NE	<0.025	<0.027 J	<0.025	<0.5	<0.48	NT	<0.52
Bromodichloromethane	75-27-4	0.6	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
Bromoform	75-25-2	0.8	<0.025 J	<0.027 J	<0.025 J	<0.5 J	<0.48 J	<0.0055	<0.52
Bromomethane (methyl bromide)	74-83-9	0.2	<0.25 J	<0.27 J	<0.25 J	<5 J	<4.8 J	<0.0055	<5.2
2-Butanone (Methyl ethyl ketone)	78-93-3	17	<0.99 J	<1.1 J	<1 J	<20 J	<19 J	<0.027	<21
n-Butyl Benzene	104-51-8	52	0.56 J,HC	4.5	8.5	<0.5	15	NT	<0.52
sec-Butyl Benzene	135-98-8	NE	0.06 J	0.056 J	0.095 J	<0.5	2.7	NT	<0.52
tert-Butylbenzene	98-06-6	NE	1.5 J	8.6	4.7 E	<0.5	23	NT	<0.52
Carbon disulfide	75-15-0	32	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
Carbon tetrachloride	56-23-5	0.07	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
Chlorobenzene	108-90-7	1	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
Chloroethane	75-00-3	NE	<0.25	<0.27 J	<0.25	<5	<4.8	<0.0055	<5.2 J
Chloroform	67-66-3	0.6	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
Chloromethane (methyl chloride)	74-87-3	NE	<0.05	<0.054 J	<0.05	<1	<0.96	<0.0055	<1
2-Chlorotoluene	95-49-8	4	<0.025 J	<0.027 J	<0.025 J	<0.5	<0.48	NT	<0.52
4-Chlorotoluene	106-43-4	NE	<0.025 J	<0.027 J	<0.025 J	<0.5	<0.48	NT	<0.52
1,2-Dibromo-3-chloropropane	96-12-8	0.002	<0.025	<0.027 J	<0.025	<0.5	<0.48	NT	<0.52
Dibromochloromethane	124-48-1	0.4	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
1,2-Dibromoethane (EDB)	106-93-4	0.0004	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
Dibromomethane	74-95-3	NE	<0.025	<0.027 J	<0.025	<0.5	<0.48	NT	<0.52
1,2-Dichlorobenzene	95-50-1	17	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
1,4-Dichlorobenzene	106-46-7	NE	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
1,3-Dichlorobenzene	541-73-1	NE	<0.025 J	<0.027 J	<0.025 J	<0.5	<0.48	<0.0055	<0.52
Dichlorodifluoromethane	75-71-8	43	<0.025	0.0065 J,B	0.006 B,J	<0.5	<0.48	<0.0055	<0.52
1,1-Dichloroethane	75-34-3	23	<0.025 J	<0.027 J	<0.025 J	<0.5	<0.48	<0.0055	<0.52
1,2-Dichloroethane	107-06-2	0.02	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
trans-1,2-Dichloroethene	156-60-5	0.7	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
cis-1,2-Dichloroethene	156-59-2	0.4	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
1,1-Dichloroethene	75-35-4	0.06	<0.025	<0.027 J	<0.025	<0.5	<0.48	NT	<0.52
2,2-Dichloropropane	594-20-7	NE	<0.025	<0.027 J	<0.025	<0.5	<0.48	NT	<0.52
1,2-Dichloropropane	78-87-5	0.03	<0.025	<0.027 J	<0.025	<0.5	<0.48	NT	<0.52
1,3-Dichloropropane	142-28-9	0.83	<0.025	<0.027 J	<0.025	<0.5	<0.48	NT	<0.52
cis-1,3-Dichloropropene ⁽⁴⁾	10061-01-5	0.004 ⁽⁵⁾	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
trans-1,3-Dichloropropene ⁽⁴⁾	10061-02-6	0.004 ⁽⁵⁾	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
1,1-Dichloropropene	563-58-6	NE	<0.025	<0.027 J	<0.025	<0.5	<0.48	NT	<0.52
Diisopropyl Ether	108-20-3	NE	<0.025	<0.027 J	<0.025	<0.5	<0.48	NT	<0.52
Ethylbenzene	100-41-4	13	6.5 HC	22 HC	28 J,HC	80 HC	61 HC	<0.0055	4.3
Hexachlorobutadiene	87-68-3	2.2	<0.099 J	<0.11 J	<0.1 J	<2	<1.9	NT	<2.1
n-Hexane	110-54-3	82	0.88 J	3.3 J	10 J	47 J	31 J	NT	0.86
2-Hexanone	591-78-6	0.16	<0.99	<1.1 J	<1	<20	<19	<0.027	<21
Isopropylbenzene	98-82-8	91	0.31	0.86 J	2.2	6.7	5.4	<0.0055	0.6
p-Isopropyltoluene	99-87-6	NE	0.027 J	0.96 J	2 J	1.2	<0.48	NT	0.48 J
Methylene chloride	75-09-2	0.02	<0.099	<0.11 J	<0.1	<2	<1.9	0.0012 J	<2.1
4-Methyl-2-pentanone	108-10-1	2.5	<0.99	<1.1 J	<1	<20	<19	<0.027	<21
Methyl t-Butyl Ether	1634-04-4	NE	<0.025 J	<0.027 J	<0.025 J	<0.5 J	<0.48 J	<0.011	<0.52
Naphthalene	91-20-3	12	2.8 J	18 J	18 J	36 J	36 J	<3.6	15
n-Propylbenzene	103-65-1	56	1.3 J	7.3	11	32	25	NT	2.9
Styrene	100-42-5	4	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
1,1,2,2-Tetrachloroethane	79-34-5	0.0035	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
Tetrachloroethene	127-18-4	0.06	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
Tetrahydrofuran	109-99-9	NE	<0.5	<0.54 J	<0.5	<10	<9.6	NT	<10
Toluene	108-88-3	12	17	43 J,HC	54 J,HC	220 J,HC	210 J,HC	<0.0055	0.92
1,2,3-Trichlorobenzene	87-61-6	0.46	<0.099	<0.11 J	<0.1	<2	<1.9	NT	<2.1
1,2,4-Trichlorobenzene	120-82-1	5	<0.099	<0.11 J	<0.1	<2	<1.9	<0.0055	<2.1
1,1,1-Trichloroethane	71-55-6	2	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
1,1,2-Trichloroethane	79-00-5	0.02	<0.025 J	<0.027 J	<0.025 J	<0.5	<0.48	<0.0055	<0.52
Trichloroethene	79-01-6	0.06	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
Trichlorofluoromethane	75-69-4	34	<0.025 J	<0.027 J	<0.025 J	<0.5	<0.48 J	<0.0055	<0.52
1,2,3-Trichloropropane	96-18-4	0.000017	<0.05	0.054 J	<0.05	<1	<0.96	NT	<1
1,1,2-Trichlorotrifluoroethane	76-13-1	450	<0.025 J	<0.027 J	<0.025 J	<0.5	<0.48	NT	<0.52
1,3,5-Trimethylbenzene	108-67-8	2	2.7 J	18	24	60	47	NT	16
1,2,4-Trimethylbenzene	95-63-6	NE	9.8 J	61 J,HC	81 J,HC	210 J,HC	170 J,HC	NT	51
Vinyl chloride	75-01-4	0.1	<0.025	<0.027 J	<0.025	<0.5	<0.48	<0.0055	<0.52
m,p-Xylene	108-38-3, 106-42-3	210	28	110 J,HC	120 J,HC	320 J,HC	240	NT	50
o-Xylene	95-47-6	190	11	41 J,HC	45 J,HC	120	88	NT	11
Total Xylene	1330-20-7	150	39	151 J,HC	165 J,HC	440	328	<0.011	61
F _{oc}	NA	NE	0.59 FOC	NT	0.66 FOC	NT	NT	NT	NT



TABLE 3
SOIL ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS
FORMER 4,000-GALLON GASOLINE UST SYSTEM
Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives	WS-SB-GP-14A (5'-6.6')	WS-SB-GP-14A (11.7'-13.3')	WS-SB-GP-14A (18.3'-20')	WS-SB-GP-14A (23.3'-25')	WS-SB-GP-14A (23.3'-25') (USEPA Split)	WS-SB-GP-14A (28.3'-30')	WS-SB-GP-14A (31.7'-33.3')
			5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014
VOCs (8260B)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Acetone	67-64-1	25	<21	<2.1	<22	<100	<9.6	<100	<19
Benzene	71-43-2	0.03	5.8	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
Bromochloromethane	74-97-5	NE	<0.52	<0.052	<0.56	<2.5	NT	<2.5	<0.47
Bromodichloromethane	75-27-4	0.6	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
Bromoform	75-25-2	0.8	<0.52	<0.052 J	<0.56	<2.5	<0.96	<2.5	<0.47
Bromomethane (methyl bromide)	74-83-9	0.2	<5.2	<0.52 J	<5.6	<25	<0.96	<25	<4.7
2-Butanone (Methyl ethyl ketone)	78-93-3	17	<21	<2.1 J	<22	<100	<4.8	<100	<19
n-Butyl Benzene	104-51-8	52	<0.52	<0.052	<0.56	<2.5	NT	<2.5	<0.47
sec-Butyl Benzene	135-98-8	NE	<0.52	<0.052	<0.56	<2.5	NT	2 J	0.45 J
tert-Butylbenzene	98-06-6	NE	<0.52	<0.052	<0.56	<2.5	NT	20	4.4
Carbon disulfide	75-15-0	32	<0.52	0.53	<0.56	<2.5	<0.96	<2.5	<0.47
Carbon tetrachloride	56-23-5	0.07	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
Chlorobenzene	108-90-7	1	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
Chloroethane	75-00-3	NE	<5.2 J	<0.52 J	<5.6 J	<25 J	<0.96	<25 J	<4.7 J
Chloroform	67-66-3	0.6	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
Chloromethane (methyl chloride)	74-87-3	NE	<1	<0.1	<1.1	<5	<0.96	<5	<0.95
2-Chlorotoluene	95-49-8	4	<0.52	<0.052	<0.56	<2.5	NT	<2.5	<0.47
4-Chlorotoluene	106-43-4	NE	<0.52	<0.052	<0.56	<2.5	NT	<2.5	<0.47
1,2-Dibromo-3-chloropropane	96-12-8	0.002	<0.52	<0.052	<0.56	<2.5	NT	<2.5	<0.47
Dibromochloromethane	124-48-1	0.4	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
1,2-Dibromoethane (EDB)	106-93-4	0.0004	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
Dibromomethane	74-95-3	NE	<0.52	<0.052	<0.56	<2.5	NT	<2.5	<0.47
1,2-Dichlorobenzene	95-50-1	17	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
1,4-Dichlorobenzene	106-46-7	NE	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
1,3-Dichlorobenzene	541-73-1	NE	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
Dichlorodifluoromethane	75-71-8	43	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
1,1-Dichloroethane	75-34-3	23	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
1,2-Dichloroethane	107-06-2	0.02	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
trans-1,2-Dichloroethene	156-60-5	0.7	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
cis-1,2-Dichloroethene	156-59-2	0.4	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
1,1-Dichloroethene	75-35-4	0.06	<0.52	<0.052	<0.56	<2.5	NT	<2.5	<0.47
2,2-Dichloropropane	594-20-7	NE	<0.52	<0.052	<0.56	<2.5	NT	<2.5	<0.47
1,2-Dichloropropane	78-87-5	0.03	<0.52	<0.052	<0.56	<2.5	NT	<2.5	<0.47
1,3-Dichloropropane	142-28-9	0.83	<0.52	<0.052	<0.56	<2.5	NT	<2.5	<0.47
cis-1,3-Dichloropropene ⁽⁴⁾	10061-01-5	0.004 ⁽⁵⁾	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
trans-1,3-Dichloropropene ⁽⁴⁾	10061-02-6	0.004 ⁽⁵⁾	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
1,1-Dichloropropene	563-58-6	NE	<0.52	<0.052	<0.56	<2.5	NT	<2.5	<0.47
Diisopropyl Ether	108-20-3	NE	<0.52	<0.052	<0.56	<2.5	NT	<2.5	<0.47
Ethylbenzene	100-41-4	13	15	0.15	1.1	7.2	7.1	11	5.1
Hexachlorobutadiene	87-68-3	2.2	<2.1	<0.21	<2.2	<10	NT	<10	<1.9
n-Hexane	110-54-3	82	2.1	<0.052	<0.56	<2.5	NT	<2.5	<0.47
2-Hexanone	591-78-6	0.16	<21	<2.1	<22	<100	<4.8	<100	<19
Isopropylbenzene	98-82-8	91	0.98	0.045 J	0.52 J	2.2 J	2.3 J	2.5 J	0.56
p-Isopropyltoluene	99-87-6	NE	0.22 J	2.1	0.57	1 J	NT	1.2 J	0.24 J
Methylene chloride	75-09-2	0.02	<2.1	<0.21	<2.2	<10	<10	<10	<1.9
4-Methyl-2-pentanone	108-10-1	2.5	<21	<2.1	<22	<100	<4.8	<100	<19
Methyl t-Butyl Ether	1634-04-4	NE	<0.52	<0.052	<0.56	<2.5	<1.9	<2.5	<0.47
Naphthalene	91-20-3	12	14	<0.52	<5.6	28 J	<3.6	28	5.3
n-Propylbenzene	103-65-1	56	5.3	0.19	2.9	12	NT	12	2.4
Styrene	100-42-5	4	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
1,1,2,2-Tetrachloroethane	79-34-5	0.0035	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
Tetrachloroethene	127-18-4	0.06	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
Tetrahydrofuran	109-99-9	NE	<10	<1	<11	<50	NT	<50	<9.5
Toluene	108-88-3	12	6.8	0.065	0.15 J	2 J	0.32 J	2 J	0.18 J
1,2,3-Trichlorobenzene	87-61-6	0.46	<2.1	<0.21	<2.2	<10	NT	<10	<1.9
1,2,4-Trichlorobenzene	120-82-1	5	<2.1	<0.21	<2.2	<10	<0.96	<10	<1.9
1,1,1-Trichloroethane	71-55-6	2	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
1,1,2-Trichloroethane	79-00-5	0.02	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
Trichloroethene	79-01-6	0.06	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
Trichlorofluoromethane	75-69-4	34	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
1,2,3-Trichloropropane	96-18-4	0.000017	<1	<0.1	<1.1	<5	NT	<5	<0.95
1,1,2-Trichlorotrifluoroethane	76-13-1	450	<0.52	<0.052	<0.56	<2.5	NT	<2.5	<0.47
1,3,5-Trimethylbenzene	108-67-8	2	14	1.3	10	54	NT	54	9.8
1,2,4-Trimethylbenzene	95-63-6	NE	45	3.1	28	170	NT	170	29
Vinyl chloride	75-01-4	0.1	<0.52	<0.052	<0.56	<2.5	<0.96	<2.5	<0.47
m,p-Xylene	108-38-3, 106-42-3	210	72	0.4	1.3	40	NT	40	31
o-Xylene	95-47-6	190	26	0.062	0.3 J	2.1 J	NT	2.1 J	6
Total Xylene	1330-20-7	150	99	0.46	1.6 J	42	42	76	37
F _{oc}	NA	NE	NT	NT	NT	NT	NT	NT	NT



TABLE 3
SOIL ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS
FORMER 4,000-GALLON GASOLINE UST SYSTEM
Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives	WS-SB-GP-15 (1.7'-3.3')	WS-SB-GP-15 (6.7'-8.3')	WS-SB-GP-15 (11.7'-13.3')	WS-SB-GP-15 (16.7'-18.3')	WS-SB-GP-15 (16.7'-18.3') (Duplicate 1)	WS-SB-GP-15 (23.3'-25')	WS-SB-GP-15 (26.7'-28.3')
			5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014
Date			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
VOCs (8260B)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Acetone	67-64-1	25	<0.94	<0.97	<1.1	<1	<1.3	<1.3	<1.1
Benzene	71-43-2	0.03	<0.024	<0.024	<0.027	<0.026	<0.033	0.015 J	0.046
Bromochloromethane	74-97-5	NE	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Bromodichloromethane	75-27-4	0.6	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Bromoform	75-25-2	0.8	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Bromomethane (methyl bromide)	74-83-9	0.2	<0.24	<0.24	<0.27	<0.26	<0.33	<0.34	<0.27
2-Butanone (Methyl ethyl ketone)	78-93-3	17	<0.94	<0.97	<1.1	<1	<1.3	<1.3	<1.1
n-Butyl Benzene	104-51-8	52	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
sec-Butyl Benzene	135-98-8	NE	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
tert-Butylbenzene	98-06-6	NE	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Carbon disulfide	75-15-0	32	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	0.007 J
Carbon tetrachloride	56-23-5	0.07	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Chlorobenzene	108-90-7	1	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Chloroethane	75-00-3	NE	<0.24	<0.24	<0.27 J	<0.26	<0.33 J	<0.34 J	<0.27 J
Chloroform	67-66-3	0.6	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Chloromethane (methyl chloride)	74-87-3	NE	<0.047	<0.049	<0.054	<0.052	<0.067	<0.067	0.054
2-Chlorotoluene	95-49-8	4	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
4-Chlorotoluene	106-43-4	NE	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,2-Dibromo-3-chloropropane	96-12-8	0.002	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Dibromochloromethane	124-48-1	0.4	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,2-Dibromoethane (EDB)	106-93-4	0.0004	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Dibromomethane	74-95-3	NE	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,2-Dichlorobenzene	95-50-1	17	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,4-Dichlorobenzene	106-46-7	NE	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,3-Dichlorobenzene	541-73-1	NE	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Dichlorodifluoromethane	75-71-8	43	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,1-Dichloroethane	75-34-3	23	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,2-Dichloroethane	107-06-2	0.02	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
trans-1,2-Dichloroethene	156-60-5	0.7	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
cis-1,2-Dichloroethene	156-59-2	0.4	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,1-Dichloroethene	75-35-4	0.06	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
2,2-Dichloropropane	594-20-7	NE	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,2-Dichloropropane	78-87-5	0.03	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,3-Dichloropropane	142-28-9	0.83	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
cis-1,3-Dichloropropene ⁽⁴⁾	10061-01-5	0.004 ⁽⁵⁾	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
trans-1,3-Dichloropropene ⁽⁴⁾	10061-02-6	0.004 ⁽⁵⁾	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,1-Dichloropropene	563-58-6	NE	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Diisopropyl Ether	108-20-3	NE	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Ethylbenzene	100-41-4	13	0.0099 J	<0.024	<0.027	0.0082 J	<0.033	0.011 J	0.032
Hexachlorobutadiene	87-68-3	2.2	<0.094	<0.097	<0.11	<0.1	<0.13	<0.13	<0.11
n-Hexane	110-54-3	82	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	0.033
2-Hexanone	591-78-6	0.16	<0.94	<0.97	<1.1	<1	<1.3	<1.3	<1.1
Isopropylbenzene	98-82-8	91	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
p-Isopropyltoluene	99-87-6	NE	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	0.015 J
Methylene chloride	75-09-2	0.02	<0.094	<0.097	<0.11	<0.1 B	<0.13	<0.13	<0.11 B
4-Methyl-2-pentanone	108-10-1	2.5	<0.94	<0.97	<1.1	<1	<1.3	<1.3	<1.1
Methyl t-Butyl Ether	1634-04-4	NE	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Naphthalene	91-20-3	12	0.018 B,J	<0.024	<0.27	<0.26	<0.33	<0.34	<0.27
n-Propylbenzene	103-65-1	56	0.0071 J	<0.024	<0.027	<0.026	<0.033	<0.034	0.01 J
Styrene	100-42-5	4	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,1,2,2-Tetrachloroethane	79-34-5	0.0035	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Tetrachloroethene	127-18-4	0.06	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Tetrahydrofuran	109-99-9	NE	<0.47	<0.49	<0.54	<0.52	<0.67	<0.67	<0.54
Toluene	108-88-3	12	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,2,3-Trichlorobenzene	87-61-6	0.46	<0.094	<0.097	<0.11	<0.1	<0.13	<0.13	<0.11
1,2,4-Trichlorobenzene	120-82-1	5	<0.094	<0.097	<0.11	<0.1	<0.13	<0.13	<0.11
1,1,1-Trichloroethane	71-55-6	2	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,1,2-Trichloroethane	79-00-5	0.02	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Trichloroethene	79-01-6	0.06	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Trichlorofluoromethane	75-69-4	34	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,2,3-Trichloropropane	96-18-4	0.000017	<0.047	<0.047	<0.054	0.052	<0.033	<0.067	<0.054
1,1,2-Trichlorotrifluoroethane	76-13-1	450	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
1,3,5-Trimethylbenzene	108-67-8	2	0.026	0.0049 J	<0.027	0.0067 J	<0.033	<0.034	0.0054 J
1,2,4-Trimethylbenzene	95-63-6	NE	0.076 J	<0.024	<0.027	<0.026	<0.033	<0.034	0.059
Vinyl chloride	75-01-4	0.1	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
m,p-Xylene	108-38-3, 106-42-3	210	0.057	<0.048	<0.054	0.037 J	<0.066	<0.068	0.12
o-Xylene	95-47-6	190	<0.024	<0.024	<0.027	<0.026	<0.033	<0.034	<0.027
Total Xylene	1330-20-7	150	0.065 J	<0.072	<0.081	<0.078	<0.099	<0.102	0.13
F _{oc}	NA	NE	0.7 FOC	NT	NT	0.59 FOC	NT	0.18 FOC	0.68 FOC



TABLE 3
SOIL ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS
FORMER 4,000-GALLON GASOLINE UST SYSTEM
Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives	WS-SB-GP-16 (3.3'-5')	WS-SB-GP-16 (5'-6.7')	WS-SB-GP-16 (10'-11.6')	WS-SB-GP-16 (15'-16.7')	WS-SB-GP-16 (21.7'-23.3')	WS-SB-GP-16 (28.3'-30')	WS-SB-GP-17 (3.3'-5')
			5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/9/2014
Date			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
VOCs (8260B)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Acetone	67-64-1	25	<11	<10	<0.99	<0.97	<0.96	<1.3	<0.97
Benzene	71-43-2	0.03	3.5	0.37 D	0.018 J	<0.024	<0.024	0.42	0.034
Bromochloromethane	74-97-5	NE	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Bromodichloromethane	75-27-4	0.6	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Bromoform	75-25-2	0.8	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Bromomethane (methyl bromide)	74-83-9	0.2	<2.7	<2.5	<0.25	<0.24	<0.24	<0.31	<0.24
2-Butanone (Methyl ethyl ketone)	78-93-3	17	<11	<10	<0.99	<0.97	<0.96	<1.3	<0.97
n-Butyl Benzene	104-51-8	52	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
sec-Butyl Benzene	135-98-8	NE	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	0.16
tert-Butylbenzene	98-06-6	NE	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Carbon disulfide	75-15-0	32	<0.27	<0.25	<0.025	<0.024	0.0076 J	<0.031	<0.024
Carbon tetrachloride	56-23-5	0.07	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Chlorobenzene	108-90-7	1	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Chloroethane	75-00-3	NE	<2.7 J	<2.5 J	<0.25	<0.24 J	<0.24 J	<0.31 J	<0.24 J
Chloroform	67-66-3	0.6	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Chloromethane (methyl chloride)	74-87-3	NE	0.53	<0.5	<0.05	<0.049	<0.048	<0.063	<0.049
2-Chlorotoluene	95-49-8	4	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
4-Chlorotoluene	106-43-4	NE	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,2-Dibromo-3-chloropropane	96-12-8	0.002	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Dibromochloromethane	124-48-1	0.4	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,2-Dibromoethane (EDB)	106-93-4	0.0004	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Dibromomethane	74-95-3	NE	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,2-Dichlorobenzene	95-50-1	17	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,4-Dichlorobenzene	106-46-7	NE	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,3-Dichlorobenzene	541-73-1	NE	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Dichlorodifluoromethane	75-71-8	43	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,1-Dichloroethane	75-34-3	23	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,2-Dichloroethane	107-06-2	0.02	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
trans-1,2-Dichloroethene	156-60-5	0.7	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
cis-1,2-Dichloroethene	156-59-2	0.4	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,1-Dichloroethene	75-35-4	0.06	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
2,2-Dichloropropane	594-20-7	NE	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,2-Dichloropropane	78-87-5	0.03	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,3-Dichloropropane	142-28-9	0.83	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
cis-1,3-Dichloropropene ⁽⁴⁾	10061-01-5	0.004 ⁽⁵⁾	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
trans-1,3-Dichloropropene ⁽⁴⁾	10061-02-6	0.004 ⁽⁵⁾	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,1-Dichloropropene	563-58-6	NE	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Diisopropyl Ether	108-20-3	NE	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Ethylbenzene	100-41-4	13	5	15	<0.025	<0.024	0.033	0.67	2.2
Hexachlorobutadiene	87-68-3	2.2	<1.1	<1	<0.099	0.097	<0.096	<0.13	<0.097
n-Hexane	110-54-3	82	0.27	10	0.033	<0.024	<0.024	0.042	0.052
2-Hexanone	591-78-6	0.16	<11	<10	<0.99	<0.97	<0.96	<1.3	<0.97
Isopropylbenzene	98-82-8	91	<0.27	1.5	<0.025	<0.024	0.0086 J	0.047	0.26
p-Isopropyltoluene	99-87-6	NE	<0.27	0.34	<0.025	<0.024	0.033	0.032	0.038
Methylene chloride	75-09-2	0.02	<1.1	<1	<0.099	<0.097	<0.096	<0.13	0.023 J
4-Methyl-2-pentanone	108-10-1	2.5	<11	<10	0.088 J	<0.97	<0.96	<1.3	<0.97
Methyl t-Butyl Ether	1634-04-4	NE	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Naphthalene	91-20-3	12	<2.7	12	0.013 B,J	<0.24	<0.24	0.078 J	0.24
n-Propylbenzene	103-65-1	56	<0.27	7.2	<0.025	<0.024	0.031	0.3	1.1
Styrene	100-42-5	4	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,1,2,2-Tetrachloroethane	79-34-5	0.0035	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Tetrachloroethene	127-18-4	0.06	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Tetrahydrofuran	109-99-9	NE	<5.3	<5	<0.5	<0.49	<0.48	<0.63	<0.49
Toluene	108-88-3	12	5.1	1.7	<0.025	<0.024	<0.024	0.15	<0.024
1,2,3-Trichlorobenzene	87-61-6	0.46	<1.1	<1	<0.099	<0.097	<0.096	<0.13	<0.097
1,2,4-Trichlorobenzene	120-82-1	5	1.1 U	<1	<0.099	<0.097	<0.096	<0.13	<0.097
1,1,1-Trichloroethane	71-55-6	2	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,1,2-Trichloroethane	79-00-5	0.02	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Trichloroethene	79-01-6	0.06	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
Trichlorofluoromethane	75-69-4	34	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,2,3-Trichloropropane	96-18-4	0.000017	<0.53	<0.5	<0.05	<0.049	<0.048	<0.063	<0.049
1,1,2-Trichlorotrifluoroethane	76-13-1	450	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
1,3,5-Trimethylbenzene	108-67-8	2	0.096 J	14	<0.025	0.035	0.018 J	0.46	0.2
1,2,4-Trimethylbenzene	95-63-6	NE	0.42	45	<0.025	0.091	0.29	2.1	1
Vinyl chloride	75-01-4	0.1	<0.27	<0.25	<0.025	<0.024	<0.024	<0.031	<0.024
m,p-Xylene	108-38-3, 106-42-3	210	14	44	<0.05	0.23	0.22	1.9	0.32
o-Xylene	95-47-6	190	3.8	2.6	<0.025	<0.024	<0.024	0.28	0.013 J
Total Xylene	1330-20-7	150	18	47	0.075	0.24	0.22	2.2	0.33
F _{oc}	NA	NE	NT	NT	NT	NT	NT	NT	NT



TABLE 3
SOIL ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS
FORMER 4,000-GALLON GASOLINE UST SYSTEM
Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives	WS-SB-GP-17 (6.7'-8.3')	WS-SB-GP-17 (13.3'-15')	WS-SB-GP-17 (18.3'-20')	WS-SB-GP-17 (21.7'-23')	WS-SB-GP-17 (26.7'-28.3')	WS-SB-GP-17 (31.7'-33.3')	WS-SB-GP-18 (1.7'-3.3')
			5/9/2014	5/9/2014	5/9/2014	5/9/2014	5/9/2014	5/9/2014	5/8/2014
Date			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
VOCs (8260B)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Acetone	67-64-1	25	<1.1	<1.1	<1.1	<1.1	<9.7	<1.1	<1.2
Benzene	71-43-2	0.03	<0.027	0.12	0.012 J	0.033	0.31	0.011 J	<0.031
Bromochloromethane	74-97-5	NE	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Bromodichloromethane	75-27-4	0.6	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Bromoform	75-25-2	0.8	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Bromomethane (methyl bromide)	74-83-9	0.2	<0.27	<0.28	<0.28	<0.28	<2.4	<0.26	<0.31
2-Butanone (Methyl ethyl ketone)	78-93-3	17	<1.1	<1.1	<1.1	<1.1	<9.7	<1.1	<1.2
n-Butyl Benzene	104-51-8	52	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
sec-Butyl Benzene	135-98-8	NE	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
tert-Butylbenzene	98-06-6	NE	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Carbon disulfide	75-15-0	32	<0.027	<0.028	0.066	0.01 J	<0.24	0.0095 J	<0.031
Carbon tetrachloride	56-23-5	0.07	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Chlorobenzene	108-90-7	1	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Chloroethane	75-00-3	NE	<0.27	<0.28 J	<0.28 J	<0.28 J	<2.4 J	<0.26 J	<0.31
Chloroform	67-66-3	0.6	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Chloromethane (methyl chloride)	74-87-3	NE	<0.055	0.056	<0.055	<0.055	<0.48	<0.053	<0.061
2-Chlorotoluene	95-49-8	4	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
4-Chlorotoluene	106-43-4	NE	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
1,2-Dibromo-3-chloropropane	96-12-8	0.002	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Dibromochloromethane	124-48-1	0.4	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
1,2-Dibromoethane (EDB)	106-93-4	0.0004	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Dibromomethane	74-95-3	NE	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
1,2-Dichlorobenzene	95-50-1	17	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
1,4-Dichlorobenzene	106-46-7	NE	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
1,3-Dichlorobenzene	541-73-1	NE	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Dichlorodifluoromethane	75-71-8	43	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	0.008 J
1,1-Dichloroethane	75-34-3	23	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
1,2-Dichloroethane	107-06-2	0.02	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
trans-1,2-Dichloroethene	156-60-5	0.7	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
cis-1,2-Dichloroethene	156-59-2	0.4	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
1,1-Dichloroethene	75-35-4	0.06	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
2,2-Dichloropropane	594-20-7	NE	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
1,2-Dichloropropane	78-87-5	0.03	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
1,3-Dichloropropane	142-28-9	0.83	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
cis-1,3-Dichloropropene ⁽⁴⁾	10061-01-5	0.004 ⁽⁵⁾	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
trans-1,3-Dichloropropene ⁽⁴⁾	10061-02-6	0.004 ⁽⁵⁾	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
1,1-Dichloropropene	563-58-6	NE	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Diisopropyl Ether	108-20-3	NE	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Ethylbenzene	100-41-4	13	0.0066 J	0.013 J	0.31	0.26	2.2	0.097	<0.031
Hexachlorobutadiene	87-68-3	2.2	<0.11	<0.11	<0.11	<0.11	<0.97	<0.11	<0.12
n-Hexane	110-54-3	82	<0.027 U	0.034	<0.028	<0.028	0.11 J	<0.026	<0.031
2-Hexanone	591-78-6	0.16	<1.1	<1.1	<1.1	<1.1	<9.7	<1.1	<1.2
Isopropylbenzene	98-82-8	91	<0.027	<0.028	0.094	0.043	0.26	0.0058 J	<0.031
p-Isopropyltoluene	99-87-6	NE	<0.027	<0.028	0.069	0.028	0.16 J	0.0068 J	<0.031
Methylene chloride	75-09-2	0.02	0.024 J	0.024 J	<0.11	<0.11 B	<0.97	0.025 J	<0.12 B
4-Methyl-2-pentanone	108-10-1	2.5	<1.1	<1.1	<1.1	<1.1	<9.7	<1.1	<1.2
Methyl t-Butyl Ether	1634-04-4	NE	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Naphthalene	91-20-3	12	0.016 B,J	<0.28	1.1	1.1	2.3 J	0.19 J	<0.31
n-Propylbenzene	103-65-1	56	0.0049 J	<0.028	0.44	0.26	1.6	0.043	<0.031
Styrene	100-42-5	4	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
1,1,2,2-Tetrachloroethane	79-34-5	0.0035	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Tetrachloroethene	127-18-4	0.06	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Tetrahydrofuran	109-99-9	NE	<0.55	<0.56	<0.55	<0.55	<4.8	<0.53	<0.61
Toluene	108-88-3	12	<0.027	<0.028	<0.028	0.059	0.57	<0.026	<0.031
1,2,3-Trichlorobenzene	87-61-6	0.46	<0.11	<0.11	<0.11	<0.11	<0.97	<0.11	<0.12
1,2,4-Trichlorobenzene	120-82-1	5	<0.11	<0.11	<0.11	<0.11	<0.97	<0.11	<0.12
1,1,1-Trichloroethane	71-55-6	2	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
1,1,2-Trichloroethane	79-00-5	0.02	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Trichloroethene	79-01-6	0.06	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
Trichlorofluoromethane	75-69-4	34	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
1,2,3-Trichloropropane	96-18-4	0.000017	<0.055	<0.056	<0.055	<0.055	<0.48	<0.053	<0.61
1,1,2-Trichlorotrifluoroethane	76-13-1	450	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
1,3,5-Trimethylbenzene	108-67-8	2	<0.027	0.051	2.1	1.1	5.6	0.066	<0.031
1,2,4-Trimethylbenzene	95-63-6	NE	0.0088 J	0.06	7.8	4	21	0.22	0.0061 J
Vinyl chloride	75-01-4	0.1	<0.027	<0.028	<0.028	<0.028	<0.24	<0.026	<0.031
m,p-Xylene	108-38-3, 106-42-3	210	0.0071 J	1.7	1.5	1.2	11	0.26	<0.062
o-Xylene	95-47-6	190	0.0044 J	0.01 J	0.093	0.12	1.3	0.023 J	<0.031
Total Xylene	1330-20-7	150	0.012 J	1.7	1.6	1.4	12	0.28	<0.092
F _{oc}	NA	NE	NT	NT	NT	NT	NT	NT	NT



TABLE 3
SOIL ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS
FORMER 4,000-GALLON GASOLINE UST SYSTEM
Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives	WS-SB-GP-18 (1.7'-3.3') (Duplicate 2)	WS-SB-GP-18 (6.7'-8.3')	WS-SB-GP-18 (13.3'-15')	WS-SB-GP-18 (16.7'-18.3')	WS-SB-GP-18 (23.3'-25')	WS-SB-GP-18 (28.3'-30')	WS-SB-GP-18 (31.7'-33.3')
			5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014
Date			5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014	5/8/2014
VOCs (8260B)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Acetone	67-64-1	25	<1.1	<1.1	<9.8	<1.2	<1.2	<1.3	<1.3
Benzene	71-43-2	0.03	<0.027	<0.027	0.12 J	0.057	0.025 J	0.073	0.01 J
Bromochloromethane	74-97-5	NE	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Bromodichloromethane	75-27-4	0.6	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Bromoform	75-25-2	0.8	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Bromomethane (methyl bromide)	74-83-9	0.2	<0.27	<0.27	<2.5	<0.3	<0.3	<0.33	<0.31
2-Butanone (Methyl ethyl ketone)	78-93-3	17	<1.1	<1.1	<9.8	<1.2	<1.2	<1.3	<1.3
n-Butyl Benzene	104-51-8	52	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
sec-Butyl Benzene	135-98-8	NE	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
tert-Butylbenzene	98-06-6	NE	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Carbon disulfide	75-15-0	32	<0.027	<0.027	<0.25	0.0059	<0.03	<0.033	<0.031
Carbon tetrachloride	56-23-5	0.07	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Chlorobenzene	108-90-7	1	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Chloroethane	75-00-3	NE	<0.27	<0.27	<2.5	<0.3	<0.3	<0.33 J	<0.31 J
Chloroform	67-66-3	0.6	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Chloromethane (methyl chloride)	74-87-3	NE	<0.053 B	<0.053 B	<0.49 B	<0.059	<0.059 B	<0.065	<0.063
2-Chlorotoluene	95-49-8	4	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
4-Chlorotoluene	106-43-4	NE	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,2-Dibromo-3-chloropropane	96-12-8	0.002	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Dibromochloromethane	124-48-1	0.4	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,2-Dibromoethane (EDB)	106-93-4	0.0004	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Dibromomethane	74-95-3	NE	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,2-Dichlorobenzene	95-50-1	17	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,4-Dichlorobenzene	106-46-7	NE	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,3-Dichlorobenzene	541-73-1	NE	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Dichlorodifluoromethane	75-71-8	43	<0.027	<0.027	<0.25	<0.03	0.0077 J	<0.033	<0.031
1,1-Dichloroethane	75-34-3	23	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,2-Dichloroethane	107-06-2	0.02	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
trans-1,2-Dichloroethene	156-60-5	0.7	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
cis-1,2-Dichloroethene	156-59-2	0.4	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,1-Dichloroethene	75-35-4	0.06	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
2,2-Dichloropropane	594-20-7	NE	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,2-Dichloropropane	78-87-5	0.03	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,3-Dichloropropane	142-28-9	0.83	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
cis-1,3-Dichloropropene ⁽⁴⁾	10061-01-5	0.004 ⁽⁵⁾	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
trans-1,3-Dichloropropene ⁽⁴⁾	10061-02-6	0.004 ⁽⁵⁾	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,1-Dichloropropene	563-58-6	NE	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Diisopropyl Ether	108-20-3	NE	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Ethylbenzene	100-41-4	13	<0.027	<0.027	1.5	0.25	0.085	0.39	0.0075 J
Hexachlorobutadiene	87-68-3	2.2	<0.11	<0.11	<0.98	<0.12	<0.12	<0.13	<0.13
n-Hexane	110-54-3	82	<0.027	<0.027	<0.25	0.015 J	<0.03	0.02 J	<0.031
2-Hexanone	591-78-6	0.16	<1.1	<1.1	<9.8	<1.2	<1.2	<1.3	<1.3
Isopropylbenzene	98-82-8	91	<0.027	<0.027	0.19 J	0.019 J	0.0077 J	0.044	<0.031
p-Isopropyltoluene	99-87-6	NE	<0.027	<0.027	0.059 J	0.0089 J	<0.03	0.02 J	<0.031
Methylene chloride	75-09-2	0.02	0.0091 B,J	0.011 B,J	0.1 J	0.017 B,J	0.016 B,J	0.025 J	<0.13 B
4-Methyl-2-pentanone	108-10-1	2.5	<1.1	<1.1	<9.8	<1.2	<1.2	<1.3	<1.3
Methyl t-Butyl Ether	1634-04-4	NE	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Naphthalene	91-20-3	12	<0.27	<0.27	<2.5	<0.3	<0.3	<0.33	<0.31
n-Propylbenzene	103-65-1	56	<0.027	<0.027	0.77	0.12	0.044	0.22	<0.031
Styrene	100-42-5	4	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,1,2,2-Tetrachloroethane	79-34-5	0.0035	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Tetrachloroethene	127-18-4	0.06	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Tetrahydrofuran	109-99-9	NE	<0.53	<0.53	<4.9	<0.59	<0.59	<0.65	<0.63
Toluene	108-88-3	12	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,2,3-Trichlorobenzene	87-61-6	0.46	<0.11	<0.11	<0.98	<0.12	<0.12	<0.13	<0.13
1,2,4-Trichlorobenzene	120-82-1	5	<0.11	<0.11	<0.98	<0.12	<0.12	<0.13	<0.13
1,1,1-Trichloroethane	71-55-6	2	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,1,2-Trichloroethane	79-00-5	0.02	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Trichloroethene	79-01-6	0.06	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
Trichlorofluoromethane	75-69-4	34	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,2,3-Trichloropropane	96-18-4	0.000017	<0.053	<0.053	<0.49	<0.059	<0.059	<0.065	<0.063
1,1,2-Trichlorotrifluoroethane	76-13-1	450	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
1,3,5-Trimethylbenzene	108-67-8	2	<0.027	<0.027	2.5	0.3	0.12	0.79	0.033
1,2,4-Trimethylbenzene	95-63-6	NE	<0.027	<0.027	6	1.1	0.39	2.2 J	0.048
Vinyl chloride	75-01-4	0.1	<0.027	<0.027	<0.25	<0.03	<0.03	<0.033	<0.031
m,p-Xylene	108-38-3, 106-42-3	210	<0.053	<0.053	3.8	0.93	0.38	2	0.15
o-Xylene	95-47-6	190	<0.027	<0.027	0.13 J	0.071	0.046	0.31	0.013 J
Total Xylene	1330-20-7	150	<0.08	<0.08	3.9	1	0.43	2.3	0.16
F _{oc}	NA	NE	NT	NT	NT	NT	NT	NT	NT



TABLE 4
SOIL ANALYTICAL RESULTS FOR LEAD AND pH
FORMER 4,000-GALLON GASOLINE UST SYSTEM
Wedron, Illinois

Analyte and USEPA Method	CAS Registry No.	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives pH = 4.5 to 6.24	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives pH = 6.25 to 8.74	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives pH = 8.75 to 9.0	WS-SB-GP-3 (4'-6')	WS-SB-GP-4 (4'-6')	WS-SB-GP-5 (2'-4')	WS-SB-GP-6 (0'-2')	WS-SB-GP-6 (Duplicate 1) (0'-2')	WS-SB-GP-14A (3.3'-5')	WS-SB-GP-14A (5'-6.6')	WS-SB-GP-14A (11.7'-13.3')	WS-SB-GP-14A (18.3'-20')	WS-SB-GP-14A (23.3'-25')	WS-SB-GP-14A (23.3'-25') (USEPA Split)	WS-SB-GP-14A (31.7'-33.3')	WS-SB-GP-15 (1.7'-3.3')
Lead (6010C)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lead	7439-92-1	23	107	282	6.0	9.0	6.8	8.9	7.3	8.5	7.2	5.2	4	6.2	2.5	6.7	6.5
pH	NA	NA	NA	NA	8.3 H6	8.4 H6,lq	8.4 H6	9.4 H6	8.3 H6	8 H6	8.1 H6	8.2 H6	8.2 H6	7.7 H6	7.67	8.3 H6	8.3 H6
F _{oc}	NA	NA	NA	NA	0.59 FOC	NT	0.660 FOC	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.7 FOC

Analyte and USEPA Method	CAS Registry No.	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives pH = 4.5 to 6.24	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives pH = 6.25 to 8.74	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives pH = 8.75 to 9.0	WS-SB-GP-15 (6.7'-8.3')	WS-SB-GP-15 (11.7'-13.3')	WS-SB-GP-15 (16.7'-18.3')	WS-SB-GP-15 (16.7'-18.3') (Duplicate 1)	WS-SB-GP-15 (23.3'-25')	WS-SB-GP-15 (26.7'-28.3')	WS-SB-GP-16 (3.3'-5')	WS-SB-GP-16 (5'-6.7')	WS-SB-GP-16 (10'-11.7')	WS-SB-GP-16 (15'-16.7')	WS-SB-GP-16 (21.7'-23.3')	WS-SB-GP-16 (28.3'-30')	WS-SB-GP-17 (3.3'-5')
Lead (6010C)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lead	7439-92-1	23	107	282	4.9	2.4	9.2	11.7	3.8	16.5	6.3	4.1	5.7	7.3	6.4	6	7.7
pH	NA	NA	NA	NA	8.5 H6	8.4 H6	8.2 H6	8.3 H6	8.2 H6	7.8 H6	7.8 H6	7.9 H6	8 H6	7.8 H6	7.9 H6	7.8 H6	8.1 H6
F _{oc}	NA	NA	NA	NA	NT	NT	0.59 FOC	NT	0.18 FOC	0.68 FOC	NT	NT	NT	NT	NT	NT	NT

Analyte and USEPA Method	CAS Registry No.	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives pH = 4.5 to 6.24	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives pH = 6.25 to 8.74	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives pH = 8.75 to 9.0	WS-SB-GP-17 (6.7'-8.3')	WS-SB-GP-17 (13.3'-15')	WS-SB-GP-17 (18.3'-20')	WS-SB-GP-17 (21.7'-23')	WS-SB-GP-17 (26.7'-28.3')	WS-SB-GP-17 (31.7'-33.3')	WS-SB-GP-18 (1.7'-3.3')	WS-SB-GP-18 (Duplicate 2) (1.7'-3.3')	WS-SB-GP-18 (6.7'-8.3')	WS-SB-GP-18 (13.3'-15')	WS-SB-GP-18 (16.7'-18.3')	WS-SB-GP-18 (23.3'-25')	WS-SB-GP-18 (28.3'-30')	WS-SB-GP-18 (31.7'-33.3')
Lead (6010C)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lead	7439-92-1	23	107	282	7.4	5.5	5.3	5.5	4.5	5.1	8.3	9	5.6	6.3	2.6	2.6	10.2	6.4
pH	NA	NA	NA	NA	8.1 H6	8.1 H6	8.2 H6	7.7 H6	8.2 H6	7.8 H6	8.5 H6	8.4 H6	8.3 H6	7.9 H6	8.2 H6	8 H6	7.7 H6	8 H6
F _{oc}	NA	NA	NA	NA	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT



**TABLE 5
SOIL ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS
FORMER 6,000-GALLON GASOLINE UST
Wedron, Illinois**

Analyte	CAS Registry No.	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives	Former 6,000-Gallon Gasoline UST						
			WS-SB-GP-07 (2'-4')	WS-SB-GP-07 (8'-9')	WS-SB-GP-08 (2'-4')	WS-SB-GP-08 (8'-10')	WS-SB-GP-09 (8'-10')	WS-SB-GP-10 (8'-10')	WS-SB-GP-11 (8'-10')
			Date	12/3/2013	12/3/2013	12/3/2013	12/3/2013	12/3/2013	12/3/2013
VOCs (8260B)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Acetone	67-64-1	25	<1.1 J	<1.2 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.2 J
Benzene	71-43-2	0.03	0.029	<0.029	0.0087 J	<0.028	<0.027 J	<0.026 J	<0.03
Bromochloromethane	74-97-5	NE	<0.028	<0.029	<0.027	<0.028	<0.027 J	<0.026 J	<0.03
Bromodichloromethane	75-27-4	0.6	<0.028	<0.029	<0.027	<0.028	<0.027	<0.026	<0.03
Bromoform	75-25-2	0.8	<0.028 J	<0.029 J	<0.027 J	<0.028 J	<0.027 J	<0.026 J	<0.03 J
Bromomethane (methyl bromide)	74-83-9	0.2	<0.28 J	<0.29 J	<0.27 J	<0.28 J	<0.27 J	<0.26 J	<0.3 J
2-Butanone (Methyl ethyl ketone)	78-93-3	17	<1.1 J	<1.2 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.2 J
n-Butyl Benzene	104-51-8	52	0.11 J,HC	<0.029	0.021 J	<0.028	<0.027 J	<0.026 J	<0.03
sec-Butyl Benzene	135-98-8	NE	0.014 J	<0.029	<0.027	<0.028	<0.027 J	<0.026 J	<0.03
tert-Butylbenzene	98-06-6	NE	0.094 J	<0.029	0.03	<0.028	<0.027 J	<0.026 J	<0.03
Carbon disulfide	75-15-0	32	<0.028	<0.029	<0.027	<0.028	<0.027	<0.026	<0.03
Carbon tetrachloride	56-23-5	0.07	<0.028	<0.029	<0.027	<0.028	<0.027	<0.026	<0.03
Chlorobenzene	108-90-7	1	<0.028	<0.029	<0.027	<0.028	<0.027	<0.026	<0.03
Chloroethane	75-00-3	NE	<0.28	<0.29	<0.27	<0.28	<0.27	<0.26	<0.3
Chloroform	67-66-3	0.6	<0.028	<0.029	<0.027	<0.028	<0.027 J	<0.026 J	<0.03
Chloromethane (methyl chloride)	74-87-3	NE	<0.057	<0.059	<0.054	<0.057	<0.053	<0.053	<0.061
2-Chlorotoluene	95-49-8	4	<0.028 J	<0.029	<0.027	<0.028	<0.027 J	<0.026 J	<0.03
4-Chlorotoluene	106-43-4	NE	<0.028 J	<0.029	<0.027	<0.028 U	<0.027 J	<0.026 J	<0.03
1,2-Dibromo-3-chloropropane	96-12-8	0.002	<0.028	<0.029	<0.027	<0.028 U	<0.027	<0.026	<0.03
Dibromochloromethane	124-48-1	0.4	<0.028	<0.029	<0.027	<0.028 U	<0.027	<0.026	<0.03
1,2-Dibromoethane (EDB)	106-93-4	0.0004	<0.028	<0.029	<0.027	<0.028 U	<0.027	<0.026	<0.03
Dibromomethane	74-95-3	NE	<0.028	<0.029	<0.027	<0.028 U	<0.027	<0.026	<0.03
1,2-Dichlorobenzene	95-50-1	17	<0.028	<0.029	<0.027	<0.028 U	<0.027 J	<0.026 J	<0.03
1,4-Dichlorobenzene	106-46-7	NE	<0.028	<0.029	<0.027	<0.028 U	<0.027 J	<0.026 J	<0.03
1,3-Dichlorobenzene	541-73-1	NE	<0.028 J	<0.029	<0.027	<0.028 U	<0.027 J	<0.026 J	<0.03
Dichlorodifluoromethane	75-71-8	43	<0.028	<0.029	<0.027	<0.028 U	<0.027	<0.026	<0.03
1,1-Dichloroethane	75-34-3	23	<0.028	<0.029	<0.027	<0.028 U	<0.027 J	<0.026 J	<0.03
1,2-Dichloroethane	107-06-2	0.02	<0.028	<0.029	<0.027	<0.028 U	<0.027 J	<0.026 J	<0.03
trans-1,2-Dichloroethene	156-60-5	0.7	<0.028	<0.029	<0.027	<0.028 U	<0.027 J	<0.026 J	<0.03
cis-1,2-Dichloroethene	156-59-2	0.4	<0.028	<0.029	<0.027	<0.028 U	<0.027 J	<0.026 J	<0.03
1,1-Dichloroethene	75-35-4	0.06	<0.028 J	<0.029	<0.027	<0.028 U	<0.027	<0.026	<0.03
2,2-Dichloropropane	594-20-7	NE	<0.028	<0.029	<0.027	<0.028	<0.027	<0.026	<0.03
1,2-Dichloropropane	78-87-5	0.03	<0.028	<0.029	<0.027	<0.028	<0.027	<0.026	<0.03
1,3-Dichloropropane	142-28-9	0.83	<0.028	<0.029	<0.027	<0.028	<0.027	<0.026	<0.03
cis-1,3-Dichloropropene ⁽⁴⁾	10061-01-5	0.004 ⁽⁵⁾	<0.028	<0.029	<0.027	<0.028	<0.027	<0.026	<0.03
trans-1,3-Dichloropropene ⁽⁴⁾	10061-02-6	0.004 ⁽⁵⁾	<0.028	<0.029	<0.027	<0.028	<0.027	<0.026	<0.03
1,1-Dichloropropene	563-58-6	NE	<0.028	<0.029	<0.027	<0.028	<0.027 J	<0.026 J	<0.03
Diisopropyl Ether	108-20-3	NE	<0.028	<0.029	<0.027	<0.028	<0.027 J	<0.026 J	<0.03
Ethylbenzene	100-41-4	13	0.13	0.0053 J	0.064 HC	<0.028	<0.027 J	<0.026 J	<0.03
Hexachlorobutadiene	87-68-3	2.2	<0.11 J	0.12 J	<0.11	<0.028	0.11 J	<0.11 J	<0.12
n-Hexane	110-54-3	82	0.068 J	0.014 J	0.026 J	<0.028 J	<0.027 J	<0.026 J	<0.03 J
2-Hexanone	591-78-6	0.16	<1.1	<1.2	<1.1	<1.1	<1.1	<1.1	<1.2
Isopropylbenzene	98-82-8	91	0.017 J	<0.029	<0.027	<0.028	<0.027	<0.026 J	<0.03
p-Isopropyltoluene	99-87-6	NE	0.0091 J	<0.029	<0.027	<0.028	<0.027	<0.026 J	<0.03
Methylene chloride	75-09-2	0.02	<0.11	<0.12	<0.11	<0.11	<0.11 J	<0.11 J	<0.12
4-Methyl-2-pentanone	108-10-1	2.5	<1.1	<1.2	<1.1	<1.1	<1.1	<1.1	<1.2
Methyl t-Butyl Ether	1634-04-4	NE	<0.028 J	<0.029 J	<0.027 J	<0.028 J	<0.027 J	<0.026 J	<0.03 J
Naphthalene	91-20-3	12	0.73 J	<0.29 J	0.19 J	<0.28 J	<0.27 J	<0.26 J	<0.3 J
n-Propylbenzene	103-65-1	56	0.066 J	<0.029	0.029	<0.028	<0.027 J	<0.026 J	<0.03
Styrene	100-42-5	4	<0.028	<0.029	<0.027	<0.028	<0.027 J	<0.026 J	<0.03
1,1,2,2-Tetrachloroethane	79-34-5	0.0035	<0.028	<0.029	<0.027	<0.028	<0.027 J	<0.026 J	<0.03
Tetrachloroethene	127-18-4	0.06	<0.028	<0.029	<0.027	<0.028	<0.027	<0.026 J	<0.03
Tetrahydrofuran	109-99-9	NE	<0.57	<0.59	<0.54	<0.57 U	<0.53 J	<0.53 J	<0.61
Toluene	108-88-3	12	0.34	0.012 J	0.14	0.0057 J	0.0064 HC,J	0.0074 HC,J	0.0067 J
1,2,3-Trichlorobenzene	87-61-6	0.46	<0.11	<0.12	<0.11	<0.11	<0.11 J	<0.11 J	<0.12
1,2,4-Trichlorobenzene	120-82-1	5	<0.11	<0.12	<0.11	<0.11	<0.11 J	<0.11 J	<0.12
1,1,1-Trichloroethane	71-55-6	2	<0.028	<0.029	<0.027	<0.028	<0.027 J	<0.026 J	<0.03
1,1,2-Trichloroethane	79-00-5	0.02	<0.028 J	<0.029	<0.027	<0.028	<0.027	<0.026	<0.03
Trichloroethene	79-01-6	0.06	<0.028	<0.029	<0.027	<0.028	<0.027	<0.026 J	<0.03
Trichlorofluoromethane	75-69-4	34	<0.028 J	<0.029 J	<0.027 J	<0.028 J	<0.027 J	<0.026	<0.03
1,2,3-Trichloropropane	96-18-4	0.000017	<0.057	<0.029	<0.054	<0.057	<0.053	<0.053 J	<0.061
1,1,2-Trichlorotrifluoroethane	76-13-1	450	<0.028 J	<0.029	<0.027	<0.028	<0.027 J	<0.026 J	<0.03
1,3,5-Trimethylbenzene	108-67-8	2	0.17 J	<0.029	0.063	<0.028	<0.027 J	<0.026 J	<0.03
1,2,4-Trimethylbenzene	95-63-6	NE	0.64 J	0.013 J	0.22	<0.028	<0.027 J	<0.026	<0.03
Vinyl chloride	75-01-4	0.1	<0.028	<0.029	<0.027	<0.028	<0.027	<0.026	<0.03
m,p-Xylene	108-38-3, 106-42-3	210	0.55	<0.059 B,J	0.28	<0.057	<0.053 J,B,HC	<0.053 J,B,HC	0.0055 J,B
o-Xylene	95-47-6	190	0.29	<0.029 B,J	0.091	<0.028	<0.027 J,B,HC	<0.026 J,B,HC	<0.03 B,J
Total Xylene	1330-20-7	150	NR	NR	NR	NR	NR	NR	NR
F _{oc}	NA	NE	NT	NT	NT	0.17 FOC	0.96 FOC	NT	NT



TABLE 6
SOIL ANALYTICAL RESULTS FOR LEAD AND pH
FORMER 6,000-GALLON GASOLINE UST
Wedron, Illinois

Analyte and USEPA Method	CAS Registry No.	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives pH = 4.5 to 6.24	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives pH = 6.25 to 8.74	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives pH = 8.75 to 9.0	WS-SB-GP-7 (2'-4')	WS-SB-GP-7 (8'-9')	WS-SB-GP-8 (2'-4')	WS-SB-GP-8 (8'-10')	WS-SB-GP-9 (8'-10')	WS-SB-GP-10 (8'-10')	WS-SB-GP-11 (8'-10')
Lead (6010C)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lead	7439-92-1	23	107	282	53.1	4.7	4.0	1.2	6.3	18.4	9.2
pH	NA	NA	NA	NA	8.0 H6	8.3 H6	8.4 H6	8.5 H6	8.5 H6	7.6 H6	8.2 H6
F _{oc}	NA	NA	NA	NA	NT	NT	NT	0.17 FOC	0.96 FOC	NT	NT



TABLE 7
SOIL ANALYTICAL RESULTS
WGS-GP-10 AREA
Wedron, Illinois

Analyte	CAS Registry No.	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives	WGS-GP-10 Area							
			WS-SB-GP-12 (6'-8')	WS-SB-GP-12 (12'-15')	WS-SB-GP-13 (6'-8')	WS-SB-GP-13 (13'-15')	WS-SB-GP-13 (13'-15') (Duplicate 2)	WS-SB-GP-13 (156''-180'') (USEPA Split)	WS-SB-GP-14 (6'-8')	WS-SB-GP-14 (12'-15')
			12/4/2013	12/4/2013	12/4/2013	12/4/2013	12/4/2013	12/4/2013	12/4/2013	12/4/2013
VOCs (8260B)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Acetone	67-64-1	25	<1.1 J	<1.1 J	<1.2 J	<1.2 J	<1.2 J	0.04 J	<0.99 J	<1
Benzene	71-43-2	0.03	<0.027 J	0.016 J	<0.029 J	0.030 J	0.098 J	<0.0042	<0.025 J	0.0046 J
Bromochloromethane	74-97-5	NE	<0.027 J	<0.028	<0.029 J	<0.029	<0.029	NT	<0.025	<0.025
Bromodichloromethane	75-27-4	0.6	<0.027	<0.028	<0.029	<0.029	<0.029	<0.0042	<0.025	<0.025
Bromoform	75-25-2	0.8	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	<0.0042	<0.025 J	<0.025 J
Bromomethane (methyl bromide)	74-83-9	0.2	<0.027 J	<0.028 J	<0.029 J	<0.29 J	<0.29 J	<0.0042	<0.25 J	<0.25 J
2-Butanone (Methyl ethyl ketone)	78-93-3	17	<1.1 J	<1.1 J	<1.2 J	<1.1 J	<1.2 J	0.0058 J	<0.99 J	<1 J
n-Butyl Benzene	104-51-8	52	<0.027 J	0.17 J,HC	<0.029 J	1 HC	0.18 J,HC	NT	0.01 J,HC	0.0097 J,HC
sec-Butyl Benzene	135-98-8	NE	<0.027 J	0.038 J	<0.029 J	0.39 J	0.095 J	NT	<0.025 J	0.0092 J
tert-Butylbenzene	98-06-6	NE	<0.027 J	0.29 J	<0.029 J	1.1 J	0.94 J	NT	0.015 J	<0.025 J
Carbon disulfide	75-15-0	32	<0.027	<0.028	<0.029	<0.029	<0.029	0.00099 J	<0.025	<0.025
Carbon tetrachloride	56-23-5	0.07	<0.027	<0.028	<0.029	<0.029	<0.029	<0.0042	<0.025	<0.025
Chlorobenzene	108-90-7	1	<0.027	<0.028	<0.029	<0.029	<0.029	<0.0042	<0.025	<0.025
Chloroethane	75-00-3	NE	<0.27	<0.28	<0.29	0.29	0.29	<0.0042	0.25	0.25
Chloroform	67-66-3	0.6	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	<0.0042	<0.025 J	<0.025 J
Chloromethane (methyl chloride)	74-87-3	NE	<0.054	<0.056	<0.059	0.057	<0.059	<0.0042	0.05	0.051
2-Chlorotoluene	95-49-8	4	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	NT	<0.025 J	<0.025 J
4-Chlorotoluene	106-43-4	NE	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	NT	<0.025 J	<0.025 J
1,2-Dibromo-3-chloropropane	96-12-8	0.002	<0.027	<0.028	<0.029	<0.029	<0.029	NT	<0.025	<0.025
Dibromochloromethane	124-48-1	0.4	<0.027	<0.028	<0.029	<0.029	<0.029	<0.0042	<0.025	<0.025
1,2-Dibromoethane (EDB)	106-93-4	0.0004	<0.027	<0.028	<0.029	<0.029	<0.029	<0.0042	<0.025	<0.025
Dibromomethane	74-95-3	NE	<0.027	<0.028	<0.029	<0.029	<0.029	NT	<0.025	<0.025
1,2-Dichlorobenzene	95-50-1	17	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	<0.0042	<0.025 J	<0.025 J
1,4-Dichlorobenzene	106-46-7	NE	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	<0.0042	<0.025 J	<0.025 J
1,3-Dichlorobenzene	541-73-1	NE	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	<0.0042	<0.025 J	<0.025 J
Dichlorodifluoromethane	75-71-8	43	<0.027	<0.028	<0.029	<0.029	<0.029 B,J	<0.0042	<0.025 B,J	<0.025
1,1-Dichloroethane	75-34-3	23	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	<0.0042	<0.025 J	<0.025 J
1,2-Dichloroethane	107-06-2	0.02	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	<0.0042	<0.025 J	<0.025 J
trans-1,2-Dichloroethene	156-60-5	0.7	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	<0.0042	<0.025 J	<0.025 J
cis-1,2-Dichloroethene	156-59-2	0.4	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	<0.0042	<0.025 J	<0.025 J
1,1-Dichloroethene	75-35-4	0.06	<0.027	<0.028	<0.029	<0.029	<0.029	NT	<0.025	<0.025
2,2-Dichloropropane	594-20-7	NE	<0.027	<0.028	<0.029	<0.029	<0.029	NT	<0.025	<0.025
1,2-Dichloropropane	78-87-5	0.03	<0.027	<0.028	<0.029	<0.029	<0.029	NT	<0.025	<0.025
1,3-Dichloropropane	142-28-9	0.83	<0.027	<0.028	<0.029	<0.029	<0.029	NT	<0.025	<0.025
cis-1,3-Dichloropropene ⁽⁴⁾	10061-01-5	0.004 ⁽⁵⁾	<0.027 J	<0.028	<0.029	<0.029	<0.029	<0.0042	<0.025	<0.025
trans-1,3-Dichloropropene ⁽⁴⁾	10061-02-6	0.004 ⁽⁵⁾	<0.027 J	<0.028	<0.029	<0.029	<0.029	<0.0042	<0.025	<0.025
1,1-Dichloropropene	563-58-6	NE	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	NT	<0.025 J	<0.025 J
Diisopropyl Ether	108-20-3	NE	<0.027 J	0.82 J,HC	<0.029 J	<0.029 J	<0.029 J	NT	<0.025 J	<0.025 J
Ethylbenzene	100-41-4	13	0.007 J,HC	0.82 HC	0.0053 J,HC	0.28 J,HC	7.8	<0.0042	0.035 J,HC	0.017 J,HC
Hexachlorobutadiene	87-68-3	2.2	<0.11 J	<0.11 J	<0.12 J	<0.11 J	<0.12 J	NT	<0.099 J	<0.1 J
n-Hexane	110-54-3	82	<0.027 J	0.084 J	<0.029 J	0.12 J	0.64 J	NT	<0.025 J	0.011 J
2-Hexanone	591-78-6	0.16	<1.1	<1.1	<1.2	<1.1	<1.2	<0.021	<0.99	<1
Isopropylbenzene	98-82-8	91	<0.027 J	0.13 J	<0.029 J	0.6 J	0.73 J	0.0029 J	<0.025 J	<0.025 J
p-Isopropyltoluene	99-87-6	NE	<0.027 J	<0.028 J	<0.029 J	0.12 J	0.14 J	NT	<0.025 J	<0.025 J
Methylene chloride	75-09-2	0.02	<0.11 J	<0.11 J	<0.12 J	<0.11 J	<0.12 J	<0.0042	<0.099 J	<0.1 J
4-Methyl-2-pentanone	108-10-1	2.5	<1.1	<1.1	<1.2	<1.1	<1.2	<0.021	<0.99	<1
Methyl t-Butyl Ether	1634-04-4	NE	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	<0.0084	<0.025 J	<0.025 J
Naphthalene	91-20-3	12	<0.27 J	0.11 J,HC	0.022 J,B,HC	0.72 J,HC	0.44 J,HC	<3.6	0.066 J,HC	0.037 J,B,HC
n-Propylbenzene	103-65-1	56	<0.027 J	0.56 J,HC	<0.029 J	2.6 D	2.3 J,HC	NT	0.016 J,HC	0.011 J,HC
Styrene	100-42-5	4	<0.027 J	<0.028	<0.029 J	<0.029 J	<0.029 J	<0.0042	<0.025 J	<0.025 J
1,1,2,2-Tetrachloroethane	79-34-5	0.0035	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	<0.0042	<0.025 J	<0.025 J
Tetrachloroethene	127-18-4	0.06	<0.027	<0.028	<0.029	<0.029	<0.029	<0.0042	<0.025	<0.025
Tetrahydrofuran	109-99-9	NE	<0.54 J	<0.56 J	<0.59 J	<0.57 J	<0.59 J	NT	<0.5 J	<0.51 J
Toluene	108-88-3	12	0.0075 HC,J	0.018 HC,J	0.0083 HC,J	0.017 HC,J	0.023 HC,J	<0.0042	0.038 HC	0.031 HC
1,2,3-Trichlorobenzene	87-61-6	0.46	<0.11 J	<0.11 J	<0.12 J	<0.11 J	<0.12 J	NT	<0.099 J	0.1 J
1,2,4-Trichlorobenzene	120-82-1	5	<0.11 J	<0.11 J	<0.12 J	<0.11 J	<0.12 J	<0.0042	0.099 J	0.1 J
1,1,1-Trichloroethane	71-55-6	2	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	<0.0042	<0.025 J	<0.025 J
1,1,2-Trichloroethane	79-00-5	0.02	<0.027	<0.028	<0.029 J	<0.029	<0.029	<0.0042	<0.025	<0.025
Trichloroethene	79-01-6	0.06	<0.027 J	<0.028 J	<0.029 J	<0.029	<0.029	<0.0042	<0.025	<0.025
Trichlorofluoromethane	75-69-4	34	<0.027	<0.028	<0.029	<0.029 J	<0.029 J	<0.0042	<0.025 J	<0.025 J
1,2,3-Trichloropropane	96-18-4	0.000017	<0.054 J	0.056 J	<0.059 J	<0.057	<0.059	NT	0.05	0.051
1,1,2-Trichlorotrifluoroethane	76-13-1	450	<0.027 J	<0.028 J	<0.029 J	<0.029 J	<0.029 J	NT	<0.025 J	<0.025 J
1,3,5-Trimethylbenzene	108-67-8	2	<0.027 J	0.22 J,HC	<0.029 J	1.4 J,HC	1.6 J,HC	NT	0.026 J,HC	0.018 J,HC
1,2,4-Trimethylbenzene	95-63-6	NE	0.008 HC,J	2 J,HC	0.017 HC,J	7.1 D	6.4	NT	0.1 J,HC	0.062 J,HC
Vinyl chloride	75-01-4	0.1	<0.027	<0.028	<0.029	<0.029	<0.029	<0.0042	<0.025	<0.025
m,p-Xylene	108-38-3, 106-42-3	210	0.019 J,B,HC	0.088 J,HC	0.015 J,B,HC	0.67 J,HC	0.3 J,HC	NT	0.12 J,HC	0.074 J,HC
o-Xylene	95-47-6	190	<0.027 J,B,HC	<0.028 J,B,HC	<0.029 J,B,HC	0.035 J,HC	0.027 J,B,HC	NT	0.036 J,HC	<0.025 J,B,HC
Total Xylene	1330-20-7	150	NR	NR	NR	NR	NR	<0.0084	NR	NR
F _{oc}	NA	NE	NT	NT	NT	0.78 FOC	NT	NT	NT	0.38 FOC



**TABLE 8
SOIL ANALYTICAL RESULTS
PIT 2 RECLAMATION AREA
Wedron, Illinois**

Analyte	CAS Registry No.	TACO Tier I Soil Component of Groundwater Ingestion Remediation Objectives	Pit 2 Reclamation Area						
			WS-SB-GP-19 (12'-14')	WS-SB-GP-19 (18'-20')	WS-SB-GP-20 (10'-12')	WS-SB-GP-20 (18'-20')	WS-SB-GP-20 (18'-20') (Duplicate 3)	WS-SB-GP-21 (6'-8')	WS-SB-GP-21 (16'-18')
Date			5/9/2014	5/9/2014	5/9/2014	5/9/2014	5/9/2014	5/9/2014	5/9/2014
VOCs (8260B)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Acetone	67-64-1	25	<1.1	<1.1	<1.1	<1	<1	<1.1	<1.1
Benzene	71-43-2	0.03	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Bromochloromethane	74-97-5	NE	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Bromodichloromethane	75-27-4	0.6	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Bromoform	75-25-2	0.8	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Bromomethane (methyl bromide)	74-83-9	0.2	<0.28	<0.27	<0.27	<0.25	<0.25	<0.29	<0.27
2-Butanone (Methyl ethyl ketone)	78-93-3	17	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
n-Butyl Benzene	104-51-8	52	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
sec-Butyl Benzene	135-98-8	NE	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
tert-Butylbenzene	98-06-6	NE	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Carbon disulfide	75-15-0	32	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Carbon tetrachloride	56-23-5	0.07	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Chlorobenzene	108-90-7	1	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Chloroethane	75-00-3	NE	<0.28 J	<0.27	<0.27 J	<0.25	<0.25 J	<0.29	<0.27
Chloroform	67-66-3	0.6	<0.028	<0.027 J	<0.027	<0.025	<0.025	<0.029	<0.027
Chloromethane (methyl chloride)	74-87-3	NE	<0.055 B	<0.054	<0.054	<0.05	<0.051	<0.057	<0.053
2-Chlorotoluene	95-49-8	4	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
4-Chlorotoluene	106-43-4	NE	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,2-Dibromo-3-chloropropane	96-12-8	0.002	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Dibromochloromethane	124-48-1	0.4	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,2-Dibromoethane (EDB)	106-93-4	0.0004	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Dibromomethane	74-95-3	NE	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,2-Dichlorobenzene	95-50-1	17	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,4-Dichlorobenzene	106-46-7	NE	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,3-Dichlorobenzene	541-73-1	NE	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Dichlorodifluoromethane	75-71-8	43	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,1-Dichloroethane	75-34-3	23	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,2-Dichloroethane	107-06-2	0.02	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
trans-1,2-Dichloroethene	156-60-5	0.7	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
cis-1,2-Dichloroethene	156-59-2	0.4	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,1-Dichloroethene	75-35-4	0.06	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
2,2-Dichloropropane	594-20-7	NE	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,2-Dichloropropane	78-87-5	0.03	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,3-Dichloropropane	142-28-9	0.83	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
cis-1,3-Dichloropropene ⁽⁴⁾	10061-01-5	0.004 ⁽⁵⁾	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
trans-1,3-Dichloropropene ⁽⁴⁾	10061-02-6	0.004 ⁽⁵⁾	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,1-Dichloropropene	563-58-6	NE	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Diisopropyl Ether	108-20-3	NE	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Ethylbenzene	100-41-4	13	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Hexachlorobutadiene	87-68-3	2.2	<0.11 J	<0.11	<0.11	<0.1	<0.1	<0.11	<0.11
n-Hexane	110-54-3	82	<0.028 J	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
2-Hexanone	591-78-6	0.16	<1.1	<1.1	<1.1	<1	<1	<1.1	<1.1
Isopropylbenzene	98-82-8	91	<0.028 J	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
p-Isopropyltoluene	99-87-6	NE	<0.028 J	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Methylene chloride	75-09-2	0.02	<0.11 B	<0.11	<0.11	<0.1	<0.1	<0.11	<0.11
4-Methyl-2-pentanone	108-10-1	2.5	<1.1	<1.1	<1.1	<1	<1	<1.1	<1.1
Methyl t-Butyl Ether	1634-04-4	NE	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Naphthalene	91-20-3	12	<0.28	<0.27	<0.27	<0.25	<0.25	<0.29	<0.27
n-Propylbenzene	103-65-1	56	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Styrene	100-42-5	4	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,1,2,2-Tetrachloroethane	79-34-5	0.0035	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Tetrachloroethene	127-18-4	0.06	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Tetrahydrofuran	109-99-9	NE	<0.55	<0.54	<0.54	<0.5	<0.51	<0.57	<0.53
Toluene	108-88-3	12	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,2,3-Trichlorobenzene	87-61-6	0.46	<0.11	<0.11	<0.11	<0.1	<0.1	<0.11	<0.11
1,2,4-Trichlorobenzene	120-82-1	5	<0.11	<0.11	<0.11	<0.1	<0.1	<0.11	<0.11
1,1,1-Trichloroethane	71-55-6	2	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,1,2-Trichloroethane	79-00-5	0.02	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Trichloroethene	79-01-6	0.06	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Trichlorofluoromethane	75-69-4	34	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,2,3-Trichloropropane	96-18-4	0.000017	<0.055	<0.054	<0.054	<0.05	<0.051	<0.057	<0.053
1,1,2-Trichlorotrifluoroethane	76-13-1	450	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,3,5-Trimethylbenzene	108-67-8	2	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
1,2,4-Trimethylbenzene	95-63-6	NE	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Vinyl chloride	75-01-4	0.1	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
m,p-Xylene	108-38-3, 106-42-3	210	<0.055	<0.054	<0.054	0.0045 J	<0.051	<0.057	<0.053
o-Xylene	95-47-6	190	<0.028	<0.027	<0.027	<0.025	<0.025	<0.029	<0.027
Total Xylene	1330-20-7	150	<0.083	<0.081	<0.082	<0.076	<0.076	<0.086	<0.08
F _{oc}	NA	NE	2.2 FOC	2.1 FOC	NT	NT	NT	0.56 FOC	0.95 FOC



**TABLE 10
GROUNDWATER ANALYTICAL RESULTS
PIT 2 AREA
Wedron, Illinois**

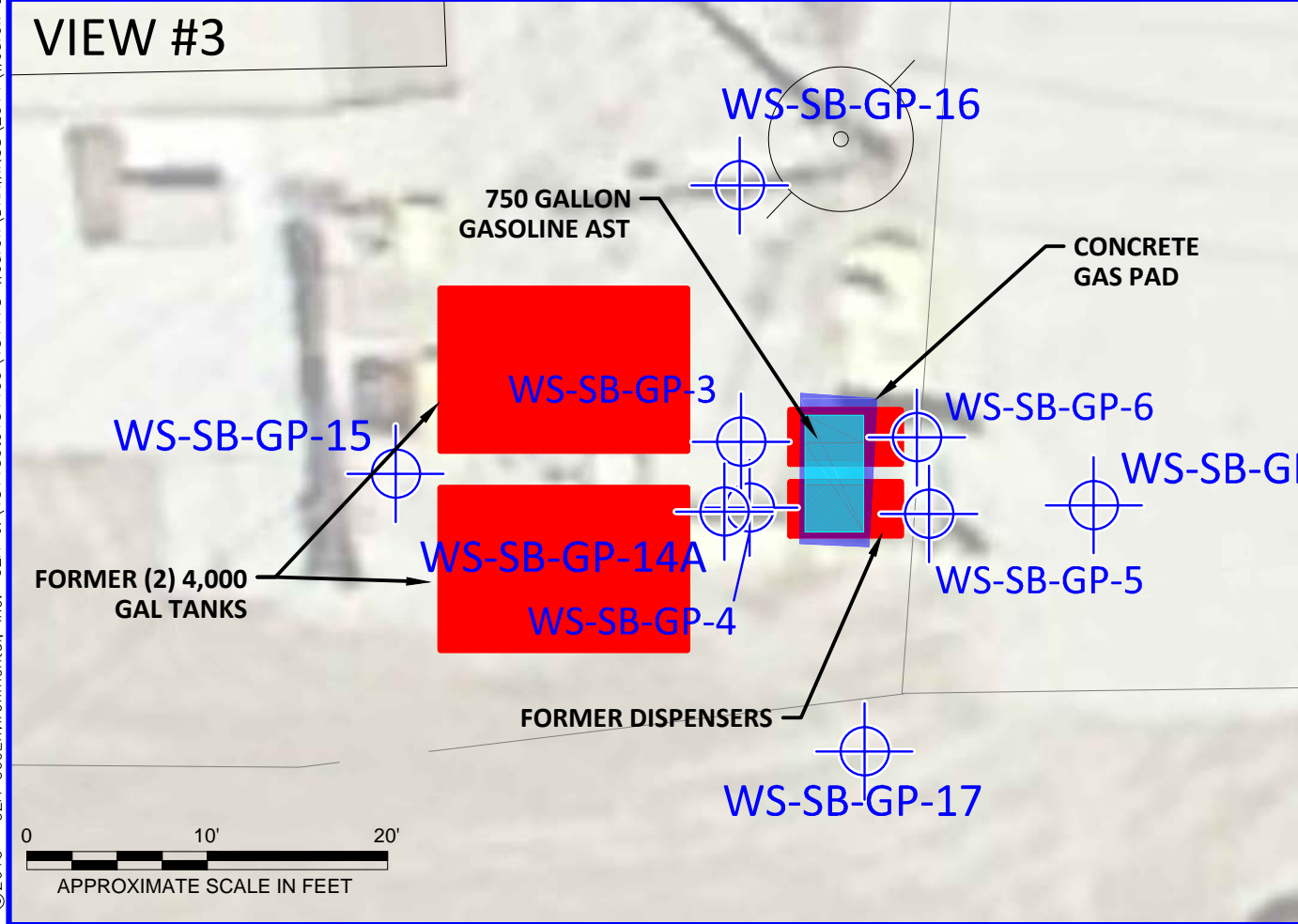
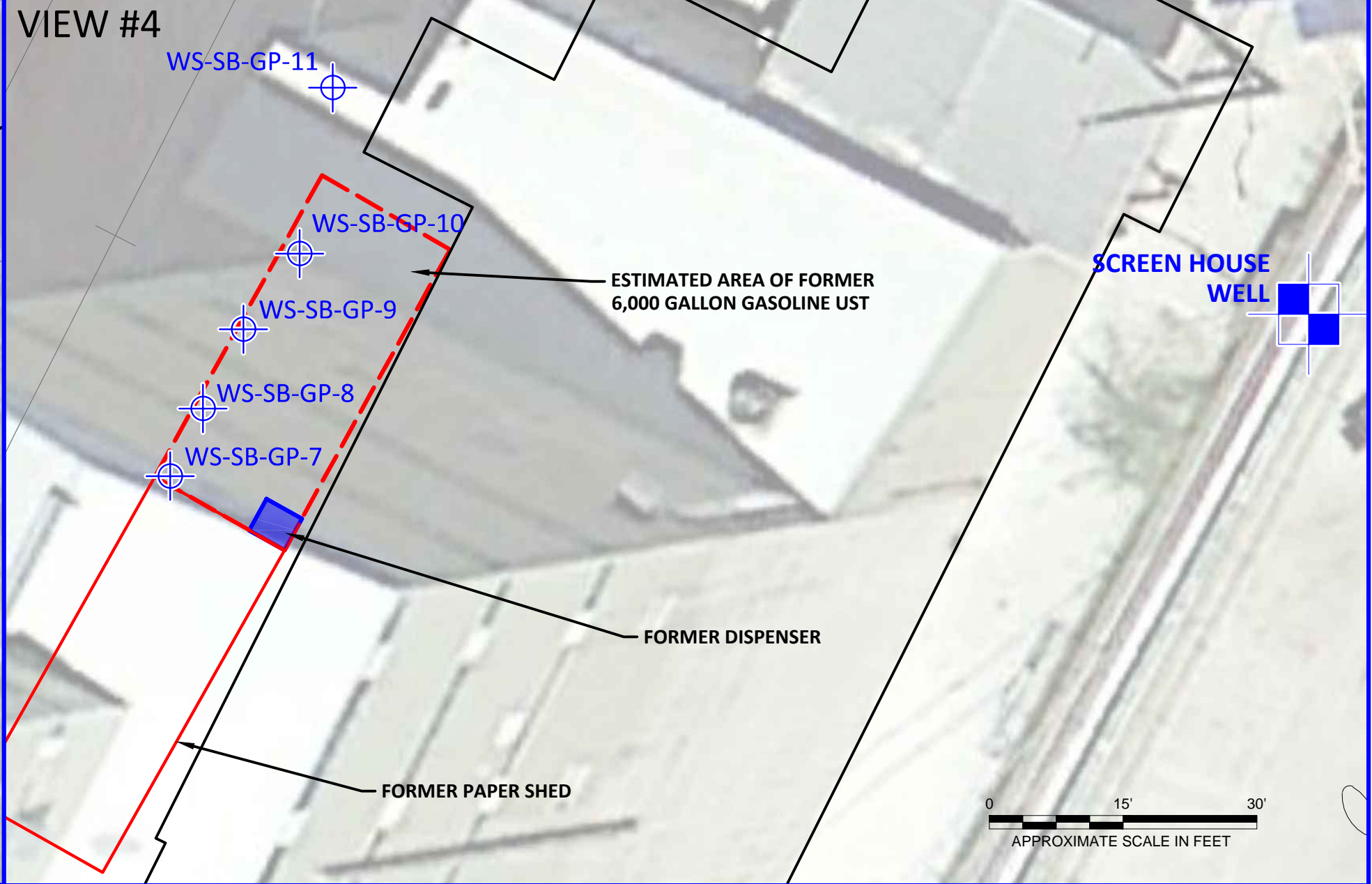
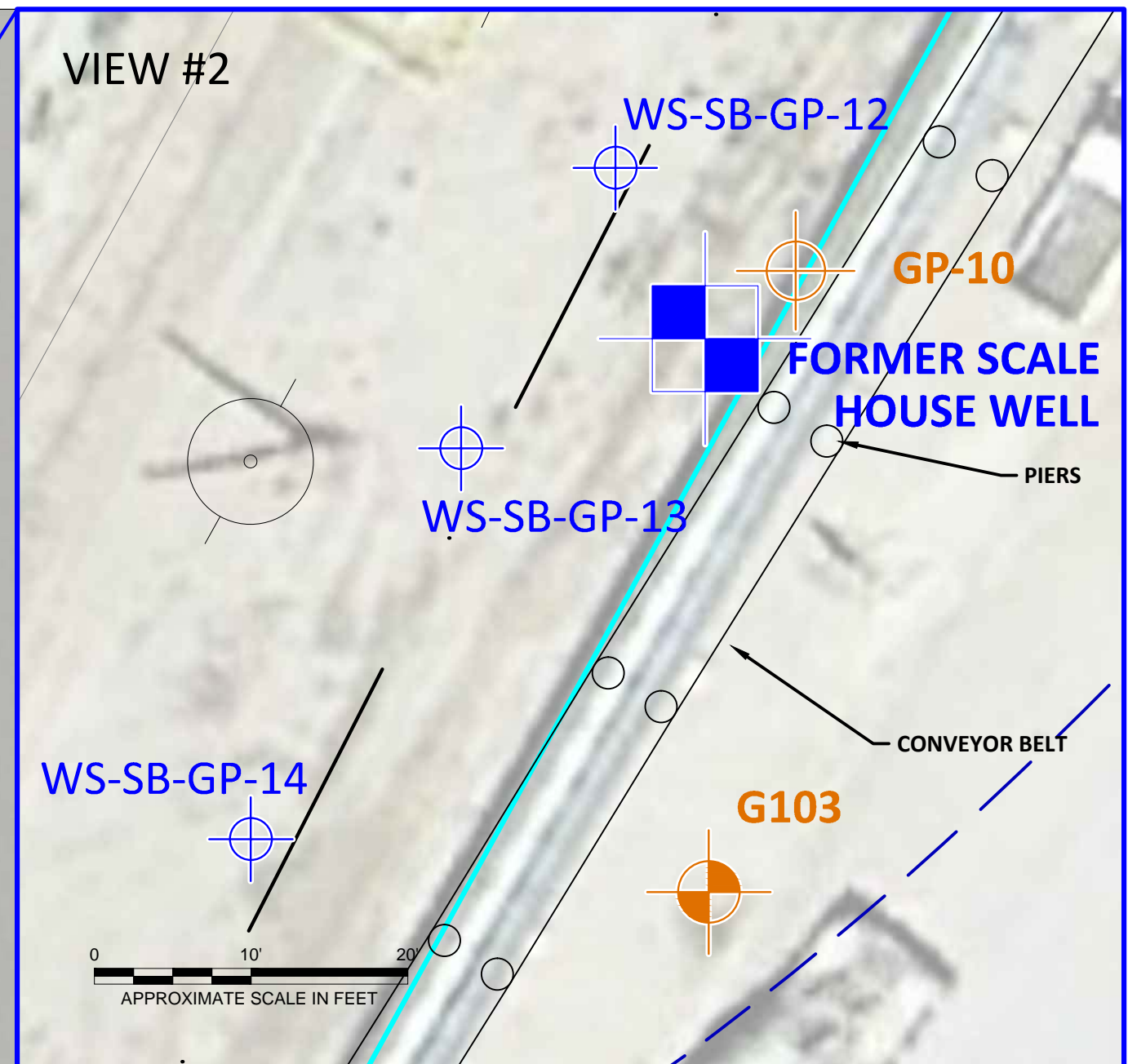
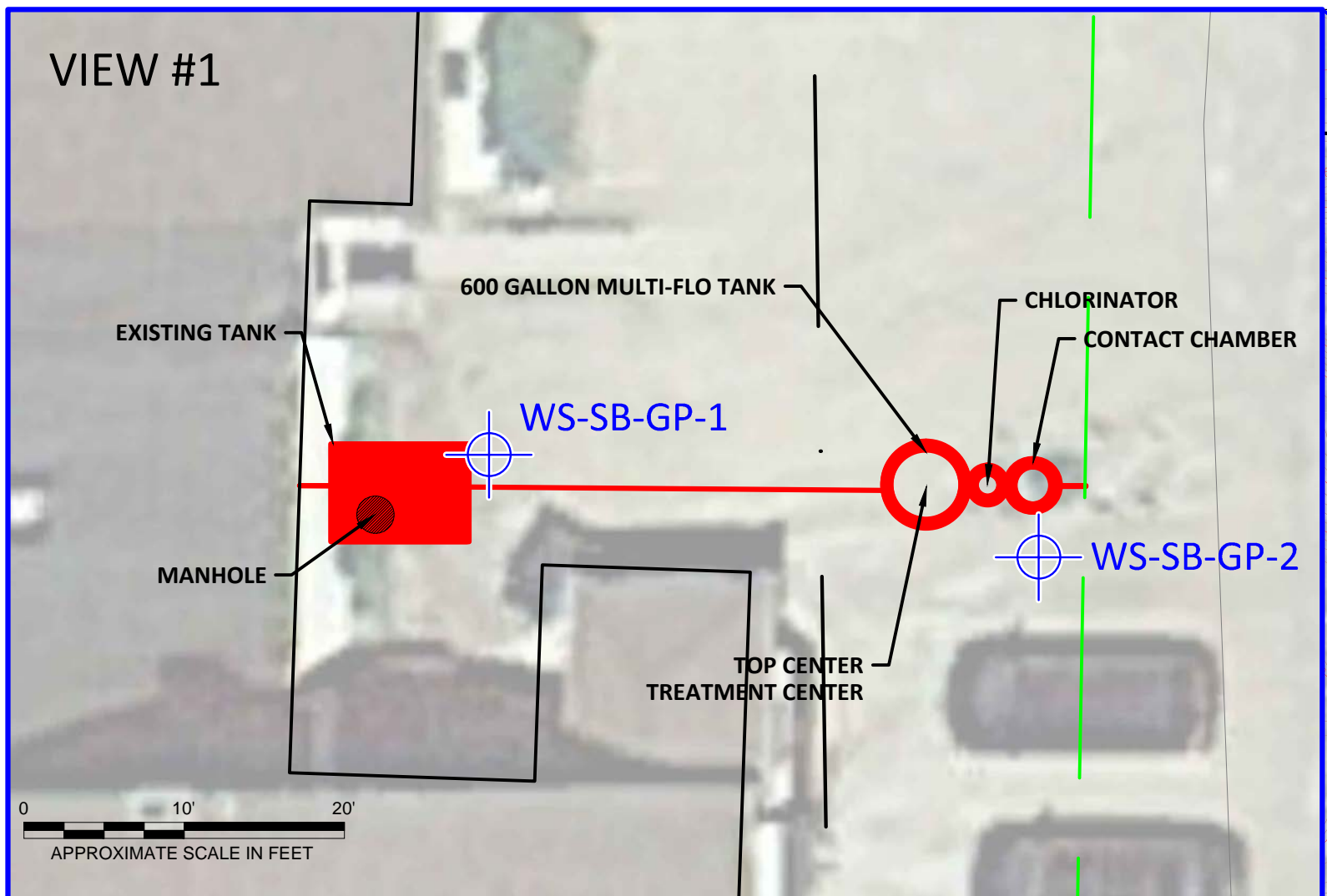
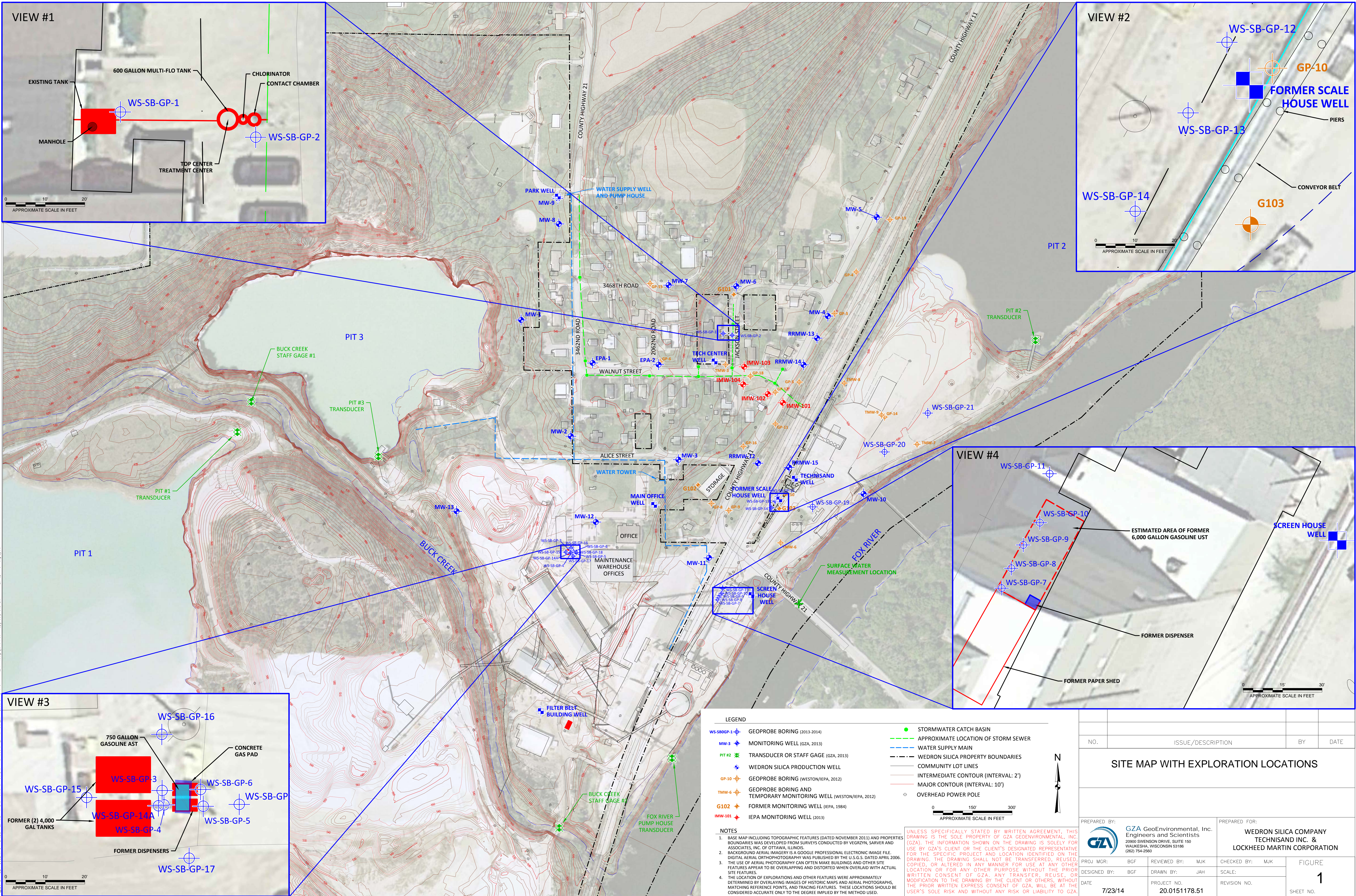
Analyte	CAS Registry No.	TACO Tier I Groundwater Remediation Objectives	GW-19	GW-20	GW Duplicate (GW-20)	GW-21
Sample Date			5/14/2014	5/14/2014	5/14/2014	5/14/2014
VOCs (8260B)		mg/L	mg/L	mg/L	mg/L	mg/L
Acetone	67-64-1	6.3	<0.02	<0.02	<0.02	<0.02
Benzene	71-43-2	0.005	<0.0005	0.00048 J	0.00049 J	0.0001 J
Bromochloromethane	74-97-5	NE	<0.0005	<0.0005	<0.0005	<0.0005
Bromodichloromethane	75-27-4	0.0002	<0.0005	<0.0005	<0.0005	<0.0005
Bromoform	75-25-2	0.001	<0.0005	<0.0005	<0.0005	<0.0005
Bromomethane (methyl bromide)	74-83-9	0.2	<0.005	<0.005	<0.005	<0.005
2-Butanone (Methyl ethyl ketone)	78-93-3	17	<0.02	<0.02	<0.02	<0.02
n-Butyl Benzene	104-51-8	NE	<0.0005	<0.0005	<0.0005	<0.0005
sec-Butyl Benzene	135-98-8	NE	<0.0005	<0.0005	<0.0005	<0.0005
tert-Butylbenzene	98-06-6	NE	<0.0005	<0.0005	<0.0005	<0.0005
Carbon disulfide	75-15-0	0.7	<0.0005	<0.0005	<0.0005	0.00011 J
Carbon tetrachloride	56-23-5	0.005	<0.0005	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	0.1	<0.0005	<0.0005	<0.0005	<0.0005
Chloroethane	75-00-3	NE	<0.005 J	<0.005 J	<0.005	<0.005 J
Chloroform	67-66-3	0.0002	<0.0005	<0.0005	<0.0005	<0.0005
Chloromethane (methyl chloride)	74-87-3	NE	<0.002	0.002 U	<0.002 B	<0.002
2-Chlorotoluene	95-49-8	NE	<0.0005	<0.0005	<0.0005	<0.0005
4-Chlorotoluene	106-43-4	NE	<0.0005	<0.0005	<0.0005	<0.0005
1,2-Dibromo-3-chloropropane	96-12-8	0.0002	<0.0005	<0.0005	<0.0005	<0.0005
Dibromochloromethane	124-48-1	NE	<0.0005	<0.0005	<0.0005	<0.0005
1,2-Dibromoethane (EDB)	106-93-4	0.00005	<0.0005	<0.0005	<0.0005	<0.0005
Dibromomethane	74-95-3	NE	<0.0005	<0.0005	<0.0005	<0.0005
1,2-Dichlorobenzene	95-50-1	0.6	<0.0005	<0.0005	<0.0005	<0.0005
1,4-Dichlorobenzene	106-46-7	0.075	<0.0005	<0.0005	<0.0005	<0.0005
1,3-Dichlorobenzene	541-73-1	NE	<0.0005	<0.0005	<0.0005	<0.0005
Dichlorodifluoromethane	75-71-8	NE	<0.0005	<0.0005	<0.0005	<0.0005
1,1-Dichloroethane	75-34-3	0.7	<0.0005	<0.0005	<0.0005	<0.0005
1,2-Dichloroethane	107-06-2	0.005	<0.0005	<0.0005	<0.0005	<0.0005
trans-1,2-Dichloroethene	156-60-5	0.1	<0.0005	<0.0005	<0.0005	<0.0005
cis-1,2-Dichloroethene	156-59-2	0.07	<0.0005	0.00025 J	0.00028 J	<0.0005
1,1-Dichloroethene	75-35-4	0.007	<0.0005	<0.0005	<0.0005	<0.0005
2,2-Dichloropropane	594-20-7	NE	<0.0005	<0.0005	<0.0005	<0.0005
1,2-Dichloropropane	78-87-5	0.005	<0.0005	<0.0005	<0.0005	<0.0005
1,3-Dichloropropane	142-28-9	NE	<0.0005	<0.0005	<0.0005	<0.0005
cis-1,3-Dichloropropene ⁽⁴⁾	10061-01-5	0.001 ⁽⁴⁾	<0.0005	<0.0005	<0.0005	<0.0005
trans-1,3-Dichloropropene ⁽⁴⁾	10061-02-6	0.001 ⁽⁴⁾	<0.0005	<0.0005	<0.0005	<0.0005
1,1-Dichloropropene	563-58-6	NE	<0.0005	<0.0005	<0.0005	<0.0005
Diisopropyl Ether	108-20-3	NE	<0.0005	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	0.7	<0.0005	<0.0005	<0.0005	<0.0005
Hexachlorobutadiene	87-68-3	NE	<0.002	<0.002	<0.002	0.00014 J
n-Hexane	110-54-3	NE	<0.0005	<0.0005	<0.0005	<0.0005
2-Hexanone	591-78-6	NE	0.0022 J	0.0021 J	<0.02	<0.02
Isopropylbenzene	98-82-8	NE	<0.0005	<0.0005	<0.0005	<0.0005
p-Isopropyltoluene	99-87-6	NE	<0.0005	<0.0005	<0.0005	<0.0005
Methylene chloride	75-09-2	0.005	<0.002	<0.002	<0.002	<0.002
4-Methyl-2-pentanone	108-10-1	NE	<0.02	<0.02	<0.02	<0.02
Methyl t-Butyl Ether	1634-04-4	0.07	<0.0005	<0.0005	<0.0005	<0.0005
Naphthalene	91-20-3	0.14	<0.0005	<0.0005	<0.0005	<0.0005
n-Propylbenzene	103-65-1	NE	<0.0005	<0.0005	<0.0005	<0.0005
Styrene	100-42-5	0.1	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2,2-Tetrachloroethane	79-34-5	NE	<0.0005	<0.0005	<0.0005	<0.0005
Tetrachloroethene	127-18-4	0.005	<0.0005	<0.0005	<0.0005	<0.0005
Tetrahydrofuran	109-99-9	NE	<0.01	<0.01	<0.01	<0.01
Toluene	108-88-3	1	<0.0005	<0.0005	<0.0005	<0.0005
1,2,3-Trichlorobenzene	87-61-6	NE	<0.002	<0.002	<0.002	<0.002
1,2,4-Trichlorobenzene	120-82-1	0.07	<0.002	<0.002	<0.002	0.00015 J
1,1,1-Trichloroethane	71-55-6	0.2	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2-Trichloroethane	79-00-5	0.005	<0.0005	<0.0005	<0.0005	<0.0005
Trichloroethene	79-01-6	0.005	<0.0005	<0.0005	<0.0005	<0.0005
Trichlorofluoromethane	75-69-4	NE	<0.0005	<0.0005	<0.0005	<0.0005
1,2,3-Trichloropropane	96-18-4	NE	<0.001	<0.001	<0.001	<0.001
1,1,2-Trichlorotrifluoroethane	76-13-1	NE	<0.0005	<0.0005	<0.0005	<0.0005
1,3,5-Trimethylbenzene	108-67-8	NE	<0.0005	<0.0005	<0.0005	<0.0005
1,2,4-Trimethylbenzene	95-63-6	NE	<0.0005	<0.0005	<0.0005	<0.0005
Vinyl chloride	75-01-4	0.002	<0.0005	<0.0005	<0.0005	<0.0005
m,p-Xylene ⁽⁵⁾	108-38-3/106-42-3	10 ⁽⁵⁾	<0.001	<0.001	<0.001	<0.001
o-Xylene ⁽⁵⁾	95-47-6	10 ⁽⁵⁾	<0.0005	<0.0005	<0.0005	<0.0005
Total Xylene	1330-20-7	10	<0.0015	<0.0015	<0.0015	<0.0015

Notes:

1. Samples were collected by GZA GeoEnvironmental, Inc. (GZA) and were submitted to Environmental Chemistry Consulting Services, Inc. (ECCS) of Madison, Wisconsin for analysis.
2. Laboratory limits provided are compared to Illinois Tiered Approach to Corrective Action Objectives (TACO) Tier 1 Class I Groundwater remediation Objectives.
3. Concentrations are provided in milligrams per liter (mg/L).
4. "NE" = Standard is not established for the parameter.
5. The TACO Tier 1 Class I Groundwater Remediation Objectives is for total cis- and trans-1,2-Dichloropropene.
6. "J" = Indicates an estimated value.



FIGURES



LEGEND

WS-SB-GP-1	GEOPROBE BORING (2013-2014)	STORMWATER CATCH BASIN
MW-3	MONITORING WELL (GZA, 2013)	APPROXIMATE LOCATION OF STORM SEWER
PIT #2	TRANSDUCER OR STAFF GAGE (GZA, 2013)	WATER SUPPLY MAIN
GP-10	WEDRON SILICA PRODUCTION WELL	WEDRON SILICA PROPERTY BOUNDARIES
TMW-6	GEOPROBE BORING (WESTON/IEPA, 2012)	COMMUNITY LOT LINES
G102	GEOPROBE BORING AND TEMPORARY MONITORING WELL (WESTON/IEPA, 2012)	INTERMEDIATE CONTOUR (INTERVAL: 2')
IMW-101	IEPA MONITORING WELL (2013)	MAJOR CONTOUR (INTERVAL: 10')
		OVERHEAD POWER POLE

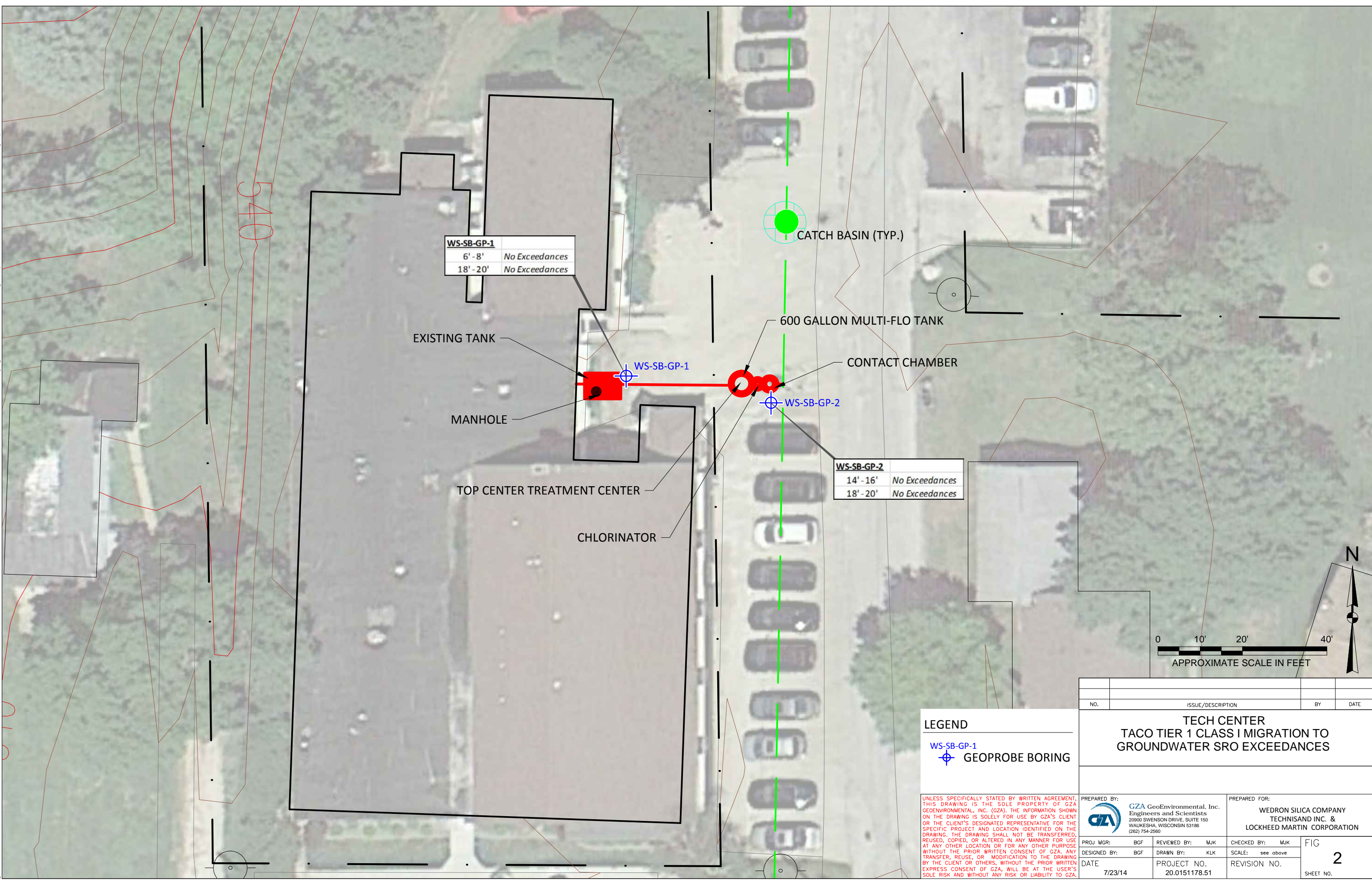
NOTES

- BASE MAP INCLUDING TOPOGRAPHIC FEATURES (DATED NOVEMBER 2011) AND PROPERTY BOUNDARIES WAS DEVELOPED FROM SURVEYS CONDUCTED BY VEGRIN, SARVER AND ASSOCIATES, INC. OF OTTAWA, ILLINOIS.
- BACKGROUND AERIAL IMAGERY IS A GOOGLE PROFESSIONAL ELECTRONIC IMAGE FILE. DIGITAL AERIAL ORTHOPHOTOGRAPHY WAS PUBLISHED BY THE U.S.G.S. DATED APRIL 2006.
- THE USE OF AERIAL PHOTOGRAPHY CAN OFTEN MAKE BUILDINGS AND OTHER SITE FEATURES APPEAR TO BE OVERLAPPING AND DISTORTED WHEN OVERLAID WITH ACTUAL SITE FEATURES.
- THE LOCATION OF EXPLORATIONS AND OTHER FEATURES WERE APPROXIMATELY DETERMINED BY OVERLAYING IMAGES OF HISTORIC MAPS AND AERIAL PHOTOGRAPHS, MATCHING REFERENCE POINTS, AND TRACKING FEATURES. THESE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

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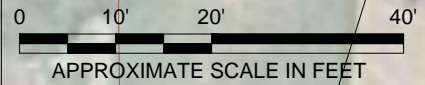
NO.	ISSUE/DESCRIPTION	BY	DATE
SITE MAP WITH EXPLORATION LOCATIONS			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists 20900 SWENSON DRIVE, SUITE 150 WALKESHA, WISCONSIN 53186 (262) 754-2500		PREPARED FOR: WEDRON SILICA COMPANY TECHNISAND INC. & LOCKHEED MARTIN CORPORATION	
PROJ MGR: BGF	DESIGNED BY: BGF	REVIEWED BY: MJK	CHECKED BY: MJK
DATE: 7/23/14	PROJECT NO.: 20.0151178.51	DRAWN BY: JAH	SCALE: REVISION NO.
			FIGURE 1 SHEET NO.

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WS-SB-GP-1	
6' - 8'	No Exceedances
18' - 20'	No Exceedances

WS-SB-GP-2	
14' - 16'	No Exceedances
18' - 20'	No Exceedances

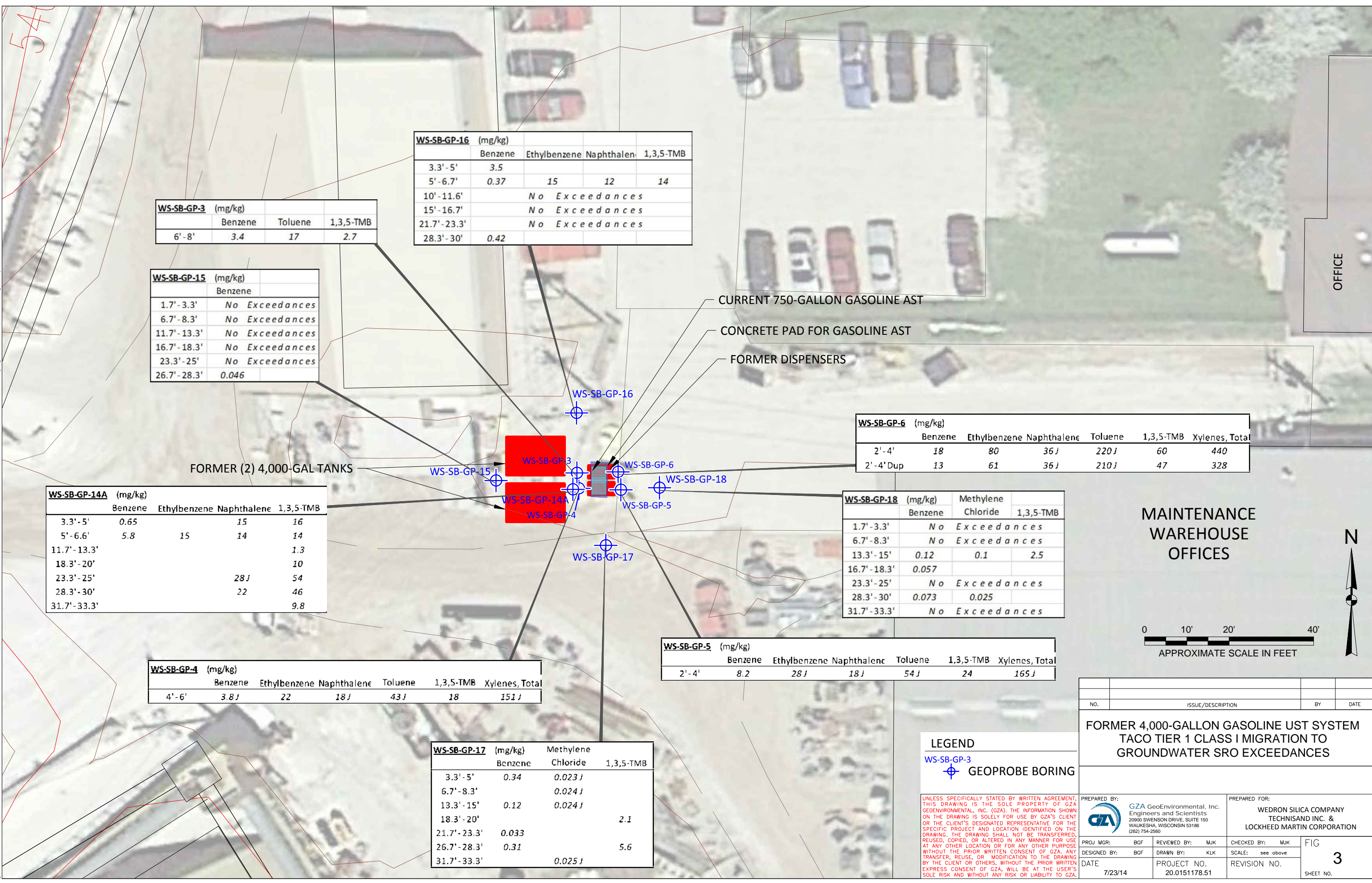


LEGEND
 WS-SB-GP-1
 GEOPROBE BORING

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NO.	ISSUE/DESCRIPTION	BY	DATE
TECH CENTER TACO TIER 1 CLASS I MIGRATION TO GROUNDWATER SRO EXCEEDANCES			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists 20900 SWENSON DRIVE, SUITE 150 WALKESHA, WISCONSIN 53186 (262) 754-2560		PREPARED FOR: WEDRON SILICA COMPANY TECHNISAND INC. & LOCKHEED MARTIN CORPORATION	
PROJ MGR:	BGF	REVIEWED BY:	MJK
DESIGNED BY:	BGF	DRAWN BY:	KLK
DATE	7/23/14	PROJECT NO.	20.0151178.51
		CHECKED BY:	MJK
		SCALE:	see above
		REVISION NO.	
			FIG 2
			SHEET NO.

© 2014 - GZA GeoEnvironmental, Inc. GZA-j:\151100to151199\151178 Wedron\DRAWINGS\2014\Wedron Environ - 7.24.14.dwg [2 Gas UST FIG 3] July 30, 2014 - 12:38pm anne.grzywa



WS-SB-GP-3 (mg/kg)

	Benzene	Toluene	1,3,5-TMB
6'-8'	3.4	17	2.7

WS-SB-GP-16 (mg/kg)

	Benzene	Ethylbenzene	Naphthalen	1,3,5-TMB
3.3'-5'	3.5			
5'-6.7'	0.37	15	12	14
10'-11.6'	<i>No Exceedances</i>			
15'-16.7'	<i>No Exceedances</i>			
21.7'-23.3'	<i>No Exceedances</i>			
28.3'-30'	0.42			

WS-SB-GP-15 (mg/kg)

	Benzene
1.7'-3.3'	<i>No Exceedances</i>
6.7'-8.3'	<i>No Exceedances</i>
11.7'-13.3'	<i>No Exceedances</i>
16.7'-18.3'	<i>No Exceedances</i>
23.3'-25'	<i>No Exceedances</i>
26.7'-28.3'	0.046

WS-SB-GP-14A (mg/kg)

	Benzene	Ethylbenzene	Naphthalene	1,3,5-TMB
3.3'-5'	0.65		15	16
5'-6.6'	5.8	15	14	14
11.7'-13.3'				1.3
18.3'-20'				10
23.3'-25'			28 J	54
28.3'-30'			22	46
31.7'-33.3'				9.8

WS-SB-GP-4 (mg/kg)

	Benzene	Ethylbenzene	Naphthalene	Toluene	1,3,5-TMB	Xylenes, Total
4'-6'	3.8 J	22	18 J	43 J	18	151 J

WS-SB-GP-17 (mg/kg)

	Benzene	Methylene Chloride	1,3,5-TMB
3.3'-5'	0.34	0.023 J	
6.7'-8.3'		0.024 J	
13.3'-15'	0.12	0.024 J	
18.3'-20'			2.1
21.7'-23.3'	0.033		
26.7'-28.3'	0.31		5.6
31.7'-33.3'		0.025 J	

WS-SB-GP-6 (mg/kg)

	Benzene	Ethylbenzene	Naphthalene	Toluene	1,3,5-TMB	Xylenes, Total
2'-4'	18	80	36 J	220 J	60	440
2'-4' Dup	13	61	36 J	210 J	47	328

WS-SB-GP-18 (mg/kg)

	Benzene	Methylene Chloride	1,3,5-TMB
1.7'-3.3'	<i>No Exceedances</i>		
6.7'-8.3'	<i>No Exceedances</i>		
13.3'-15'	0.12	0.1	2.5
16.7'-18.3'	0.057		
23.3'-25'	<i>No Exceedances</i>		
28.3'-30'	0.073	0.025	
31.7'-33.3'	<i>No Exceedances</i>		

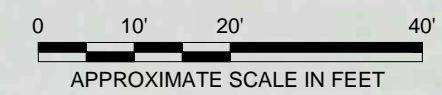
WS-SB-GP-5 (mg/kg)

	Benzene	Ethylbenzene	Naphthalene	Toluene	1,3,5-TMB	Xylenes, Total
2'-4'	8.2	28 J	18 J	54 J	24	165 J

LEGEND
 WS-SB-GP-3
 ⊕ GEOPROBE BORING

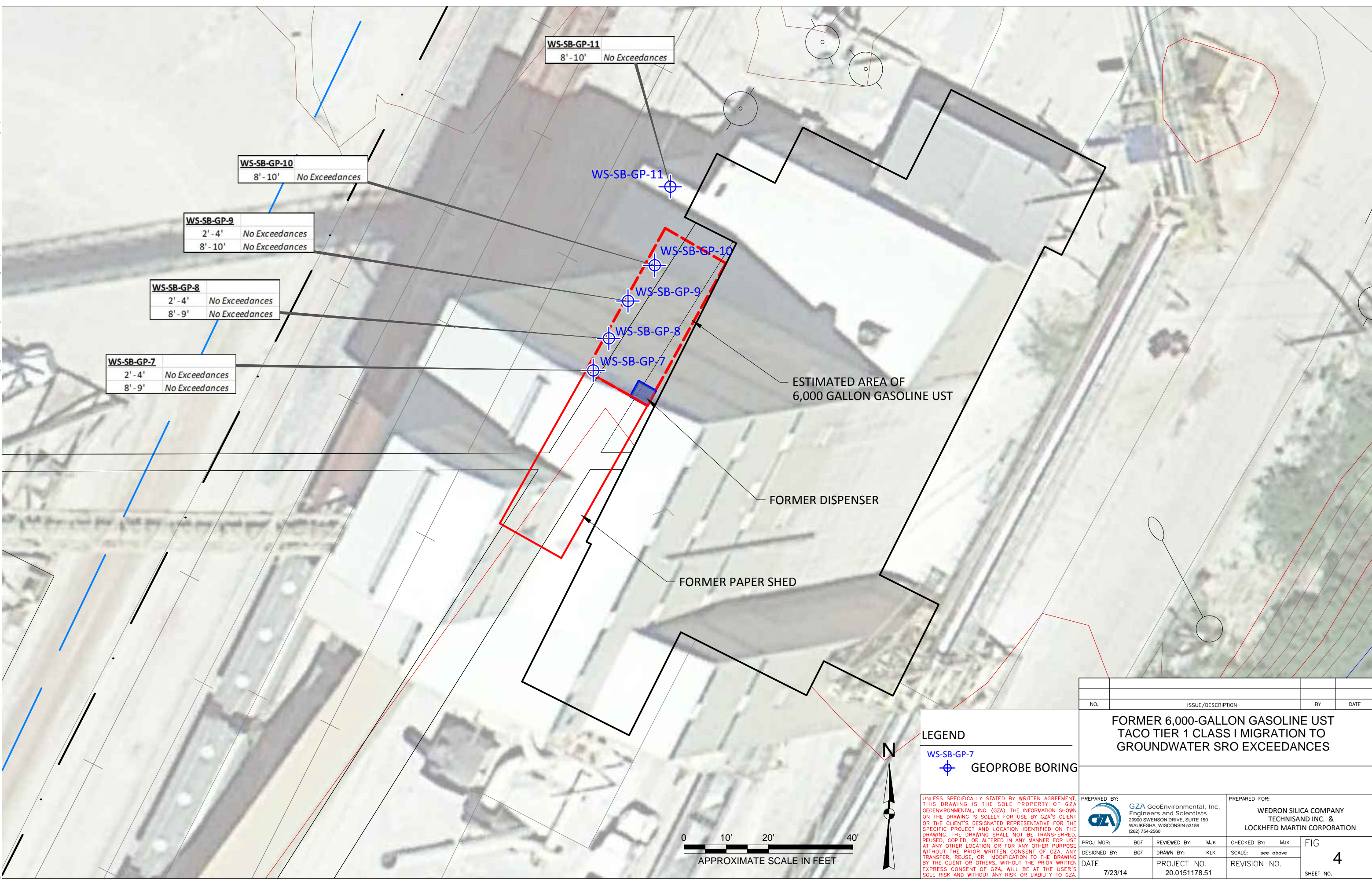
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MAINTENANCE WAREHOUSE OFFICES



NO.	ISSUE/DESCRIPTION	BY	DATE
FORMER 4,000-GALLON GASOLINE UST SYSTEM TACO TIER 1 CLASS I MIGRATION TO GROUNDWATER SRO EXCEEDANCES			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists 20900 SWENSON DRIVE, SUITE 150 WAUKESHA, WISCONSIN 53186 (262) 754-2560		PREPARED FOR: WEDRON SILICA COMPANY TECHNISAND INC. & LOCKHEED MARTIN CORPORATION	
PROJ MGR: BGF DESIGNED BY: BGF DATE: 7/23/14	REVIEWED BY: MJK DRAWN BY: KLK PROJECT NO.: 20.0151178.51	CHECKED BY: MJK SCALE: see above REVISION NO.:	FIG 3 SHEET NO.

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WS-SB-GP-7	
2' - 4'	No Exceedances
8' - 9'	No Exceedances

WS-SB-GP-8	
2' - 4'	No Exceedances
8' - 9'	No Exceedances

WS-SB-GP-9	
2' - 4'	No Exceedances
8' - 10'	No Exceedances

WS-SB-GP-10	
8' - 10'	No Exceedances

WS-SB-GP-11	
8' - 10'	No Exceedances

ESTIMATED AREA OF
6,000 GALLON GASOLINE UST

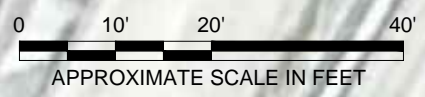
FORMER DISPENSER

FORMER PAPER SHED

LEGEND

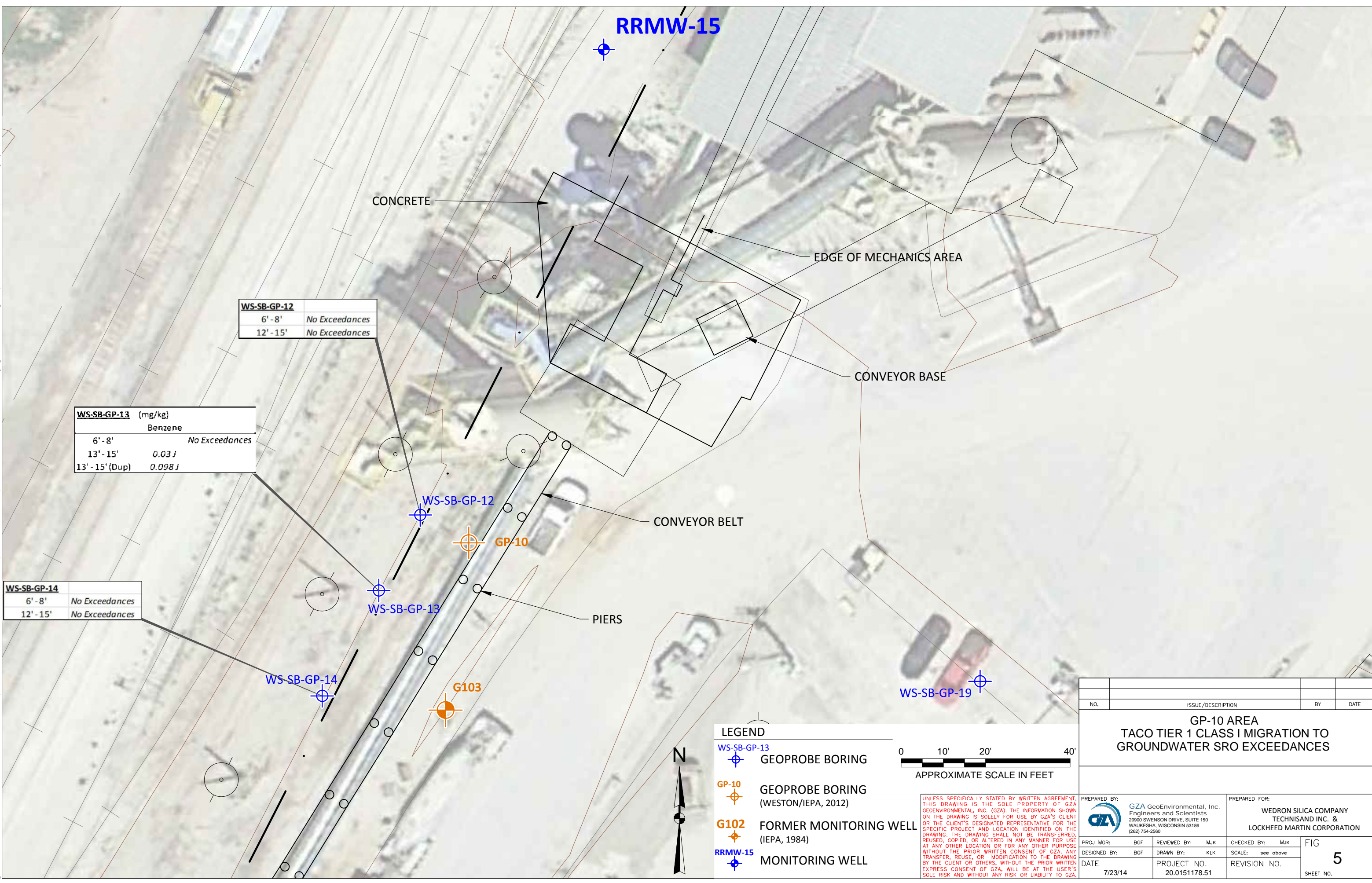
WS-SB-GP-7
GEOPROBE BORING

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NO.	ISSUE/DESCRIPTION	BY	DATE
FORMER 6,000-GALLON GASOLINE UST TACO TIER 1 CLASS I MIGRATION TO GROUNDWATER SRO EXCEEDANCES			
PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists 20900 SWENSON DRIVE, SUITE 150 WAUKESHA, WISCONSIN 53186 (262) 754-2550		WEDRON SILICA COMPANY TECHNISAND INC. & LOCKHEED MARTIN CORPORATION	
PROJ MGR:	BGF	REVIEWED BY:	MJK
DESIGNED BY:	BGF	DRAWN BY:	KLK
DATE:	7/23/14	PROJECT NO.:	20.0151178.51
		CHECKED BY:	MJK
		SCALE:	see above
		REVISION NO.:	
			4
			SHEET NO.

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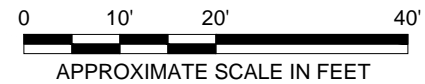


WS-SB-GP-12	
6' - 8'	No Exceedances
12' - 15'	No Exceedances

WS-SB-GP-13 (mg/kg)	
	Benzene
6' - 8'	No Exceedances
13' - 15'	0.031
13' - 15' (Dup)	0.0981

WS-SB-GP-14	
6' - 8'	No Exceedances
12' - 15'	No Exceedances

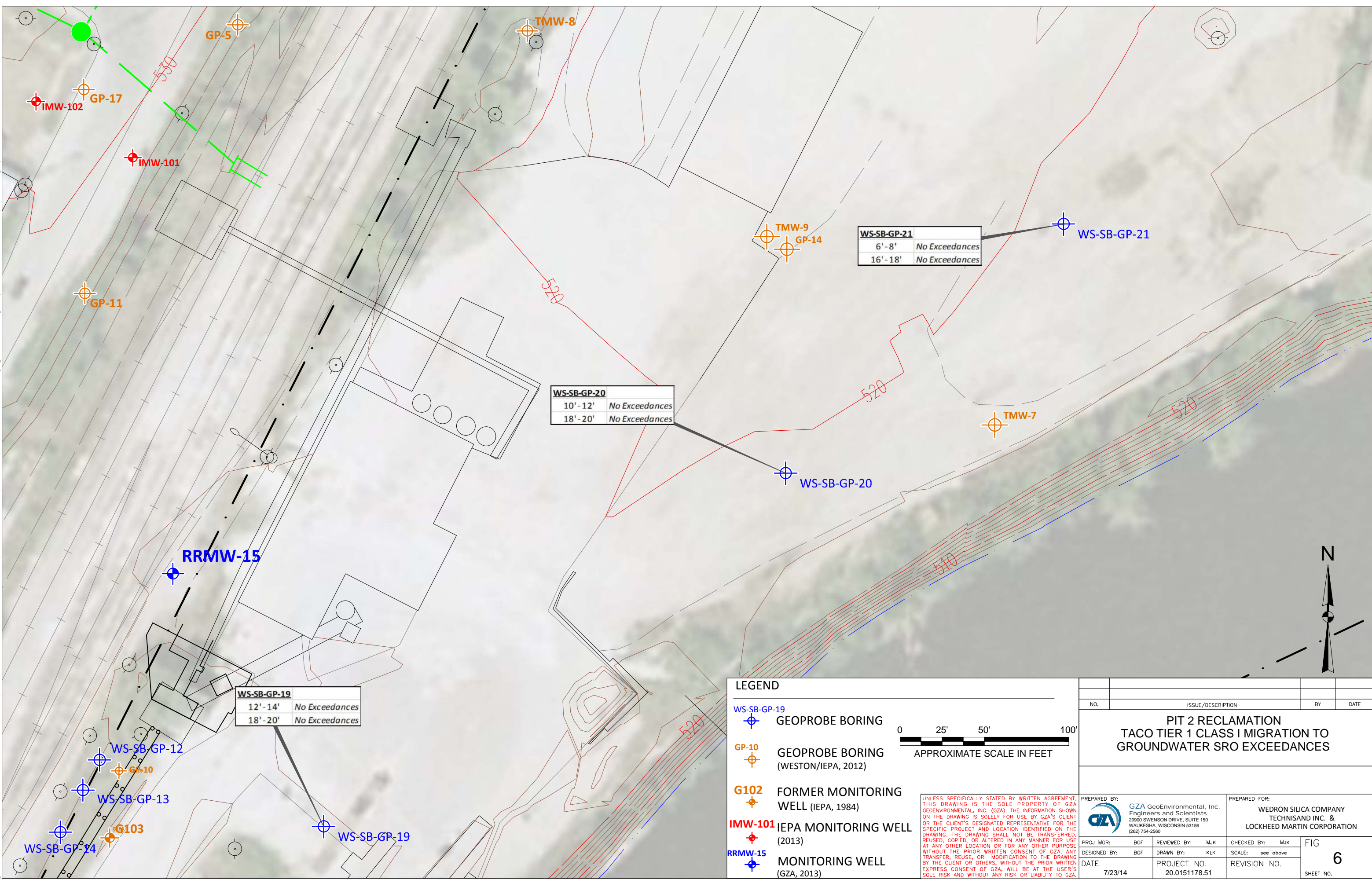
- LEGEND**
- WS-SB-GP-13 GEOPROBE BORING
 - GP-10 GEOPROBE BORING (WESTON/IEPA, 2012)
 - G102 FORMER MONITORING WELL (IEPA, 1984)
 - RRMW-15 MONITORING WELL



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NO.	ISSUE/DESCRIPTION	BY	DATE
GP-10 AREA TACO TIER 1 CLASS I MIGRATION TO GROUNDWATER SRO EXCEEDANCES			
PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists 20900 SWENSON DRIVE, SUITE 150 WALKESHA, WISCONSIN 53186 (262) 754-2560		WEDRON SILICA COMPANY TECHNISAND INC. & LOCKHEED MARTIN CORPORATION	
PROJ MGR:	BGF	REVIEWED BY:	MJK
DESIGNED BY:	BGF	DRAWN BY:	KLK
DATE:	7/23/14	PROJECT NO.:	20.0151178.51
		CHECKED BY:	MJK
		SCALE:	see above
		REVISION NO.:	
			5
			SHEET NO.

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LEGEND

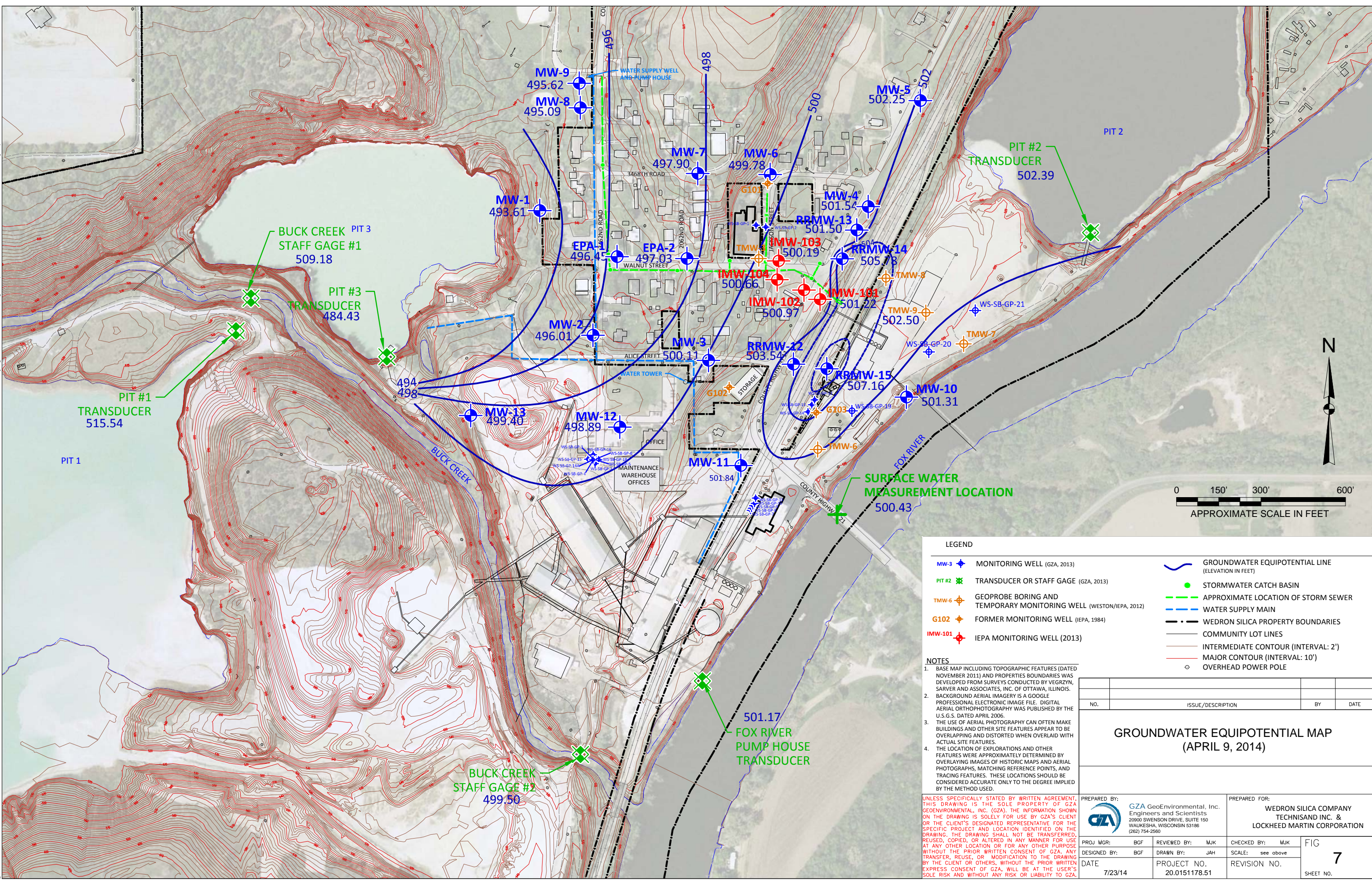
- WS-SB-GP-19** **GEOPROBE BORING**
- GP-10** **GEOPROBE BORING (WESTON/IEPA, 2012)**
- G102** **FORMER MONITORING WELL (IEPA, 1984)**
- IMW-101** **IEPA MONITORING WELL (2013)**
- RRMW-15** **MONITORING WELL (GZA, 2013)**

0 25' 50' 100'
APPROXIMATE SCALE IN FEET

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

NO.	ISSUE/DESCRIPTION	BY	DATE
PIT 2 RECLAMATION TACO TIER 1 CLASS I MIGRATION TO GROUNDWATER SRO EXCEEDANCES			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists 20900 SWENSON DRIVE, SUITE 150 WALKESHA, WISCONSIN 53186 (262) 754-2560		PREPARED FOR: WEDRON SILICA COMPANY TECHNISAND INC. & LOCKHEED MARTIN CORPORATION	
PROJ MGR: BGF DESIGNED BY: BGF DATE: 7/23/14	REVIEWED BY: MJK DRAWN BY: KLK PROJECT NO.: 20.0151178.51	CHECKED BY: MJK SCALE: see above REVISION NO.:	FIG 6 SHEET NO.

© 2013 - GZA GeoEnvironmental, Inc. GZA-j:\151100to151199\151178 Wedron\DRAWINGS\2014\Wedron Environ - 7.24.14.dwg [April 9 GW Flow] July 30, 2014 - 12:49pm anne.grzywo



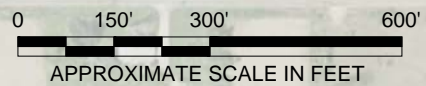
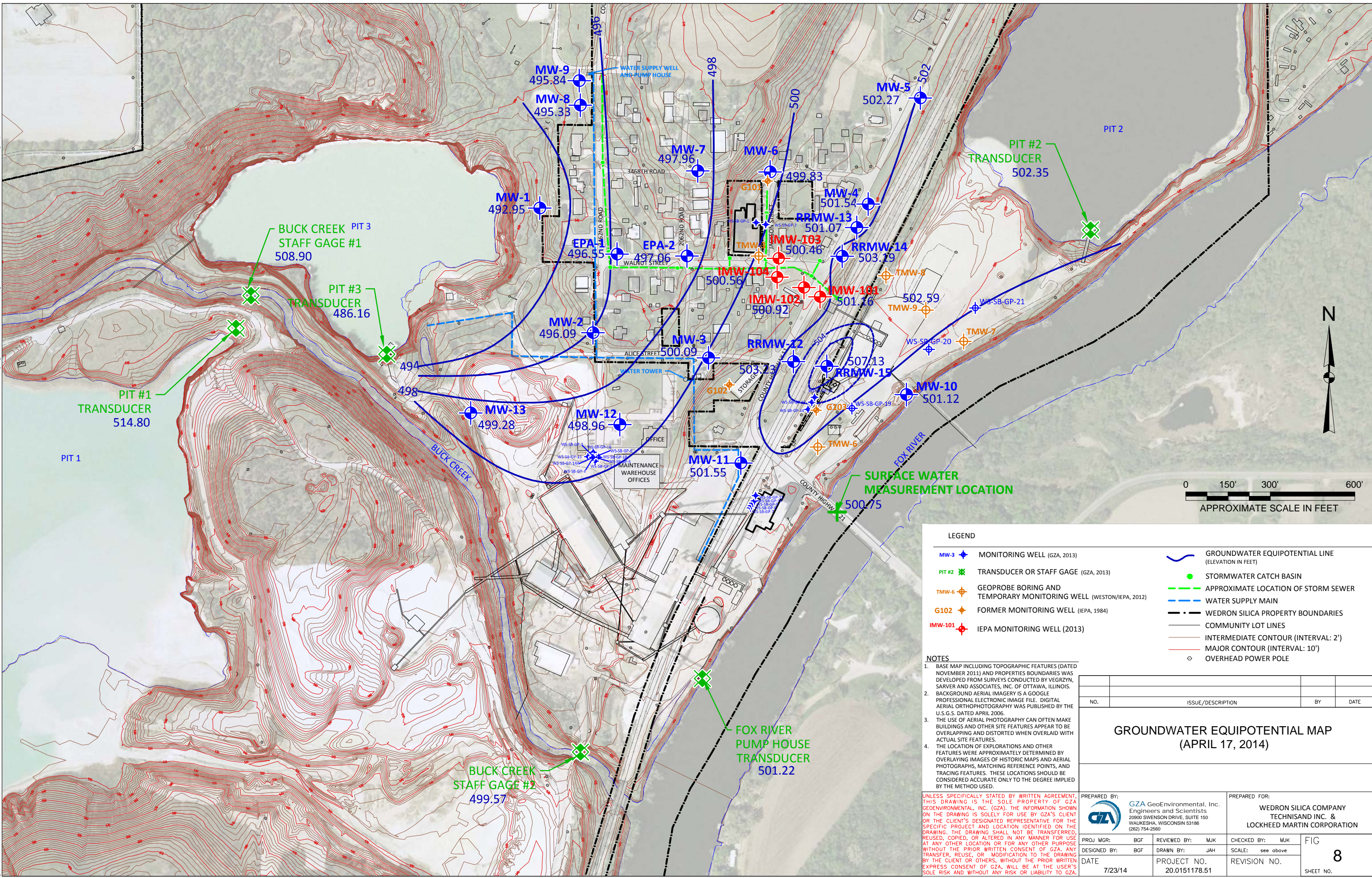
LEGEND				
MW-3	◆	MONITORING WELL (GZA, 2013)	—	GROUNDWATER EQUIPOTENTIAL LINE (ELEVATION IN FEET)
PIT #2	⊠	TRANSDUCER OR STAFF GAGE (GZA, 2013)	●	STORMWATER CATCH BASIN
TMW-6	⊕	GEOPROBE BORING AND TEMPORARY MONITORING WELL (WESTON/EPA, 2012)	—	APPROXIMATE LOCATION OF STORM SEWER
G102	⊕	FORMER MONITORING WELL (IEPA, 1984)	—	WATER SUPPLY MAIN
IMW-101	◆	IEPA MONITORING WELL (2013)	—	WEDRON SILICA PROPERTY BOUNDARIES
			—	COMMUNITY LOT LINES
			—	INTERMEDIATE CONTOUR (INTERVAL: 2')
			—	MAJOR CONTOUR (INTERVAL: 10')
			○	OVERHEAD POWER POLE

NOTES

1. BASE MAP INCLUDING TOPOGRAPHIC FEATURES (DATED NOVEMBER 2011) AND PROPERTIES BOUNDARIES WAS DEVELOPED FROM SURVEYS CONDUCTED BY VEGRZYN, SARVER AND ASSOCIATES, INC. OF OTTAWA, ILLINOIS. BACKGROUND AERIAL IMAGERY IS A GOOGLE PROFESSIONAL ELECTRONIC IMAGE FILE. DIGITAL AERIAL ORTHOPHOTOGRAPHY WAS PUBLISHED BY THE U.S.G.S. DATED APRIL 2006.
2. THE USE OF AERIAL PHOTOGRAPHY CAN OFTEN MAKE BUILDINGS AND OTHER SITE FEATURES APPEAR TO BE OVERLAPPING AND DISTORTED WHEN OVERLAID WITH ACTUAL SITE FEATURES.
3. THE LOCATION OF EXPLORATIONS AND OTHER FEATURES WERE APPROXIMATELY DETERMINED BY OVERLAYING IMAGES OF HISTORIC MAPS AND AERIAL PHOTOGRAPHS, MATCHING REFERENCE POINTS, AND TRACING FEATURES. THESE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

NO.	ISSUE/DESCRIPTION	BY	DATE
GROUNDWATER EQUIPOTENTIAL MAP (APRIL 9, 2014)			
PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists 20900 SWENSON DRIVE, SUITE 150 WALKERSHA, WISCONSIN 53186 (262) 754-2560		WEDRON SILICA COMPANY TECHNISAND INC. & LOCKHEED MARTIN CORPORATION	
PROJ MGR:	BGF	REVIEWED BY:	MJK
DESIGNED BY:	BGF	DRAWN BY:	JAH
DATE:	7/23/14	PROJECT NO.:	20.0151178.51
		CHECKED BY:	MJK
		SCALE:	see above
		REVISION NO.:	
			FIG 7 SHEET NO.



LEGEND	
MW-3	MONITORING WELL (GZA, 2013)
PIT #2	TRANSDUCER OR STAFF GAGE (GZA, 2013)
TMW-6	GEOPROBE BORING AND TEMPORARY MONITORING WELL (WESTON/IEPA, 2012)
G102	FORMER MONITORING WELL (IEPA, 1984)
IMW-101	IEPA MONITORING WELL (2013)
(Blue line)	GROUNDWATER EQUIPOTENTIAL LINE (ELEVATION IN FEET)
(Green line)	STORMWATER CATCH BASIN
(Green dashed line)	APPROXIMATE LOCATION OF STORM SEWER
(Blue dashed line)	WATER SUPPLY MAIN
(Black dashed line)	WEDRON SILICA PROPERTY BOUNDARIES
(Thin black line)	COMMUNITY LOT LINES
(Thin red line)	INTERMEDIATE CONTOUR (INTERVAL: 2')
(Thick red line)	MAJOR CONTOUR (INTERVAL: 10')
(Circle with cross)	OVERHEAD POWER POLE

NOTES

1. BASE MAP INCLUDING TOPOGRAPHIC FEATURES (DATED NOVEMBER 2011) AND PROPERTIES BOUNDARIES WAS DEVELOPED FROM SURVEYS CONDUCTED BY VEGRZYN, SARVER AND ASSOCIATES, INC. OF OTTAWA, ILLINOIS. BACKGROUND AERIAL IMAGERY IS A GOOGLE PROFESSIONAL ELECTRONIC IMAGE FILE. DIGITAL AERIAL ORTHOPHOTOGRAPHY WAS PUBLISHED BY THE U.S.G.S. DATED APRIL 2006.
2. THE USE OF AERIAL PHOTOGRAPHY CAN OFTEN MAKE BUILDINGS AND OTHER SITE FEATURES APPEAR TO BE OVERLAPPING AND DISTORTED WHEN OVERLAID WITH ACTUAL SITE FEATURES.
3. THE LOCATION OF EXPLORATIONS AND OTHER FEATURES WERE APPROXIMATELY DETERMINED BY OVERLAYING IMAGES OF HISTORIC MAPS AND AERIAL PHOTOGRAPHS, MATCHING REFERENCE POINTS, AND TRACING FEATURES. THESE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

NO.	ISSUE/DESCRIPTION	BY	DATE
GROUNDWATER EQUIPOTENTIAL MAP (APRIL 17, 2014)			
PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists 20900 SWENSON DRIVE, SUITE 150 WALKER, WISCONSIN 53186 (262) 754-2560		WEDRON SILICA COMPANY TECHNISAND INC. & LOCKHEED MARTIN CORPORATION	
PROJ MGR:	BGF	REVIEWED BY:	MJK
DESIGNED BY:	BGF	DRAWN BY:	JAH
DATE:	7/23/14	PROJECT NO.:	20.0151178.51
		CHECKED BY:	MJK
		SCALE:	see above
		REVISION NO.:	
			FIG 8 SHEET NO.



APPENDIX A
Limitations

GEOHYDROLOGICAL LIMITATIONS

Sources of Information

1. In preparing this work plan, GZA has relied on certain information provided by state and local officials and other parties referenced therein, and on information contained in the files of state and/or local agencies available to GZA at the time of the site assessment. Although there may have been some degree of overlap in the information provided by these various sources, GZA did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this site assessment.



Compliance with Codes and Regulations

2. We used reasonable care in identifying and interpreting applicable codes and regulations. These codes and regulations are subject to various, and possibly contradictory, interpretations. Interpretations and compliance with codes and regulations by other parties is beyond our control.

Screening and Analytical Testing

3. Environmental samples were collected by others at the locations identified in the report. These samples were analyzed for the specific parameters identified in the report. Additional constituents for which analyses were not conducted may be present in soil, groundwater, surface water and/or air. Future Site activities and uses may result in a requirement for additional testing.
4. Our interpretation of field screening and laboratory data is presented in the report. Unless otherwise noted, we relied on the laboratory's QA/QC program to validate these data.
5. Variations in the types and concentrations of contaminants observed at a given location or time may occur due to release mechanisms, disposal practices, changes in flow paths, and/or the influence of various physical, chemical, biological, or radiological processes. Subsequently observed concentrations may be other than indicated in the report.

Interpretation of Data

6. Our opinions are based on available information and on our professional judgment. Additional observations made over time and/or space may not support the opinions provided in the report.

Additional Services

7. We recommend that we be retained to provide services during any future investigations, design, implementation activities, construction and/or property development and/or redevelopment at the Site. This will allow us the opportunity to: 1) observe conditions and compliance with our work plan design concepts and opinions; 2) allow for changes in the event that conditions are other than anticipated; 3) provide modifications to our work plan design; and 4) assess the consequences of changes in technologies and/or regulations.



APPENDIX B

Soil Boring and Well Construction Logs



GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wedron Silica Company, Technisand, Inc.
and Martin Marietta Corporation
Fairmount Minerals, Ltd.
Wedron Silica Co.
Wedron, Illinois

Boring No.: MW-1

Page: 1 of 2

File No.: 20.0151178.50

Checked By: Bernard Fenelon

Contractor: Boart Longyear
Foreman: Randy Radke
GZA Rep.: Chris Ainsworth
Date Start: 5/6/13
Date Finish: 5/7/13
Boring Loc.: East of Pit 3
GS Elev.: 529.3' Datum: NGVD 1929

Auger/Casing: Type: _____
O.D. / I.D.: 6" _____
Hammer Wt.: _____
Hammer Fall: _____
Other: _____
Sampler: Sonic Barrel
4" _____

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
5/8/13	7:30	25.5'	N/A	12 hrs
5/10/13	7:15	37.6'	N/A	30 hrs
5/22/13		37.7'	N/A	330 hrs

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1 2 3 4 5	1	60/40	0 - 5				22" Stiff, lean CLAY (CL); trace Silt; dark gray, moist, root fragments 18" Very stiff, lean CLAY (CL); trace Silt; brown, dry		CL		
6 7 8 9 10	2	60/38	5 - 10				24" Very stiff, lean CLAY (CL); trace Silt; brown, dry 14" Fine to medium SAND (SP); little Silt; trace Clay; brown, dry	7'	SP		
11 12 13 14 15	3	60/42	10 - 15				SAND, fine to coarse and GRAVEL (SW); trace Silt; brown, dry	10'	SW		
16 17 18 19 20	4	60/52	15 - 20				19" SAND, fine to coarse and GRAVEL (SW); trace Silt; brown, dry 33" SANDSTONE, fine; little Silt; tan, dry	16.5'			
21 22 23 24 25	5	60/48	20 - 25				SANDSTONE, fine; some Silt; tan, dry		Sandstone		

NOTES:



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26	6	60/41	25 - 30				Very weak SANDSTONE, fine; tan, dry	1	Sandstone		
27											
28											
29											
30	7	24/24	30 - 32				Very weak SANDSTONE; fine; tan, dry	2	Sandstone		
31											
32	12	36/36	32 - 35				Very weak SANDSTONE, fine; 4" dark gray over tan, dry	3	Sandstone		
33											
34											
35											
36	13	48/0	35 - 39				No Recovery	4	Sandstone		
37											
38											
39											
40	14	60	39 - 44				Very weak SANDSTONE, fine; gray, wet	5	Sandstone		
41											
42											
43											
44											
45	END OF BORING AT 44'							44'			
46											
47											
48											
49											
50											

NOTES:

1. Driller set casing to 30 feet after 25- to 30-foot run and will use casing on down.
2. Driller made several attempts to recover sandstone from 35- to 39-foot interval. First issue was extracting core barrel. Sand would lock between casing and core barrel. Driller began using Quik Gel. After gel was used, sand would fall out of core barrel upon retrieval. A catch was used to keep material in barrel; however, hard drilling "chewed" up the catches. Sandstone material eventually was "pushed out" or suspended in mud so interval was lost.
3. Driller made several attempts at the 39- to 44-foot interval with different bits and catches. Eventually, recovery was achieved; however, soil may be a combination of all soils 35 to 44 feet, as several catches appeared in soil core sample.



Contractor: Boart Longyear
Foreman: Jason / Todd
GZA Rep.: Dave Bauer
Date Start: 5/13/13
Date Finish: 5/14/13
Boring Loc.: 3462nd Road and Alice Street
GS Elev.: 537.8' Datum: NGVD 1929

Auger/Casing: Type: _____
O.D. / I.D.: 6" _____
Hammer Wt.: _____
Hammer Fall: _____
Other: _____
Sampler: Sonic Barrel
4" _____

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab
5/22/13		40.5'	N/A	

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	108/48	0 - 9				12" Lean CLAY (CL); brown, organic-rich, rootlets 36" Lean CLAY (CL); trace Gravel		CL		
2											
3											
4											
5											
6											
7											
8											
9											
10	2	60/48	9 - 14				Lean CLAY (CL); trace Gravel, fine; brown, very moist		CL		
11											
12											
13											
14											
15	3	36/36	14 - 17				32" Lean CLAY (CL) 4" Loose, well-graded GRAVEL (GW), fine to coarse with well-graded SAND (SW), fine to coarse; dry	16.7'	SW-GW		
16											
17											
18	4	24/24	17 - 19				Loose, well-graded GRAVEL (GW), fine to coarse with well-graded SAND (SW), fine to coarse; dry		SW-GW		
19											
20	5	48/48	19 - 23				Loose, well-graded GRAVEL (GW), fine to coarse with well-graded SAND (SW), fine to coarse, little cobbles, dry	23'	SW-GW		
21											
22											
23											
24	6	36/36	23 - 26				24" Poorly-graded SAND (SP), fine; little Gravel, fine; brown 12" Poorly-graded SAND (SP), fine; white, dry (SANDSTONE)		SP		
25											

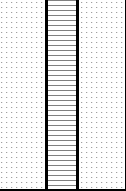
NOTES:
1. Sandstone encountered at 25 feet.



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26			23 - 26								
27	7	36/36	26 - 29				Poorly-graded SAND (SP), fine; white, dry (SANDSTONE)		Sandstone		
28											
29											
30											
31	8	60/60	29 - 34				Poorly-graded SAND (SP), fine; white, dry (SANDSTONE)		Sandstone		
32											
33											
34											
35	9	36/36	34 - 37				Well-graded SAND (SW), fine to medium; white to off-white, dry (SANDSTONE)		Sandstone		
36											
37											
38											
39	10	24/24	37 - 39				Poorly-graded SAND (SP), fine; white to off-white, dry (SANDSTONE)		Sandstone		
40											
41											
42											
43	11	36/36	39 - 42				Poorly-graded SAND (SP), fine; white to off-white, dry to wet at 42' (SANDSTONE)		Sandstone		
44											
45											
46											
47	12	24/24	42 - 44				Well-graded SAND (SW), fine to medium; white, very moist to wet (SANDSTONE)		Sandstone		
48											
49											
50											
50									No Recovery		

NOTES:



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
51	14	60/60	49 - 54				No Recovery		No Recovery		
52											
53											
54											
55	END OF BORING AT 54'							54'			
56											
57											
58											
59											
60											
61											
62											
63											
64											
65											
66											
67											
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69											
70											
71											
72											
73											
74											
75											

NOTES:



Contractor: Boart Longyear
Foreman: Randy Radke
GZA Rep.: Chris Ainsworth
Date Start: 5/8/13
Date Finish: 5/8/13
Boring Loc.: Adjacent to Boring MW-2
GS Elev.: Datum: NGVD 1929

Auger/Casing Sampler
Type: Sonic Barrel
O.D. / I.D.: 6" 4"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction			
					Interval (feet)	PID ppm								
1	1	48/46	0 - 4				11" Organic TOPSOIL; dark brown, dry, root hairs 35" Very stiff, lean CLAY (CL); trace Silt; trace Sand, fine; brown, dry	1'	TOPSOIL					
2														
3														
4														
5	2	60/28	4 - 9				Very stiff, lean CLAY (CL); trace Silt; trace Sand, fine; brown, dry		CL					
6														
7														
8														
9	3	60/60	9 - 14				Very stiff, lean CLAY (CL); trace to little Silt; brown, dry							
10														
11														
12														
13														
14	4	60/41	14 - 19				15" Very stiff, lean CLAY (CL); trace to little Silt; brown, dry 7" Poorly-graded SAND (SP), fine; trace Silt; trace Gravel, fine; brown, dry 5" Poorly-graded SAND (SP), fine; some Silt; brown, dry 14" Poorly-graded SAND (SP), fine; some Silt; trace Gravel, fine; rust-colored, dry	15'	SP					
15														
16														
17														
18														
19	5	60/36	18 - 23				Well-sorted SAND (SW), fine to coarse; little Silt; trace Gravel, fine; brown, dry	19'	SW					
20														
21														
22														
23														
24	6	48/17	24 - 28					24'						
25														

NOTES:



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26	6	48/17	24 - 28				Poorly-graded SAND (SP), fine to medium; little Silt; trace Gravel; trace cobbles; brown, dry	1,2	SP		
27											
28											
29	7	42/42	29.5 - 33				12" SANDSTONE, fine; tan and dark gray; dry 30" SANDSTONE, fine; tan, dry	3,4	Sandstone		
30											
31											
32											
33											
34	END OF BORING AT 33'							5			
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											

NOTES:

1. Driller noted sample lost in hole. Encountered sandstone at 28 feet during advanced casing.
2. Driller attempted several runs at 28 feet. Soil eventually lost in formation from overdrilling efforts.
3. Driller made several attempts at 33 to 35 feet; however, soil lost in borehole after attempts, as borehole is open to 35 feet.
4. Driller made several attempts with HQ core barrel from interval 35 to 39 feet; soil being lost upon withdrawal.
5. Boring was abandoned and another boring (MW-2) was drilled at an adjacent location with different tooling to allow better sample recovery.



Contractor: Boart Longyear
Foreman: Jason / Todd
GZA Rep.: Dave Bauer
Date Start: 5/14/13
Date Finish: 5/14/13
Boring Loc.: North of Transformer Sub-Station
GS Elev.: 535.3' Datum: NGVD 1929

Auger/Casing Type: 6"
Sampler: Sonic Barrel
O.D. / I.D.: 6" / 4"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
5/14/13	12:15	34'	N/A	No
5/22/13		33.5'	N/A	No

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	60/16	0 - 5				6" Lean CLAY (CL); little Silt; organic rootlets	0.5'	CL	[Green hatched pattern]	[Black bar]
2							10" Well-graded SAND (SW), fine to coarse; little cobbles				
3											
4											
5											
6	2	60/46	5 - 10				Lean CLAY (CL); little Gravel, fine; brown, moist	5'	CL	[Green hatched pattern]	[Black bar]
7											
8											
9											
10											
11	3	60/60	10 - 15				Lean CLAY (CL); little Gravel, fine; brown, moist	16.5'	SW-GW	[Brown hatched pattern]	[Black bar]
12											
13											
14											
15											
16	4	12/12	15 - 16				6" Lean CLAY (CL); little Gravel, fine; brown, moist	20'	SW	[Yellow hatched pattern]	[Black bar]
17							6" Well-graded GRAVEL (GW), angular and well-graded SAND (SW), fine to coarse; brown, dry				
18							Well-graded GRAVEL (GW), angular and well-graded SAND (SW), fine to coarse; some cobbles; brown, dry				
19											
20											
21	6	30/30	20 - 22.5				Well-graded SAND (SW), fine to coarse; some Gravel; some cobbles; brown, dry	20'	SW	[Yellow hatched pattern]	[Black bar]
22											
23											
24											
25											
24	7	30/30	22.5 - 25				Well-graded SAND (SW), fine to coarse; some Gravel, coarse; some cobbles, coarse; brown, dry	20'	SW	[Yellow hatched pattern]	[Black bar]
25											

NOTES:



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26	8	30/30	25 - 27.5				SILT (SM) and well-graded SAND (SW), fine to medium; white to off-white, dry (SANDSTONE)	1	25.5		
27											
28	9	30/18	27.5 - 30				SILT (SM) and well-graded SAND (SW), fine to medium; white to off-white, dry (SANDSTONE)				
29											
30	10	30/30	30 - 32.5				Poorly-graded SAND (SW), fine with Silt; off-white to gray, dry (SANDSTONE)				
31											
32	11	30/30	32.5 - 35				Well-graded SAND (SW), fine to medium; some Silt; off-white, dry to very moist at 35' (SANDSTONE)				
33											
34	12	60/60	35 - 40				Well-graded SAND (SW), fine to medium; some Silt; off-white, very moist (SANDSTONE)		Sandstone		
35											
36	13	60/60	40 - 45				Well-graded SAND (SW), fine to medium; some Silt; off-white with little gold and gray streaks, very moist (SANDSTONE)				
37											
38	14	12/12	45 - 46				Well-graded SAND (SW), fine to medium; some Silt; off-white with gold and gray streaks, very moist (SANDSTONE)				
39											
40											
41											
42											
43											
44											
45											
46											
47							END OF BORING AT 46.5'				
48											
49											
50											

NOTES:
1. Sandstone encountered at 25.5 feet.



Contractor: Boart Longyear
Foreman: Jason / Todd
GZA Rep.: Dave Bauer
Date Start: 5/14/13
Date Finish: 5/14/13
Boring Loc.: Southern Hwy 11 Well
GS Elev.: 528.6' Datum: NGVD 1929

Auger/Casing: Type: _____
O.D. / I.D.: 6" _____
Hammer Wt.: _____
Hammer Fall: _____
Other: _____

Sampler: Sonic Barrel
4" _____

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab
5/22/13		24.2'	N/A	

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	60/40	0 - 5				Lean CLAY (CL); little Gravel, fine; brown, moist	5'	CL		
2											
3											
4											
5											
6	2	60/38	5 - 10				Loose, well-graded SAND (SW), fine to coarse with GRAVEL (GW), medium to coarse; brown, moist to wet	10'	SW-GW		
7											
8											
9											
10											
11	3	60/42	10 - 15				Lean CLAY (CL); some Gravel, fine to coarse; brown, moist to wet	1	CL		
12											
13											
14											
15											
16	4	60/52	15 - 20				36" Lean CLAY (CL); some Gravel, fine to coarse; brown, moist to wet 24" Well-graded SAND (SW), fine to coarse; some Gravel, fine to medium; red, very moist to wet	18'	SW		
17											
18											
19											
20											
21	5	60/48	20 - 25				48" Lean CLAY (CL); trace Gravel, medium to fine; brown, wet 12" Loose, well-graded GRAVEL (GW), fine to coarse; some Sand, off-white; gray, dry	24'	CL		
22											
23											
24											
25											

NOTES:



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26 27 28 29 30	6	60/41	25 - 30				Loose, well-graded SAND (SW), fine to medium; off-white, moist (SANDSTONE)	1	25.5'		
31 32 33 34 35	7	60/60	30 - 35				Loose, well-graded SAND (SW), fine to medium; off-white, dry (SANDSTONE)				
36 37 38 39 40	8	60/60	35 - 40				Loose, well-graded SAND (SW), fine to medium; off-white moist (SANDSTONE)		Sandstone		
41 42 43 44 45	9	60/60	40 - 45				Loose, well-graded SAND (SW), fine to medium; off-white to dark gray at 42-43', moist (SANDSTONE)				
46	10	12/12	45 - 46				Well-graded SAND (SW), fine to medium; white to off-white, dry to moist (SANDSTONE)	46'			
47 48 49 50							END OF BORING AT 46'				

NOTES:
1. Sandstone encountered at 25.5 feet.



Contractor: Boart Longyear
Foreman: Jason / Todd
GZA Rep.: Dave Bauer
Date Start: 5/16/13
Date Finish: 5/16/13
Boring Loc.: Northern Hwy 11 Well
GS Elev.: 530.4' Datum: NGVD 1929

Auger/Casing: _____
Type: _____
O.D. / I.D.: 6" _____
Hammer Wt.: _____
Hammer Fall: _____
Other: _____
Sampler: Sonic Barrel
4" _____

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab
5/22/13		24.7'	N/A	

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	60/60	0 - 5				36" Loose, well-graded GRAVEL (GP), medium to coarse; black cinders, coal 24" Lean CLAY (CL); trace Gravel, fine; brown, moist		GP		
2											
3											
4											
5											
6	2	60/60	5 - 10				Hard, lean CLAY (CL); trace Gravel, fine; brown, wet		CL		
7											
8											
9											
10											
11	3	60/60	10 - 15				42" Hard, lean CLAY (CL); trace Gravel, fine; brown, wet 18" Well-graded SAND (SW), fine to coarse; trace Gravel, medium; brown, moist		SW		
12											
13											
14											
15											
16	4	60/60	15 - 20				24" Lean CLAY (CL) 30" Well-graded SAND (SW), fine to coarse 6" Lean CLAY (CL); brown, moist		CL		
17											
18											
19											
20											
21	5	60/60	20 - 25				12" Hard, lean CLAY (CL); brown, moist to wet 48" Well-graded quartz SAND (SW), fine to medium; white to off-white, round quartz grains 21" SANDSTONE	1	Sandstone		
22											
23											
24											
25											

NOTES:
1. Sandstone encountered at 21 feet.



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction			
					Interval (feet)	ppm								
26 27	6	30/30	25 - 27.5				Loose to semi-consolidated, well-graded quartz SAND (SW), fine to coarse; white to off-white, dry to moist		Sandstone					
28 29 30	7	30/30	27.5 - 30				Loose to semi-consolidated, well-graded quartz SAND (SW), fine to coarse; white to off-white, dry to moist							
31 32	8	30/30	30 - 32.5				Loose to semi-consolidated, well-graded quartz SAND (SW), fine to coarse; white to off-white, saturated at 30.5'							
33 34 35	9	30/30	32.5 - 35				Loose to semi-consolidated, well-graded quartz SAND (SW), fine to coarse; white to off-white, moist to dry, saturated 32.8-33'							
36 37 38 39 40	10	60/60	35 - 40				Well-graded SAND (SW), fine to coarse; very moist to wet							
41 42 43 44 45	11	60/60	40 - 45				Well-graded SAND (SW), fine to coarse; dry to moist							
46 47 48 49 50							END OF BORING AT 45'	45'						

NOTES:



Contractor: Boart Longyear
Foreman: Jason / Todd
GZA Rep.: Dave Bauer
Date Start: 5/17/13
Date Finish: 5/17/13
Boring Loc.: Northeast of Tech Center
GS Elev.: 536.3' Datum: NGVD 1929

Auger/Casing: Type: _____
O.D. / I.D.: 6" _____
Hammer Wt.: _____
Hammer Fall: _____
Other: _____
Sampler: Sonic Barrel
4" _____

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
5/22/13		35.4'	N/A	

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	60/60	0 - 5				Lean CLAY (CL); trace Gravel, fine; organic		CL		
2											
3											
4											
5											
6	2	60/60	5 - 10				Lean CLAY (CL); trace cobbles; brown				
7											
8											
9											
10	3	30/30	10 - 12.5				14" Lean CLAY (CL); trace Gravel, coarse 16" Well-graded SAND (SW); trace Gravel, fine; brown	11'			
11											
12	4	30/30	12.5 - 15				Loose, well-graded SAND (SW), fine to coarse with Gravel, medium to coarse; brown		SW		
13											
14											
15	5	30/30	15 - 17.5				12" Loose, well-graded SAND (SW), fine to coarse with Gravel, medium to coarse; brown 18" Loose, well-graded SAND (SW), rounded, fine to medium; white (SANDSTONE)	16'			
16											
17	6	30/30	17.5 - 20				Loose to semi-consolidated, well-graded SAND (SW), fine to coarse; white to orange; dry to moist (SANDSTONE)		Sandstone		
18											
19											
20	7	30/30	20 - 22.5				Loose to semi-consolidated, well-graded SAND (SW), fine to coarse; off-white to white with orange layers; dry to moist (SANDSTONE)		Sandstone		
21											
22											
23	8	30/30	22.5 - 25				Loose to semi-consolidated, well-graded SAND (SW), fine to coarse; orange to off-white; dry (SANDSTONE)		Sandstone		
24											
25											

NOTES:
1. Sandstone encountered at 16 feet



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction		
					Interval (feet)	ppm							
26 27	9	30/30	25 - 27.5				Well-graded SAND (SW), fine to medium and loose SILT (ML); white to gray, dry (SANDSTONE)		Sandstone				
28 29 30	10	30/30	27.5 - 30				Well-graded SAND (SW), fine to medium and loose SILT (ML); white to gray, dry (SANDSTONE)						
31 32 33	11	36/36	30 - 33				Well-graded SAND (SW), fine to medium and loose SILT (ML); white to gray, dry (SANDSTONE)						
34 35	12	24/24	33 - 35				Well-graded SAND (SW), fine to coarse; off-white to gray, dry (SANDSTONE)						
36 37	13	30/30	35 - 37.5				Well-graded SAND (SW), fine to coarse; off-white to gray, dry to very moist at 35' (SANDSTONE)						
38 39 40	14	30/30	37.5 - 40				Well-graded SAND (SW), fine to coarse; orange-white, wet (SANDSTONE)						
41 42 43 44 45	15	60/60	40 - 45				Well-graded SAND (SW), fine to coarse; off-white to white with some orange streaking, wet (SANDSTONE)						
46 47	16	30/30	45 - 47.5				Well-graded SAND (SW), fine to coarse; orange-white, wet (SANDSTONE)						
48							END OF BORING AT 47.5'	47.5'					
49													
50													

NOTES:



Contractor: Boart Longyear
Foreman: Jason / Todd
GZA Rep.: Dave Bauer
Date Start: 5/16/13
Date Finish: 5/16/13
Boring Loc.: Intersection of 3468th and 2062nd
GS Elev.: 562.5' Datum: NGVD 1929

Auger/Casing: _____
Type: _____
O.D. / I.D.: 6" _____
Hammer Wt.: _____
Hammer Fall: _____
Other: _____
Sampler: Sonic Barrel
4" _____

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
5/22/13		63.8'	N/A	

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	60/48	0 - 5				Lean CLAY (CL); trace Gravel, medium; brown, dry, organic-rich		CL		
2											
3											
4											
5											
6	2	60/60	5 - 10				Lean CLAY (CL); trace Gravel, medium; brown, dry, organic-rich		CL		
7											
8											
9											
10											
11	3	60/60	10 - 15				Hard, lean CLAY (CL); trace Gravel, medium; brown, dry, organic-rich		CL		
12											
13											
14											
15											
16	4	24/24	15 - 17				Loose, well-graded SAND (SW), fine to medium with well-graded GRAVEL (GW), fine to medium; brown, dry to moist		SW		
17											
18	5	36/36	17 - 20				24" Loose, well-graded SAND (SW), fine to medium with well-graded GRAVEL (GW), fine to medium; brown, dry to moist		CL		
19							12" Hard, lean CLAY (CL); brown, dry				
20											
21	6	30/30	20 - 22.5				24" Lean CLAY (CL)		CL		
22							6" Loose, well-graded SAND (SW), fine to medium with Silt (ML); brown, dry				
23	7	30/30	22.5 - 25				Loose, well-graded SAND (SW), fine to coarse with Gravel, medium to coarse; brown, moist		SW		
24											
25											

NOTES:



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26 27	8	30/30	25 - 27.5				Loose, well-graded SAND (SW), fine to coarse with Gravel, medium to coarse; brown, moist, lean Clay layers		SW		
28 29 30	9	30/30	27.5 - 30				6" Loose, well-graded SAND (SW), fine to coarse with Gravel, medium to coarse; brown, moist, lean Clay layers 24" Loose, well-graded SAND (SW), fine to medium; white, dry, quartz grains round to sub-round	1 28'			
31 32	10	30/30	30 - 32.5				28" SANDSTONE 2" Loose, well-graded SAND (SW), fine to medium; orange to off-white, dry, quartz grains round to sub-round (SANDSTONE)				
33 34 35	11	30/30	32.5 - 35				Well-graded SAND (SW), fine to medium, friable; off-white to white, dry, quartz grains (SANDSTONE)				
36 37	12	30/30	35 - 37.5				Well-graded SAND (SW), fine to coarse, friable; orange to white, dry, quartz grains (SANDSTONE)				
38 39 40	13	30/30	37.5 - 40				Well-graded SAND (SW), fine to medium, friable; white with little gray streaking, dry, quartz grains (SANDSTONE)		Sandstone		
41 42	14	30/30	40 - 42.5				Well-graded SAND (SW), fine to medium, friable; white with little gray streaking, dry, quartz grains (SANDSTONE)				
43 44 45	15	30/30	42.5 - 45				Well-graded SAND (SW), fine to medium, friable; white with little gray streaking, dry, quartz grains (SANDSTONE)				
46 47	16	30/30	45 - 47.5				Well-graded SAND (SW), fine to medium, friable; white with little gray streaking, dry, quartz grains (SANDSTONE)				
48 49 50	17	30/30	47.5 - 50				Well-graded SAND (SW), fine to medium, friable; white with little gray streaking, dry, quartz grains (SANDSTONE)				

NOTES:

- Sandstone encountered at 28 feet.



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
51 52	18	30/30	50 - 52.5				Well-graded SAND (SW), fine to medium, friable; white with little gray streaking, dry, quartz grains (SANDSTONE)				
53 54 55	19	30/30	52.5 - 55				Well-graded SAND (SW), fine to medium, friable; white with little gray streaking, dry, quartz grains (SANDSTONE)				
56 57 58	20	30/30	55 - 57.5				Well-graded SAND (SW), fine to medium, friable; white with little gray streaking, dry, quartz grains (SANDSTONE)				
59 60	21	30/30	57.5 - 60				Well-graded SAND (SW), fine to medium, friable; white with little gray streaking, dry, quartz grains (SANDSTONE)				
61 62	22	30/30	60 - 62.5				Well-graded SAND (SW), fine to medium, friable; white with little gray streaking, dry, quartz grains (SANDSTONE)				
63 64 65	23	30/30	62.5 - 65				Well-graded SAND (SW), fine to medium, friable; white with little gray streaking, dry, quartz grains (SANDSTONE)		Sandstone		
66 67 68 69 70	24	60/60	65 - 70				Well-graded SAND (SW), fine to coarse; very moist to wet (SANDSTONE)				
71 72 73 74 75	25	60/60	70 - 75				Well-graded SAND (SW), fine to coarse; very moist (SANDSTONE)				

NOTES:



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
76	26	48/48	75 - 79				Well-graded SAND (SW), fine to coarse; wet (SANDSTONE)		Sandstone		
77											
78											
79											
80	END OF BORING AT 79'										
81											
82											
83											
84											
85											
86											
87											
88											
89											
90											
91											
92											
93											
94											
95											
96											
97											
98											
99											
100											

NOTES:



Contractor: Boart Longyear
Foreman: Jason / Todd
GZA Rep.: Dave Bauer
Date Start: 5/15/13
Date Finish: 5/15/13
Boring Loc.: Thompson Park South
GS Elev.: 542.5' Datum: NGVD 1929

Auger/Casing: Type: _____
O.D. / I.D.: 6" _____
Hammer Wt.: _____
Hammer Fall: _____
Other: _____
Sampler: Sonic Barrel
4" _____

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
5/22/13		47.1'	N/A	

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	60/16	0 - 5				Lean CLAY (CL); trace Gravel; brown, organics		CL		
2											
3											
4											
5											
6	2	24/24	5 - 7				Lean CLAY (CL); trace Gravel; brown, organics	1			
7											
8	3	24/24	7 - 9				Loose, well-graded SAND (SW), fine to medium; brown to off-white, quartz grains, well-rounded (SANDSTONE)				
9											
10											
11	4	12/12	9 - 10				Loose, well-graded SAND (SW), fine to medium; brown to off-white, quartz grains, well-rounded (SANDSTONE)				
12											
13	5	30/30	10 - 12.5				Well-graded SAND (SW), fine to coarse; brown to off-white, dry to moist (SANDSTONE)				
14											
15	6	18/18	12.5 - 14				Well-graded SAND (SW), fine to coarse; brown to off-white, dry to moist (SANDSTONE)				
16											
17	7	12/12	14 - 15				Well-graded SAND (SW), fine to coarse; brown to off-white, dry to moist (SANDSTONE)				
18											
19	8	30/30	15 - 17.5				Well-graded SAND (SW), fine to coarse; brown to off-white, dry to moist (SANDSTONE)				
20											
21	9	30/30	17.5 - 20				Well-graded SAND (SW), fine to medium; brown to off-white, dry to moist (SANDSTONE)				
22											
23	10	30/30	20 - 22.5				Well-graded SAND (SW), fine to coarse; gray with orange streaks, dry to moist (SANDSTONE)				
24											
25	11	30/30	22.5 - 25				Well-graded SAND (SW), fine to coarse; gray with orange streaks, dry to moist (SANDSTONE)				

NOTES:
1. Sandstone encountered at 7 feet.



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26 27	12	30/30	25 - 27.5				Well-graded SAND (SW), fine to coarse; gray with orange streaks, dry to moist (SANDSTONE)				
28 29 30	13	30/30	27.5 - 30				Well-graded SAND (SW), fine to coarse; orange to off-white, dry to moist (SANDSTONE)				
31 32	14	30/30	30 - 32.5				Well-graded SAND (SW), fine to coarse; orange to off-white, dry to moist (SANDSTONE)				
33 34 35	15	30/30	32.5 - 35				Well-graded SAND (SW), fine to coarse; orange to off-white, dry to moist (SANDSTONE)				
36 37	16	30/30	35 - 37.5				Well-graded SAND (SW), fine to coarse; orange to off-white, dry to moist (SANDSTONE)				
38 39 40	17	30/30	37.5 - 40				Well-graded SAND (SW), fine to coarse; orange to off-white, dry to moist (SANDSTONE)	Sandstone			
41 42 43	18	36/36	40 - 43				Well-graded SAND (SW), fine to coarse; orange to off-white, dry to moist (SANDSTONE)				
44 45	19	24/24	43 - 45				Well-graded SAND (SW), fine to coarse; orange to off-white, dry to moist (SANDSTONE)				
46 47	20	30/30	45 - 47.5				Well-graded SAND (SW), fine to coarse; orange to off-white, dry to moist (SANDSTONE)				
48 49 50	21	30/30	47.5 - 50				Well-graded SAND (SW), fine to coarse; orange to off-white, moist to very moist (SANDSTONE)				

NOTES:



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
51	22	60/60	50 - 55				Well-graded SAND (SW), fine to coarse; orange to off-white, very moist (SANDSTONE)		Sandstone		
52											
53											
54											
55											
56	23	60/60	55 - 60				Well-graded SAND (SW), fine to coarse; orange to off-white, moist to very moist (SANDSTONE)		60.5'		
57											
58											
59											
60											
61	END OF BORING AT 60.5'										
62											
63											
64											
65											
66											
67											
68											
69											
70											
71											
72											
73											
74											
75											

NOTES:



Contractor: Boart Longyear
Foreman: Jason / Todd
GZA Rep.: Dave Bauer
Date Start: 5/17/13
Date Finish: 5/17/13
Boring Loc.: Thompson Park Near Park Well
GS Elev.: 542.7' Datum: NGVD 1929

Auger/Casing: Type: _____
O.D. / I.D.: 6" _____
Hammer Wt.: _____
Hammer Fall: _____
Other: _____
Sampler: Sonic Barrel
4" _____

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab
5/22/13		46.5'	N/A	

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	60/60	0 - 5				6" Lean CLAY (CL); trace Gravel; black, organic 54" Lean CLAY (CL); trace rootlets; brown		CL		
2											
3											
4											
5											
6	2	60/60	5 - 10				24" Lean CLAY (CL); trace rootlets; brown 36" Well-graded SAND (SW), fine to coarse; orange, quartz grains round to sub-round	1	7'		
7											
8	3	30/30	10 - 12.5				Loose, well-graded SAND (SW), fine to coarse; orange-white, dry, quartz grains (SANDSTONE)		Sandstone		
11											
12											
13	4	30/30	12.5 - 15				Loose, well-graded SAND (SW), fine to medium; white with gray streaks, dry, quartz grains (SANDSTONE)		Sandstone		
14											
15	5	30/30	15 - 17.5				Loose, well-graded SAND (SW), fine to medium; white with gray streaks, dry, quartz grains (SANDSTONE)		Sandstone		
16											
17	6	30/30	17.5 - 20				Loose, well-graded SAND (SW), fine to medium; white with gray streaks, dry, quartz grains (SANDSTONE)		Sandstone		
18											
19	7	30/30	20 - 22.5				Loose, well-graded SAND (SW), fine to coarse; white with gray streaks, dry, quartz grains (SANDSTONE)		Sandstone		
20											
21	8	30/30	22.5 - 25				Loose, well-graded SAND (SW), fine to coarse; orange to off-white, dry, quartz grains (SANDSTONE)		Sandstone		
22											
23											
24											
25											

NOTES:
1. Sandstone encountered at 7 feet.

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26 27	9	30/30	25 - 27.5				Loose, well-graded SAND (SW), fine to coarse; orange to off-white, dry, quartz grains (SANDSTONE)				
28 29 30	10	30/30	27.5 - 30				Loose, well-graded SAND (SW), fine to medium; orange, dry, quartz grains (SANDSTONE)				
31 32	11	30/30	30 - 32.5				Loose, well-graded SAND (SW), fine to medium; orange, dry, quartz grains (SANDSTONE)				
33 34 35	12	30/30	32.5 - 35				Loose, well-graded SAND (SW), fine to coarse; orange, dry, quartz grains (SANDSTONE)				
36 37	13	30/30	35 - 37.5				Loose, well-graded SAND (SW), fine to medium; orange, dry, quartz grains (SANDSTONE)				
38 39 40	14	30/30	37.5 - 40				Loose, well-graded SAND (SW), fine to medium; orange, dry, quartz grains (SANDSTONE)	Sandstone			
41 42	15	30/30	40 - 42.5				Loose, well-graded SAND (SW), fine to coarse; orange, dry, quartz grains (SANDSTONE)				
43 44 45	16	30/30	42.5 - 45				Loose, well-graded SAND (SW), fine to medium; orange, dry, quartz grains (SANDSTONE)				
46 47	17	30/30	45 - 47.5				Loose, well-graded SAND (SW), fine to medium; orange-white, dry, quartz grains (SANDSTONE)				
48 49 50	18	30/30	47.5 - 50				Loose, well-graded SAND (SW), fine to coarse; orange-white, dry to moist from 48-50', quartz grains (SANDSTONE)				

NOTES:



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
51	19	60/60	50 - 55				Loose, well-graded SAND (SW), fine to coarse; orange-white, wet, quartz grains (SANDSTONE)		Sandstone		
52											
53											
54											
55											
56	END OF BORING AT 55.5'										
57											
58											
59											
60											
61											
62											
63											
64											
65											
66											
67											
68											
69											
70											
71											
72											
73											
74											
75											

NOTES:



Contractor: Cascade Drilling
Foreman: Jason Dravek
GZA Rep.: Dave Bauer
Date Start: 12/3/13
Date Finish: 12/3/13
Boring Loc.: NE of Scale (Technisand Wedron)
GS Elev.: 520.6' Datum: NGVD 1929

Auger/Casing Type: _____
O.D. / I.D.: 6" _____
Hammer Wt.: _____
Hammer Fall: _____
Other: _____
Sampler: Sonic Barrel
4.5" _____


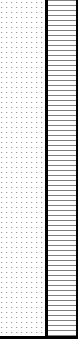

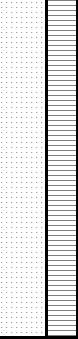
GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	30/30	0 - 2.5				Well-graded SAND (SW), fine to coarse and well-graded GRAVEL (GW), medium to coarse; trace cobbles		SW-GW		
2											
3	2	30/30	2.5 - 5				Well-graded SAND and GRAVEL (SW-GW), medium to coarse; trace cobbles, dry				
4											
5											
6	3	60/60	5 - 10				24" Well-graded SAND (SW), fine to medium; trace Gravel, fine; brown 36" SILT (ML) with Gravel, medium to coarse; brown, dry		SW		
7											
8											
9											
10	4	30/30	10 - 12.5				18" SILT (ML) with Gravel, medium to coarse; brown, moist 12" Very stiff, lean CLAY (CL); trace organics; brown, moist		ML		
11											
12	5	30/30	12.5 - 15				12" Very stiff, lean CLAY (CL); trace organics; brown, moist 18" Well-graded SAND (SW), fine to medium, dry, bedrock at 13.5'		CL		
13											
14											
15	6	30/30	15 - 17.5				Well-graded SAND (SW), fine to medium; white, dry (SANDSTONE)				
16											
17	7	30/30	17.5 - 20				Well-graded SAND (SW), fine to medium; trace coarse Sand; white, dry to moist (SANDSTONE)		Sandstone		
18											
19											
20	8	30/30	20 - 22.5				Well-graded SAND (SW), fine to coarse; white to orangish, very moist to wet at 21.5' (SANDSTONE)				
21											
22	9	30/30	22.5 - 25				Well-graded SAND (SW), fine to coarse; off-white to gray, very moist to wet (SANDSTONE)				
23											
24											
25											

NOTES:
1. Sandstone encountered at 13.5 feet.



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26	10	60/60	25 - 30				Well-graded SAND (SW), fine to coarse, gray, wet (SANDSTONE)		Sandstone		
27											
28											
29											
30											
31	11	24/24	30 - 32				Well-graded SAND (SW), fine to coarse, gray, wet (SANDSTONE)		32'		
32											
33	END OF BORING AT 32.5'										
34											
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											

NOTES:



Contractor: Cascade Drilling
Foreman: Jason Dravek
GZA Rep.: Dave Bauer
Date Start: 12/3/13
Date Finish: 12/3/13
Boring Loc.: NW of Screen House (Mine Prop.)
GS Elev.: 520.9' Datum: NGVD 1929


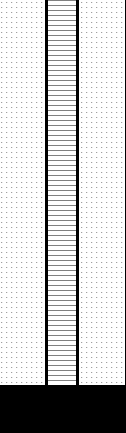

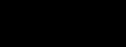
Auger/Casing: Type: _____
O.D. / I.D.: 6" _____
Hammer Wt.: _____
Hammer Fall: _____
Other: _____
Sampler: Sonic Barrel
4.5" _____

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	60/60	0 - 5				Well-graded SAND (SW), fine to coarse; some Gravel, medium; brown		SW		
2											
3											
4											
5											
6	2	60/60	5 - 10				Well-graded SAND (SW), fine to coarse; some Gravel, medium; little cobbles; brown, dry				
7											
8											
9											
10	3	30/30	10 - 12.5				10" Well-graded SAND (SW), fine to coarse; some Gravel, medium; little cobbles; brown, dry		CL		
11											
12											
13	4	30/30	12.5 - 15				12" Well-graded SAND (SW), fine to coarse; little Gravel, medium; brown		SW		
14											
15	5	30/30	15 - 17.5				18" Well-graded SAND (SW), fine to medium; white, dry, bedrock at 13.5'		Sandstone		
16											
17											
18	6	30/30	17.5 - 20				Well-graded SAND (SW), fine to coarse; white to orangish-white; dry to moist				
19											
20	7	30/30	20 - 22.5				Well-graded SAND (SW), fine to coarse; white to orangish-white; dry to moist				
21											
22											
23	8	30/30	22.5 - 25				Well-graded SAND (SW), fine to coarse; orangish-white to gray, very moist to wet				
24											
25											

NOTES:
1. Sandstone encountered at 13.5 feet.



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26	9	30/30	25 - 27.5				Well-graded SAND (SW), fine to coarse; orangish-white to gray, very moist to wet		Sandstone		
27											
28											
29	10	48/48	30 - 34				Well-graded SAND (SW), fine to coarse; orangish-white to gray, wet		34'		
30											
31											
32	END OF BORING AT 34'										
33											
34											
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											

NOTES:

Contractor: Cascade Drilling
Foreman: Jason Dravek
GZA Rep.: Dave Bauer
Date Start: 12/3/13
Date Finish: 12/3/13
Boring Loc.: W of Main Office (Mine Prop)
GS Elev.: 532.6' **Datum:** NGVD 1929

Auger/Casing **Sampler**
Type: Sonic Barrel
O.D. / I.D.: 6" 4.5"
Hammer Wt.: _____
Hammer Fall: _____
Other: _____

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction	
					Interval (feet)	ppm						
1	1	60/60	0 - 5				6" Organic CLAY (OL); black 12" Very stiff SILT (ML); trace Sand, fine 42" Lean CLAY (CL); trace Gravel, fine; brown, dry to moist		0.5'	OL		
2									1.5'	ML		
3										CL		
4												
5									5'			
6	2	60/60	5 - 10				24" Well-graded SAND (SW), fine to coarse; brown, wet 36" Lean CLAY (CL); little Sand, fine; trace Gravel, medium; moist		6'	SW		
7									7'			
8										CL		
9												
10									10.5'			
11	3	60/60	10 - 15				6" Lean CLAY (CL); little Sand, fine 18" CLAY and SAND (SC), fine to medium; brown, moist 12" Very stiff, lean CLAY (CL); trace Gravel, fine; gray, moist 6" Well-graded SAND (SW), fine to coarse with Gravel, fine to medium 18" Lean CLAY (CL); some Gravel, medium to coarse; trace cobbles; gray	1	11'	SC		
12									12'			
13										CL		
14												
15									16.2'			
16	4	60/60	15 - 20				50" Lean CLAY (CL); some Gravel, medium to coarse; gray, moist 10" Poorly-graded SAND (SP), medium; brown, moist		16.2'	SP		
17												
18												
19												
20									20.5'			
21	5	60/60	20 - 25				6" Poorly-graded SAND (SP), medium; brown, moist 54" Lean CLAY (CL); some Gravel, medium to coarse; little Sand, medium to coarse; gray, moist		20.5'	CL		
22												
23												
24												
25												

NOTES:
1. Bedrock at 13.5 feet.



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26 27 28 29 30	6	60/60	25 - 30				Lean CLAY (CL); some Gravel, medium to coarse; little Sand, medium; gray, moist		CL		
31 32 33 34 35	7	60/60	30 - 35				18" Lean CLAY (CL); some Gravel, medium to coarse; little Sand, medium; gray, moist 42" Well-graded SAND (SW), medium to coarse; gray to orangish, moist to very moist	31.5'	SW		
36 37 38 39 40	8	60/60	35 - 40				Clayey SAND (SC); little Gravel, medium to coarse; brown, very moist to wet		SC		
41 42 43 44 45	9	60/60	40 - 45				Clayey SAND (SC); little Gravel, medium to coarse; brown, very moist to wet				
46 47 48 49 50							END OF BORING AT 45'	45'			

NOTES:



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Engineers and Scientists

Wedron Silica Company, Technisand, Inc.
and Martin Marietta Corporation
Fairmount Minerals, Ltd.
Wedron Silica Co.
Wedron, Illinois

Boring No.: MW-12
Page: 1 of 2
File No.: 20.0151178.50
Checked By: Bernard Fenelon

Contractor: Cascade Drilling
Foreman: Jason Dravek
GZA Rep.: Dave Bauer
Date Start: 12/4/13
Date Finish: 12/4/13
Boring Loc.: SE of Pit 3 (Mine Prop)
GS Elev.: 532.8' Datum: NGVD 1929

Auger/Casing: Type: _____
O.D. / I.D.: 6" _____
Hammer Wt.: _____
Hammer Fall: _____
Other: _____
Sampler: Sonic Barrel
4.5" _____

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	PID ppm					
1	1	60/60	0 - 5				Well-graded SAND and well-graded GRAVEL (SW-GW), fine to coarse; some Clay; gray, moist	5'	SW-GW		
2											
3											
4											
5											
6	2	60/60	5 - 10				Well-graded SAND (SW), fine to coarse; some Gravel, coarse; some Clay; gray, moist	11.5'	SW		
7											
8											
9											
10											
11	3	60/60	10 - 15				18" Well-graded SAND (SW), fine to coarse; some Gravel, coarse; some Clay; gray, moist 42" Lean CLAY (CL); little Gravel, medium to coarse; gray, moist	25'	CL		
12											
13											
14											
15											
16	4	60/60	15 - 20				Lean CLAY (CL); some Gravel, fine to coarse; little well-graded Sand, fine to coarse; gray, moist	25'	CL		
17											
18											
19											
20											
21	5	60/60	20 - 25				Lean CLAY (CL); some Gravel, fine to coarse; little well-graded Sand, fine to coarse; gray, moist	25'	CL		
22											
23											
24											
25											

NOTES:



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26 27 28 29 30	6	60/60	25 - 30				Clayey SAND (SC); some Gravel, fine to coarse; gray, very moist to wet				
31 32 33 34 35	7	60/60	30 - 35				Clayey SAND (SC); some Gravel, fine to coarse; trace cobbles; gray to black, very moist to wet		SC		
36 37 38 39 40 41 42 43 44 45	8	120/120	35 - 45				Clayey SAND (SC); some Gravel, medium to coarse; gray to black, wet				
46 47	9	24/24	45 - 47				Clayey SAND (SC); some Gravel, medium to coarse; gray to black, wet	47'			
48 49 50							END OF BORING AT 47'				

NOTES:



Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Chris Ainsworth
Date Start: 12/3/13
Date Finish: 12/3/13
Boring Loc.: Tech Center W
GS Elev.: 534.6' Datum: NGVD 1929

Auger/Casing: Geoprobe
Sampler: Dual-Tube
Type: Geoprobe
O.D. / I.D.: 3.5" / 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/17	0 - 4		0 - 2	3.1	9" Well-graded SAND (SW), fine; trace Gravel; brown, dry (FILL) 8" Lean CLAY (CL); trace Sand; trace Silt; brown, moist		0.8' SW		
2					2 - 4	4.7					
3											
4											
5	2	48/18	4 - 8		4 - 6	4.0	Medium-stiff, lean CLAY (CL); little Silt; trace Sand; brown, moist	1	CL		
6					6 - 8	4.3					
7	3	48/32	8 - 12		8 - 10	4.3	Stiff, lean CLAY (CL); little Silt; trace Sand; brown with gray mottling, moist				
8					10 - 12	4.4					
9											
10											
11	4	48/39	12 - 16		12 - 14	2.9	20" Stiff, lean CLAY (CL); little Silt; trace Sand; brown with gray mottling, moist 4" Poorly-graded SAND (SP), fine; trace Silt; gray, wet 15" Poorly-graded SAND (SP); little Gravel; trace Silt; brown, dry	13.6'	SP		
12					14 - 16	4.9					
13											
14	5	48/39	16 - 20		16 - 18	3.8	28" Very stiff, lean CLAY (CL); trace Silt; trace Sand; gray, wet 11" Very stiff, lean CLAY (CL); gray, wet, intermittent fine Sand layers	1	CL		
15					18 - 20	3.5					
16											
17								15.2'			
18											
19											
20											
21							REFUSAL AT 20'				
22											
23											
24											
25											

NOTES:
1. Soil samples collected from 6 to 8 feet and from 18 to 20 feet for VOC analyses.



Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Chris Ainsworth
Date Start: 12/3/13
Date Finish: 12/3/13
Boring Loc.: Tech Center E
GS Elev.: 533.3' Datum: NGVD 1929

Auger/Casing: Geoprobe
Sampler: Dual-Tube
Type: Geoprobe
O.D. / I.D.: 3.5" / 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/24	0 - 4		0 - 2	11.3	7" Well-graded SAND (SW); little Gravel; trace Sand; brown, dry (FILL)		0.6' SW		
2					2 - 4	6.2	17" Very stiff, lean CLAY (CL); trace Sand; trace Silt; brown to dark brown at 3.5', dry				
3											
4	2	48/24	4 - 8		4 - 6	12.8	Hard, lean CLAY (CL), slightly plastic; little Silt; trace Sand; brown, dry		CL		
5					6 - 8	17.0					
6											
7	3	48/21	8 - 12		8 - 10	12.7	Stiff, lean CLAY (CL), plastic; little Silt; trace Sand; brown, dry				
8					10 - 12	13.0					
9											
10	4	48/39	12 - 16		12 - 14	17.5	10" Soft, lean CLAY (CL); some Sand, fine; trace Silt; brown, wet	1			
11					14 - 16	20.2	19" Stiff, lean CLAY (CL); trace Silt; trace Sand; brown, moist, fine Sand lenses				
12											
13	5	48/37	16 - 20		16 - 18	16.4	8" Very stiff, lean CLAY (CL); trace Silt; gray, dry	2	16.6'	SP	
14					18 - 20	14.7	13" Poorly-graded SAND (SP), fine to medium; little Gravel; trace Silt; brown, dry				
15											
16							16" Hard, lean CLAY (CL); trace Silt; brown, dry	1	17.7'	CL	
17											
18											
19											
20											
21							REFUSAL AT 20'				
22											
23											
24											
25											

NOTES:
1. Soil samples collected from 14 to 16 feet and from 18 to 20 feet for VOC and Foc analyses.
2. Difficult drilling from 17 to 20 feet.



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Wedron, Illinois

Boring No.: WS-SB-GP-03

Page: 1 of 1

File No.: 20.0151178.50

Checked By: Bernard Fenelon

Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Chris Ainsworth
Date Start: 12/3/13
Date Finish: 12/3/13
Boring Loc.: 4,000-Gal USTs NW
GS Elev.: 534.1' Datum: NGVD 1929

Auger/Casing Sampler
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction	
					Interval (feet)	ppm						
1	1	48/25	0 - 4		0 - 2	10.4	4" Base course 21" Very stiff, lean CLAY (CL), plastic; trace Silt; trace Sand; brown to gray at 3', dry, petroleum odor at 3'	1	CL			
2					2 - 4	88.1						
3												
4												
5	2	48/48	4 - 8		4 - 6	1,831	37" Very stiff to hard, lean CLAY (CL); trace Silt; gray, dry, trace fine Sand layer, petroleum odor 11" Poorly-graded SAND (SP), fine; some Silt; trace Gravel; gray, dry, slightly cemented	1	CL			
6					6 - 8	40.2						
7												
8									7.1'	SP		
9							END OF BORING AT 8'					
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												

NOTES:
1. Soil sample collected from 4 to 6 feet for VOC, lead and pH analyses.



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Wedron, Illinois

Boring No.: WS-SB-GP-04

Page: 1 of 1

File No.: 20.0151178.50

Checked By: Bernard Fenelon

Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Chris Ainsworth
Date Start: 12/3/13
Date Finish: 12/3/13
Boring Loc.: 4,000-Gal USTs SW
GS Elev.: 534.0' Datum: NGVD 1929

Auger/Casing Sampler
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/25	0 - 4		0 - 2	35.8	4" Base course (FILL) 21" Very stiff, lean CLAY (CL); trace Silt; brown to gray at 3', dry, trace 1/4" sand seams, petroleum odor (FILL)	1	CL	0.3' Base Course	
2					2 - 4	1,383					
3											
4											
5	2	48/45	4 - 8		4 - 6	2,382	Hard, lean CLAY (CL); little Sand; trace Silt; gray, dry, 4" fine to medium Sand seam at 5.5', petroleum odor	1	CL		
6					6 - 8	355.8					
7											
8											
9							END OF BORING AT 8'				
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:
1. Soil sample collected from 4 to 6 feet for VOC, lead, pH and Foc analyses.



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Wedron, Illinois

Boring No.: WS-SB-GP-05

Page: 1 of 1

File No.: 20.0151178.50

Checked By: Bernard Fenelon

Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Chris Ainsworth
Date Start: 12/3/13
Date Finish: 12/3/13
Boring Loc.: 4,000-Gal USTs SE
GS Elev.: 534.0' Datum: NGVD 1929

Auger/Casing Sampler
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/25	0 - 4		0 - 2	18.4	7" Poorly-graded SAND (SP), fine; little Silt; trace Gravel; brown, dry 18" Hard, lean CLAY (CL); trace Sand; trace Gravel; brown, dry, petroleum odor (FILL)	1	CL	SP	
2					2 - 4	2,114					
3											
4											
5	2	48/44	4 - 8		4 - 6	1,807	Hard, lean CLAY (CL); trace Sand; trace Gravel; little Silt; gray, dry, some 1/4" silty sand seams, petroleum odor 4-6' (FILL)	8'			
6					6 - 8	22.9					
7											
8											
9							END OF BORING AT 8'				
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:
1. Soil sample collected from 2 to 4 feet for VOC, lead and pH analyses.



GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Wedron Silica Company, Technisand, Inc.
and Martin Marietta Corporation
Fairmount Minerals, Ltd.
Wedron Silica Co.
Wedron, Illinois

Boring No.: WS-SB-GP-06

Page: 1 of 1

File No.: 20.0151178.50

Checked By: Bernard Fenelon

Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Chris Ainsworth
Date Start: 12/3/13
Date Finish: 12/3/13
Boring Loc.: 4,000-Gal USTs NE
GS Elev.: 534.0' Datum: NGVD 1929

Auger/Casing Sampler
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/13	0 - 4		0 - 2	6,109	Lean CLAY (CL); trace Silt; gray, dry, trace sand layers, petroleum odor (FILL)	1.2	CL		
2					2 - 4	5,424					
3											
4											
5	2	48/48	4 - 8		4 - 6	2,511	Very stiff, lean CLAY (CL); trace Silt; trace Sand; gray, dry, fine 1/4" sand layers, petroleum odor (FILL)	8'			
6					6 - 8	10.8					
7											
8											
9							END OF BORING AT 8'				
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:
1. Soil sample collected from 0 to 2 feet for VOC, lead, pH and Foc analyses.
2. A duplicate sample was collected from 0 to 2 feet for VOC, lead, pH and Foc analyses.



Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Chris Ainsworth
Date Start: 12/3/13
Date Finish: 12/3/13
Boring Loc.: 6,000-Gal UST N
GS Elev.: 517.7' Datum: NGVD 1929

Auger/Casing Sampler
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/29	0 - 4		0 - 2	6.9	20" Poorly-graded SAND (SP), fine; trace Silt; brown, dry (FILL) 9" Poorly-graded SAND (SP), fine; little Silt; trace Clay; black, moist, red brick fragments (FILL)	1	SP		
2					2 - 4	8.0					
3	2	48/21	4 - 8		4 - 6	2.7	Stiff, lean CLAY (CL); trace Silt; trace Sand; brown, dry, trace Sand layers (FILL)	8	CL		
4					6 - 8	5.0					
5	3	12/11	8 - 9		8 - 9	2.5	Poorly-graded SAND (SP), fine; little Gravel; trace Silt; brown, dry	1	SP		
6							9				
7	REFUSAL AT 9'										
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:
1. Soil samples collected from 2 to 4 feet and 8 to 9 feet for VOC, lead, pH and Foc analyses.



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Engineers and Scientists

Wedron Silica Company, Technisand, Inc.
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Fairmount Minerals, Ltd.
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Wedron, Illinois

Boring No.: WS-SB-GP-08

Page: 1 of 1

File No.: 20.0151178.50

Checked By: Bernard Fenelon

Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Chris Ainsworth
Date Start: 12/3/13
Date Finish: 12/3/13
Boring Loc.: 6,000-Gal UST N-1
GS Elev.: 517.9' Datum: NGVD 1929

Auger/Casing Sampler
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/25	0 - 4		0 - 2	13.1	Poorly-graded SAND (SP), fine; trace Silt; trace Gravel; brown, dry, 2" lean Clay layer	1	SP		
2					2 - 4	13.6					
3											
4											
5	2	48/25	4 - 8		4 - 6	12.0	20" Stiff, lean CLAY (CL); little Silt; trace Sand; brown, moist 5" Poorly-graded SAND (SP) with Gravel; trace Silt; brown, dry	5.7'	CL		
6					6 - 8	5.1					
7											
8	3	24/24	8 - 10		8 - 10	4.1	5" Poorly-graded SAND (SP) with Gravel; trace Silt; brown, dry 19" Poorly-graded SAND (SP), little Silt; light brown, dry	1	SP		
9											
10								10'			
11							REFUSAL AT 10'				
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:
1. Soil samples collected from 2 to 4 feet for VOC, lead, pH and Foc analyses and 8 to 10 feet for VOC, lead and pH analyses.



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Engineers and Scientists

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Wedron, Illinois

Boring No.: WS-SB-GP-09

Page: 1 of 1

File No.: 20.0151178.50

Checked By: Bernard Fenelon

Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Chris Ainsworth
Date Start: 12/3/13
Date Finish: 12/3/13
Boring Loc.: 6,000-Gal UST Center
GS Elev.: 518.3' Datum: NGVD 1929

Auger/Casing Sampler
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/25	0 - 4		0 - 2	4.7	22" Poorly-graded SAND (SP), fine; trace Silt; trace Gravel; brown, moist (FILL) 10" Poorly-graded SAND (SP), fine; trace Silt; trace Clay; brown and dark brown, moist (FILL)				
2					2 - 4	7.2					
3	2	48/25	4 - 8		4 - 6	9.1	13" Poorly-graded SAND (SP), fine; trace Silt; some Gravel; moist (FILL) 8" Poorly-graded SAND (SP), fine; some Gravel; trace Silt; black, moist		SP		
4					6 - 8	5.5					
5	3	42/14	8 - 11.5		8 - 10	10.6	10" Poorly-graded SAND (SP), fine; trace Silt; trace Clay; some Gravel; black, moist 4" Poorly-graded SAND (SP), fine; yellow-brown, moist	1			
6					10 - 11.5	6.8					
7											
8											
9											
10											
11											
12							REFUSAL AT 11.5'				
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:
1. Soil sample collected from 8 to 10 feet for VOC, lead and pH analyses.



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Engineers and Scientists

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Wedron, Illinois

Boring No.: WS-SB-GP-10

Page: 1 of 1

File No.: 20.0151178.50

Checked By: Bernard Fenelon

Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Chris Ainsworth
Date Start: 12/3/13
Date Finish: 12/3/13
Boring Loc.: 6,000-Gal UST S+1
GS Elev.: 518.8' Datum: NGVD 1929

Auger/Casing Sampler
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/12	0 - 4		0 - 2	5.2	Poorly-graded SAND (SP), fine; trace Silt; trace Clay; brown, dry (FILL)	1	SP		
2											
3											
4											
5	2	48/14	4 - 8		4 - 6	4.6	Poorly-graded SAND (SP), fine; little Silt; trace Gravel; brown, moist				
6											
7											
8											
9	3	48/17	8 - 12		8 - 10	4.7	7" Poorly-graded SAND (SP), fine; little Silt; trace Gavel; brown, moist				
10							10" Poorly-graded SAND (SP), fine; little Silt; tan, moist				
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:
1. Soil sample collected from 8 to 10 feet for VOC, lead, pH and Foc analyses.



Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Chris Ainsworth
Date Start: 12/3/13
Date Finish: 12/3/13
Boring Loc.: 6,000-Gal UST S
GS Elev.: 519.0' Datum: NGVD 1929

Auger/Casing Sampler
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/21	0 - 4		0 - 2	4.2	19" Poorly-graded SAND (SP), fine; some Gravel; trace Silt; brown, dry (FILL) 2" Pea GRAVEL (GP)		SP		
2					2 - 4	3.9					
3											
4	2	48/16	4 - 8		4 - 6	4.2	3" Pea GRAVEL (GP) 13" Poorly-graded SAND (SP), fine; some Clay; trace Gravel; brown, dry (FILL)		SP		
5					6 - 8	2.7					
6											
7	3	48/10	8 - 12		8 - 10	4.0	1" Poorly-graded SAND (SP), fine; some Clay; trace Gravel; brown, dry (FILL) 9" Poorly-graded SAND (SP), fine; trace Gravel; brown, moist		SP		
8											
9											
10											
11											
12											
13							END OF BORING AT 12'				
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:
1. Soil sample collected from 8 to 10 feet for VOC, lead, pH and Foc analyses.



Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Chris Ainsworth
Date Start: 12/4/13
Date Finish: 12/4/13
Boring Loc.: GP-10 Area S
GS Elev.: 520.3' Datum: NGVD 1929

Auger/Casing Sampler
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/17	0 - 4		0 - 2	4.3	Poorly-graded SAND (SP), fine; trace Silt; tan to brown, dry (FILL)	1	SP		
2					2 - 4	1.8					
3					4 - 6	5.0	12" Poorly-graded SAND (SP), fine; trace Silt; tan, moist (FILL) 12" Poorly-graded SAND (SP), fine; little Clay; little Gravel; brown, moist (FILL)				
4											
5	2	48/24	4 - 8		8 - 10	5.6	Poorly-graded SAND (SP), fine; little Clay; little Gravel; brown, moist, 3" gray silt Sand seam at mid-point (FILL)	12'			
6					10 - 12	3.6					
7					3	48/20	8 - 12				
8											
9	4	36/7	12 - 15								
10											
11											
12											
13											
14											
15											
16							REFUSAL AT 15'				
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:
1. Soil samples collected from 6 to 8 feet and 12 to 15 feet for VOC analyses.



Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Chris Ainsworth
Date Start: 12/4/13
Date Finish: 12/4/13
Boring Loc.: GP-10 Area Center
GS Elev.: 519.9' Datum: NGVD 1929

Auger/Casing Sampler
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/22	0 - 4		0 - 2	3.3	5" Poorly-graded SAND (SP); little Silt; trace Clay; dark brown, dry 6" Poorly-graded SAND (SP), fine with Silt; white, dry 11" Poorly-graded SAND (SP); trace Silt, fine; tan, dry				
2					2 - 4	1.2					
3											
4											
5	2	48/26	4 - 8		4 - 6	2.7	Intermittent layers of poorly-graded SAND (SP) (FILL)	1	SP		
6					6 - 8	4.8					
7											
8											
9	3	48/31	8 - 12		8 - 10	1.1	Poorly-graded SAND (SP), fine to medium; little Gravel; trace Silt; brown, dry				
10					10 - 12	2.9					
11											
12											
13	4	36/29	12 - 15		12 - 14	4.8	Poorly-graded SAND (SP), fine to medium; some Gravel; trace Silt; brown to black at 13.5'; moist, slight odor, 4" lean clay layer at 14'	1-3			
14					14 - 15	22					
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
REFUSAL AT 15'											

- NOTES:
- Soil samples collected from 6 to 8 feet for VOC analyses and 13 to 15 feet for VOC and Foc analyses.
 - A duplicate sample was collected from 13 to 15 feet for VOC analyses.
 - USEPA collected a split of sample WS-SB-GP-13 from 13 to 15 feet.



Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Chris Ainsworth
Date Start: 12/4/13
Date Finish: 12/4/13
Boring Loc.: GP-10 Area N
GS Elev.: 520.0' Datum: NGVD 1929

Auger/Casing Sampler
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/25	0 - 4		0 - 2	0.9	9" Poorly-graded SAND (SP), fine; little Silt; dark brown, moist (FILL) 16" Poorly-graded SAND (SP), fine; trace Silt; brown and tan, dry (FILL)				
2					2 - 4	1.1					
3											
4											
5	2	48/26	4 - 8		4 - 6	0.7	17" Poorly-graded SAND (SP), fine; trace Silt; brown and tan, moist to wet (FILL) 9" Poorly-graded SAND (SP), fine; little Gravel; brown with rust staining, moist	1	SP		
6					6 - 8	0.9					
7											
8											
9	3	48/27	8 - 12		8 - 10	0.6	Poorly-graded SAND (SP), fine, with Gravel; brown, dry				
10					10 - 12	1.8					
11											
12											
13	4	36/11	12 - 15		12 - 14	2.8	Poorly-graded SAND (SP), fine, with Gravel; brown to black, dry, slight odor	1			
14											
15											
15								15'			
16	REFUSAL AT 15'										
17											
18											
19											
20											
21											
22											
23											
24											
25											

NOTES:
1. Soil samples collected from 6 to 8 feet for VOC analyses and 12 to 15 feet for VOC and Foc analyses.



Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Ellie Stapleton
Date Start: 5/8/14
Date Finish: 5/8/14
Boring Loc.: Off SW Corner of AST
GS Elev.: 533.8' Datum: NGVD 1929

Auger/Casing **Sampler**
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/26	0 - 4		0 - 1.7	0	13" SAND (SP), medium (FILL) 13" Stiff, lean CLAY (CL), plastic; trace Silt; trace Sand, medium; brown to gray, moist	1.1'	SP		
2					1.7 - 3.3	0					
3					3.3 - 5	4.6					
4	2	48/42	4 - 8		5 - 6.7	55	14" Very stiff, lean CLAY (CL); trace Gravel; trace Silt; gray, moist 28" Poorly-graded SAND (SP), fine with few medium; little Clay; trace Gravel; brown, dry	5.2'	CL		
5					6.7 - 8.3	3.2					
6					8.3 - 10	0					
7	3	48/28	8 - 12		10 - 11.7	1.8	15" Poorly-graded SAND (SP), fine; some Clay; trace Gravel; brown, dry 13" Very stiff, lean CLAY (CL); trace Gravel; trace Silt; gray, dry	9.3'	SP		
8					11.7 - 13.3	169.6					
9					13.3 - 15	104.7					
10	4	48/41	12 - 16		15 - 16.7	41.3	20" Stiff, lean CLAY (CL); trace Silt; trace Sand; brown, dry 21" Very soft, lean CLAY (CL); trace Silt; black, moist, stained and strong odors	17.7'	CL		
11					16.7 - 18.3	50.4					
12					18.3 - 20	347.5					
13	5	48/26	16 - 20		20 - 21.7	337.9	7" Stiff, lean CLAY (CL); trace Silt; trace Sand; black/gray 19" Poorly-graded SAND (SP), medium; trace Clay; gray, moist	1	SP		
14					21.7 - 23.3	518.2					
15					23.3 - 25	741.4					
16	6	48/30	20 - 24								
17	7	48/29	24 - 28								
18							Sample No. 7 Description Provided on Page 2				
19											
20											
21											
22											
23											
24											
25											

- NOTES:**
- Soil samples collected from 3.3 to 5 feet, 5 to 6.6 feet, 11.7 to 13.3 feet, 18.3 to 20 feet, 23.3 to 25 feet, 28.3 to 30 feet and 31.7 to 33.3 feet for VOC, lead, pH and Foc analyses.
 - USEPA collected a split of sample WS-SB-GP-14A from 23.3 to 25 feet.



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26	7	48/29	24 - 28		25 - 26.7	862.2	Poorly-graded SAND (SP), medium; gray, moist, some black staining, strong odors				
27					26.7 - 28.3	1,449					
28											
29	8	48/42	28 - 32		28.3 - 30	926.7	Poorly-graded SAND (SP), medium; dark brown, moist to wet, black staining	1	SP		
30					30 - 31.7	904.3		1			
31											
32	9	48/33	32 - 36		31.7 - 33.3	696.2	Poorly-graded SAND (SP), medium; trace Gravel; brown, moist to wet				
33					33.3 - 35	518.6					
34											
35											
36								36'			
37							END OF BORING AT 36'				
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											

NOTES:

1. Soil samples collected from 3.3 to 5 feet, 5 to 6.6 feet, 11.7 to 13.3 feet, 18.3 to 20 feet, 23.3 to 25 feet, 28.3 to 30 feet and 31.7 to 33.3 feet for VOC, lead, pH and Foc analyses.

Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Ellie Stapleton
Date Start: 5/8/14
Date Finish: 5/8/14
Boring Loc.: Approx. 20' W of AST
GS Elev.: 534.4' **Datum:** NGVD 1929

Auger/Casing **Sampler**
Type: Geoprobe **Dual-Tube**
O.D. / I.D.: 3.5" **2"**
Hammer Wt.: _____
Hammer Fall: _____
Other: _____

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/30	0 - 4		0 - 1.7	0.4	16" Well-graded SAND (SW), fine to coarse; some Gravel; tan (FILL)	1.3'	SW		
2					1.7 - 3.3	0	14" Medium-stiff, lean CLAY (CL) with medium Sand; little Gravel; brown, moist		CL		
3					2	48/26	4 - 8		3.3 - 5	0	Well-graded SAND (SW), medium to coarse; little Gravel; brown, moist
4	5 - 6.7	0									
5	6.7 - 8.3	0									
6	3	48/25	8 - 12		8.3 - 10	0	Well-graded SAND (SW), medium to coarse; little Gravel; brown, moist	1	SW		
7					10 - 11.7	0					
8					11.7 - 13.3	0					
9	4	48/34	12 - 16		13.3 - 15	0	5" Well-graded SAND (SW), medium to coarse; little Gravel; golden brown, moist 29" Poorly-graded SAND (SP), medium with Clay; trace Gravel	12.4'	SP		
10					15 - 16.7	8.7					
11					16.7 - 18.3	2.7					
12	5	48/33	16 - 20		18.3 - 20	2.4	18" Very stiff, lean CLAY (CL); some Sand, medium; trace Gravel; brown, moist 15" Poorly-graded SAND (SP), medium; gray, moist	1.2	CL		
13					20 - 21.7	0.8					
14					21.7 - 23.3	0.8					
15	6	48/30	20 - 24		23.3 - 25	1.5	Poorly-graded SAND (SP), medium; gray, moist	17.5'	SP		
16											
17											
18	7	48/29	24 - 28				Sample No. 7 Description Provided on Page 2	1	SP		
19											
20											

NOTES:
1. Soil samples collected from 1.7 to 3.3 feet, 6.7 to 8.3 feet, 11.7 to 13.3 feet, 16.7 to 18.3 feet, 23.3 to 25 feet and 26.7 to 28.3 feet. Samples collected from 1.7 to 3.3 feet, 16.7 to 18.3 feet, 23.3 to 25 feet and 26.7 to 28.3 feet were analyzed for VOC, lead and pH analyses. Samples collected from 6.7 to 8.3 feet and 11.7 to 13.3 feet were analyzed for VOC, lead, pH and Foc analyses.
2. A duplicate sample was collected from 16.7 to 18.3 feet for VOC, lead, pH and Foc analyses.

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction	
					Interval (feet)	ppm						
26	7	48/26	24 - 28		25 - 26.7	1.3	Poorly-graded SAND (SP), medium; some Clay; gray to brown, moist	1	SP			
27					26.7 - 28.3	1.7						17" Well-graded SAND (SW), fine to medium; trace Gravel; golden brown, moist
28					28.3 - 30	0.4						
29	8	24/19	28 - 30		28.3 - 30	0.4						
30												
31							END OF BORING AT 30'					
32												
33												
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NOTES:
 1. Soil samples collected from 1.7 to 3.3 feet, 6.7 to 8.3 feet, 11.7 to 13.3 feet, 16.7 to 18.3 feet, 23.3 to 25 feet and 26.7 to 28.3 feet. Samples collected from 1.7 to 3.3 feet, 16.7 to 18.3 feet, 23.3 to 25 feet and 26.7 to 28.3 feet were analyzed for VOC, lead and pH analyses. Samples collected from 6.7 to 8.3 feet and 11.7 to 13.3 feet were analyzed for VOC, lead, pH and Foc analyses.



Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Ellie Stapleton
Date Start: 5/8/14
Date Finish: 5/8/14
Boring Loc.: Approx. 10' N of AST
GS Elev.: 533.8' Datum: NGVD 1929

Auger/Casing **Sampler**
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/29	0 - 4		0 - 1.7	0	3" Well-graded SAND (SW), fine to coarse; little Gravel; tan (FILL) 21" Poorly-graded SAND (SP), medium with Clay; brown, moist 5" Very stiff, lean CLAY (CL); some Sand, medium; gray, moist	0.3'	SW		
2					1.7 - 3.3	0					
3											
4	2	48/48	4 - 8		3.3 - 5	3.1	Very stiff, lean CLAY (CL); some Sand, medium; gray to brown, moist, some dark staining	1	CL		
5					5 - 6.7	21.6					
6					6.7 - 8.3	0.2					
7	3	48/12	8 - 12		8.3 - 10	0.1	Very stiff, lean CLAY (CL); some Sand, fine to medium; grayish-brown, dry	1	CL		
8					10 - 11.7	5.4					
9											
10	4	48/35	12 - 16		11.7 - 13.3	3.8	Very stiff, lean CLAY (CL); some Sand, medium; trace Silt; brown, dry	1	CL		
11					13.3 - 15	2.9					
12					15 - 16.7	8.7					
13	5	48/27	16 - 20		16.7 - 18.3	5.1	Very stiff, lean CLAY (CL); some Sand, fine to medium; dark brown, dry, few 2" layers of white silica sand mixed in	1	CL		
14					18.3 - 20	4.4					
15											
16	6	48/36	20 - 24		20 - 21.7	3.5	Poorly-graded SAND (SP) with Clay; trace Silt; dark brown, dry, 2" greenish clay layer at approx. 22"	20'	SP		
17					21.7 - 23.3	5.6					
18					23.3 - 25	9.7					
19	7	48/27	24 - 28				Sample No. 7 Description Provided on Page 2				

NOTES:
1. Soil samples collected from 3.3 to 5 feet, 5 to 6.7 feet, 10 to 11.6 feet, 15 to 16.7 feet, 21.7 to 23.3 feet and 28.3 to 30 feet for VOC, lead, pH and Foc analyses.

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26	7	48/27	24 - 28		25 - 26.7	3.0	Poorly-graded SAND (SP), medium; gray, dry, silica sand, some black staining and odors				
27					26.7 - 28.3	3.4					
28											
29	8	48/30	28 - 32		28.3 - 30	4.8	17" Poorly-graded SAND (SP), medium; some Clay; brown, dry 13" Poorly-graded SAND (SP), medium; little Clay; brown, moist	1	SP		
30											
31					30 - 31.7	2.4					
32											
33											
34											
35											
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NOTES:
 1. Soil samples collected from 3.3 to 5 feet, 5 to 6.7 feet, 10 to 11.6 feet, 15 to 16.7 feet, 21.7 to 23.3 feet and 28.3 to 30 feet for VOC, lead, pH and Foc analyses.



Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Ellie Stapleton
Date Start: 5/9/14
Date Finish: 5/9/14
Boring Loc.: Approx. 10' S of GP-14
GS Elev.: 534.4' Datum: NGVD 1929

Auger/Casing **Sampler**
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/36	0 - 4		0 - 1.7	6.2	12" GRAVEL and well-graded SAND (GW-SW); tank dry (FILL) 24" Very stiff, lean CLAY (CL) with Sand, fine; trace Gravel; brown, dry	1'	GW-SW		
2					1.7 - 3.3	4.8					
3											
4	2	48/48	4 - 8		3.3 - 5	8.5	44" Hard, lean CLAY (CL); little Sand, fine to medium; trace Gravel; brown, dry 4" Poorly-graded SAND (SP), fine; some Clay; little Silt; trace Gravel; tan, dry	1	CL		
5					5 - 6.7	6.0					
6					6.7 - 8.3	6.4					
7	3	48/48	8 - 12		8.3 - 10	1.2	36" Well-graded SAND (SW), fine to medium; some Clay; little Gravel; brown, dry 12" Hard, lean CLAY (CL); little Sand, fine; trace Gravel; brown, dry	11'	SW		
8					10 - 11.7	4.2					
9											
10	4	48/39	12 - 16		11.7 - 13.3	4.7	Very stiff, lean CLAY (CL); little Sand, fine; trace Gravel; brown, dry	1	CL		
11					13.3 - 15	7.2					
12					15 - 16.7	9.3					
13	5	48/33	16 - 20		16.7 - 18.3	6.3	28" Very stiff, lean CLAY (CL); some Sand, fine to medium; trace Gravel; grayish-brown, moist 5" Poorly-graded SAND (SP), medium; light gray, moist, some black staining and strong odors	18.3'			
14					18.3 - 20	21.5					
15											
16	6	48/36	20 - 24		20 - 21.7	7.8	Poorly-graded SAND (SP), medium; light gray, some black staining	1	SP		
17					21.7 - 23.3	23.1					
18					23.3 - 25	4.4					
19	7	48/23	24 - 28				Sample No. 7 Description Provided on Page 2				

NOTES:
1. Soil samples collected from 3.3 to 5 feet, 6.7 to 8.3 feet, 13.3 to 15 feet, 18.3 to 20 feet, 21.7 to 23 feet, 26.7 to 28.3 feet and 31.7 to 33.3 feet for VOC, lead, pH and Foc analyses.



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26	7	48/23	24 - 28		25 - 26.7	6.3	Poorly-graded SAND (SP), medium; light gray to brown, moist	1	SP		
27					26.7 - 28.3	6.6					
29	8	48/0	28 - 32				No Recovery	1	No Recovery		
30					31	32					
33	9	48/20	32 - 36		31.7 - 33.3	5.0	Very stiff, lean CLAY (CL); some Sand, medium; trace Gravel; brown, moist to wet, some black staining	1	CL		
34					33.3 - 35	4.8					
37							END OF BORING AT 36'				
38											
39											
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48											
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NOTES:
1. Soil samples collected from 3.3 to 5 feet, 6.7 to 8.3 feet, 13.3 to 15 feet, 18.3 to 20 feet, 21.7 to 23 feet, 26.7 to 28.3 feet and 31.7 to 33.3 feet for VOC, lead, pH and Foc analyses.

Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Ellie Stapleton
Date Start: 5/9/14
Date Finish: 5/9/14
Boring Loc.: Approx. 10' E of AST
GS Elev.: 533.9' **Datum:** NGVD 1929

Auger/Casing **Sampler**
Type: Geoprobe **Dual-Tube**
O.D. / I.D.: 3.5" **2"**
Hammer Wt.: _____
Hammer Fall: _____
Other: _____

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
NA				

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/33	0 - 4		0 - 1.7	0.4	10" Concrete and sandy FILL 23" Very stiff, lean CLAY (CL); little Sand, medium; little Silt; brown, dry	0.8'	FILL		
2					1.7 - 3.3	0.4					
3											
4	2	48/46	4 - 8		3.3 - 5	0.3	22" Hard, lean CLAY (CL); little Sand; brown, dry 24" Poorly-graded SAND (SP) with hard Clay; trace Gravel; brown/tan, dry	4.9'			
5					5 - 6.7	0.7					
6					6.7 - 8.3	1.0					
7	3	48/48	8 - 12		8.3 - 10	0.6	44" Poorly-graded SAND (SP) with hard Clay; trace Gravel; brown, dry 4" Hard, lean CLAY (CL); little Sand; brown, dry	11.7'	CL		
8					10 - 11.7	0.9					
9											
10	4	48/36	12 - 16		11.7 - 13.3	0.8	23" Stiff, lean CLAY (CL); some Sand, medium; trace Gravel; brown, dry 13" Poorly-graded SAND (SP), medium; trace Clay; light gray, dry, little black staining	12.9'			
11					13.3 - 15	1.7					
12					15 - 16.7	2.4					
13	5	48/34	16 - 20		16.7 - 18.3	3.8	Poorly-graded SAND (SP), medium; light gray, dry, little black staining and little odor	1			
14					18.3 - 20	3.8					
15											
16	6	48/35	20 - 24		20 - 21.7	1.8	Poorly-graded SAND (SP), medium; light gray, dry, little black staining	1			
17					21.7 - 23.3	2.5					
18					23.3 - 25	3.3					
19	7	48/27	24 - 28				Sample No. 7 Description Provided on Page 2				

NOTES:
1. Soil samples collected from 1.7 to 3.3 feet, 6.7 to 8.3 feet, 13.3 to 15 feet, 16.7 to 18.3 feet, 23.3 to 25 feet, 28.3 to 30 feet and 31.7 to 33.3 feet for VOC, lead, pH and Foc analyses.
2. A duplicate sample was collected from 1.7 to 3.3 feet for VOC, lead, pH and Foc analyses.

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26	7	48/27	24 - 28		25 - 26.7	4.0	Poorly-graded SAND (SP), medium; light gray, dry, some darker black staining		SP		
27					26.7 - 28.3	4.8					
28											
29	8	48/35	28 - 32		28.3 - 30	10.4	14" Poorly-sorted SAND (SP), medium; dark gray, little staining 21" Stiff, lean CLAY (CL); little Sand, medium; trace Gravel; light brown, moist	1			
30					30 - 31.7	3.4					
31											
32	9	48/48	32 - 36		31.7 - 33.3	4.8	18" Medium-stiff, lean CLAY (CL); little Sand; trace Silt; trace Gravel; dark brown, moist 30" Well-graded SAND (SW), fine to medium; some Clay; trace Gravel; golden brown, moist to wet				
33					33.3 - 35	2.8					
34											
35											
36											
37							END OF BORING AT 36'				
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											

NOTES:
 1. Soil samples collected from 1.7 to 3.3 feet, 6.7 to 8.3 feet, 13.3 to 15 feet, 16.7 to 18.3 feet, 23.3 to 25 feet, 28.3 to 30 feet and 31.7 to 33.3 feet for VOC, lead, pH and Foc analyses.



Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Ellie Stapleton
Date Start: 5/14/14
Date Finish: 5/14/14
Boring Loc.: Southern Pit 2 Boring
GS Elev.: 520.2' Datum: NGVD 1929

Auger/Casing: Geoprobe
Sampler: Dual-Tube
Type: Geoprobe
O.D. / I.D.: 3.5" / 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
5/14/14	10:30	~20'		

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/33	0 - 4		0 - 2	0.9	20" Broken concrete and GRAVEL, large, angular 13" Silty CLAY (CL); little Sand, fine; trace Gravel; dark brown/black, dry				
2					2 - 4	1.6					
3											
4											
5	2	48/38	4 - 8		4 - 6	1.3	Stiff SILT (ML); some Clay; little Sand, fine; dark brown/black, moist				
6					6 - 8	1.9					
7	3	48/29	8 - 12		8 - 10	1.7	SILT (ML); some Clay; little Sand, fine; dark brown/black, moist				
8					10 - 12	1.6					
9											
10											
11	4	48/27	12 - 16		12 - 14	3.0	SILT (ML); some Clay; little Sand, fine; trace Gravel; dark brown/black; moist				
12					14 - 16	2.1					
13											
14	5	48/26	16 - 20		16 - 18	1.8	SILT (ML); some Clay; little Sand, fine; dark brown/black, moist				
15					18 - 20	2.6					
16	6	48/26	20 - 24		20 - 22	2.3	3" SILT (ML); some Clay; little Sand, fine; dark brown/black, moist 24" Poorly-graded SAND (SP), fine to medium; little Silt; little Clay; trace Gravel; dark brown, wet				
17					22 - 24	2.1					
18											
19	7	48/28	24 - 28				Sample No. 7 Description Provided on Page 2				

NOTES:

- Soil samples collected from 12 to 14 feet and 18 to 20 feet for VOC and Foc analyses.
- A temporary well screen and casing were placed to the bottom of the boring for collection of a groundwater sample and removed upon completion of sample collection.



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26	7	48/29	24 - 28		24 - 26	1.6	12" Well-graded SAND (SP), fine to medium; little Silt; little Clay; trace Gravel; dark brown, moist to wet 17" Poorly-graded SAND (SP), medium, well-rounded; white to light gray, wet		SP		
27					26 - 28	2.3					
28							END OF BORING AT 28'				
29											
30											
31											
32											
33											
34											
35											
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NOTES:



Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Ellie Stapleton
Date Start: 5/14/14
Date Finish: 5/14/14
Boring Loc.: Central Pit 2 Boring
GS Elev.: 518.8' Datum: NGVD 1929

Auger/Casing: Geoprobe
Sampler: Dual-Tube
Type: Geoprobe
O.D. / I.D.: 3.5" / 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
5/14/14	12:00	~19.5'		

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/32	0 - 4		0 - 2	2.0	13" Broken GRAVEL and concrete material 19" SILT (ML); little Clay; little Sand, fine; dark brown/black, dry	1.1'			
2					2 - 4	2.8					
3											
4	2	48/24	4 - 8		4 - 6	2.3	Poorly-graded SAND (SP), medium; little Clay; trace Gravel; tan to golden brown, dry	4'			
5					6 - 8	3.6					
6											
7	3	48/18	8 - 12		8 - 10	6.3	Poorly-graded SAND (SP), medium; little Clay; little Silt; trace Gravel; brown, dry	1			
8					10 - 12	6.6					
9											
10	4	48/0	12 - 16		No Recovery		No Recovery	12'			
11											
12											
13	5	48/30	16 - 20		16 - 18	4.2	9" Soft, poorly-graded SAND (SP), medium; some Clay; little Silt; dark brown, moist 21" Poorly-graded SAND (SP), medium; little Clay; trace Gravel; golden brown, moist to wet	1.2			
14					18 - 20	4.0					
15											
16	6	48/18	20 - 24		20 - 22	3.3	Poorly-graded SAND (SP), medium; little Sand, fine; little Clay; brown, wet				
17					22 - 24	4.2					
18											
19	7	48/8	24 - 28		Sample No. 7 Description Provided on Page 2						

NOTES:

- Soil samples collected from 10 to 12 feet and 18 to 20 feet for VOC analyses.
- A duplicate sample was collected from 18 to 20 feet for VOC analyses.
- A temporary well screen and casing were placed to the bottom of the boring for collection of a groundwater sample and removed upon completion of sample collection.



DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26	7	48/8	24 - 28		24 - 26	4.4	Poorly-graded SAND (SP), medium; trace Clay; trace Gravel; brown, wet		SP		
27											
28											
29	END OF BORING AT 28'										
30											
31											
32											
33											
34											
35											
36											
37											
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NOTES:



Contractor: Direct Push Analytical Corp.
Foreman: Scot Faber
GZA Rep.: Ellie Stapleton
Date Start: 5/14/14
Date Finish: 5/14/14
Boring Loc.: Northern Pit 2 Boring
GS Elev.: 519.3' Datum: NGVD 1929

Auger/Casing Sampler
Type: Geoprobe Dual-Tube
O.D. / I.D.: 3.5" 2"
Hammer Wt.:
Hammer Fall:
Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
5/14/14	13:00	~18.5'		

DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
1	1	48/31	0 - 4		0 - 2	3.4	5" Poorly-graded SAND (SP), medium; trace Gravel; brown (FILL) 26" Hard SILT (ML) with Sand, fine; little Clay; trace Gravel; dark brown/black, dry		ML		
2					2 - 4	4.0					
3											
4											
5	2	48/27	4 - 8		4 - 6	3.9	Well-graded SAND (SW), fine to medium; little Clay; trace Gravel; golden brown, dry	1			
6					6 - 8	3.9					
7											
8											
9	3	48/27	8 - 12		8 - 10	1.5	Well-graded SAND (SW), fine to medium; little Clay; trace Gravel; brown, moist		SP		
10					10 - 12	1.6					
11											
12											
13	4	48/24	12 - 16		12 - 14	1.2	2" Well-graded SAND (SW), fine to medium; little Clay; trace Gravel; brown, moist 22" Well-graded SAND (SW), fine to medium; some Clay; trace Gravel; brown, moist	1			
14					14 - 16	1.9					
15											
16											
17	5	48/29	16 - 20		16 - 18	2.5	Well-graded SAND (SW), fine to medium; some Clay; little Silt; trace Gravel; brown to dark brown, moist to wet	1			
18					18 - 20	3.7					
19											
20											
21	6	48/17	20 - 24		20 - 22	1.3	5" Medium-stiff, lean CLAY (CL); little Silt; little Sand; dark brown/black, moist 12" Well-graded SAND (SW), fine to coarse; trace Clay; trace Gravel, wet	1	SW		
22					22 - 24	1.2					
23											
24											
25	7	48/6	24 - 28				Sample No. 7 Description Provided on Page 2				

NOTES:
1. Soil samples collected from 6 to 8 feet and 16 to 18 feet for VOC and Foc analyses.
2. A temporary well screen and casing were placed to the bottom of the boring for collection of a groundwater sample and removed upon completion of sample collection.



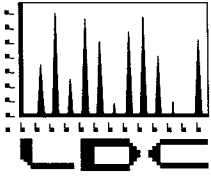
DEPTH (feet)	No.	Pen./ Rec. (inch)	Depth (feet)	Blows (/6")	Field Test Data PID		Sample Description and Classification	Notes	USCS	Soil Strata	Well Construction
					Interval (feet)	ppm					
26	7	48/6	24 - 28		24 - 26	1.4	Well-graded SAND (SW), fine to coarse; little Gravel; trace Clay; golden brown, wet		SW		
27											
28											
END OF BORING AT 28'											
29											
30											
31											
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NOTES:



APPENDIX C

Validated Soil and Groundwater Laboratory Analytical Reports



LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

GZA GeoEnvironmental, Inc.
20900 Swenson Dr. Suite 150
Waukesha, WI 53186
Atten: Bernard G. Fenelon

January 20, 2014

SUBJECT: Wedron Community Groundwater, Data Validation

Dear Mr. Fenelon,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on December 20, 2013. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 31068:

<u>SDG #</u>	<u>Fraction</u>
A134906	Volatiles, Lead, Fractional Organic Carbon, pH
A134908/4089524	

The data validation was performed under EPA Level III/IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan for EPA Docket No. RCRA 05-2013-0011, Wedron, Illinois, November 2013.
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, January 2010

Please feel free to contact us if you have any questions.

Sincerely,

Christina Rink
Project Manager/Senior Chemist

90/10 III/IV LDC #31068 (GZA GeoEnvironmental, Inc. - Waukesha, WI / Wedron Community Groundwater)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		Pb (6010)		Fractional Organic Carbon		pH (9045)																									
				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
Matrix:	Water/Soil																																		
A	A134906	12/20/13	01/14/14	2	0	-	-	-	-	-	-																								
B	A134908/4089524	12/20/13	01/14/14	0	21	0	11	0	9	0	11																								
B	A134908/4089524	12/20/13	01/14/14	0	3	0	1	0	1	0	1																								
Total	T/CR			2	24	0	12	0	10	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	

Shaded cells indicate Level IV validation (all other cells are Level III validation). These sample counts do not include MS, MSD, or DUP's.

**Laboratory Data Consultants, Inc.
Data Validation Report**

Project/Site Name: Wedron Community Groundwater
Collection Date: December 3, 2013
LDC Report Date: January 20, 2014
Matrix: Water
Parameters: Volatiles
Validation Level: EPA Level III
Laboratory: Environmental Chemistry Consulting Services, Inc.
Sample Delivery Group (SDG): A134906

Sample Identification

Storage Tank
Equipment Blank
Equipment BlankMS
Equipment BlankMSD

Introduction

This data review covers 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows the Quality Assurance Project Plan for EPA Docket No. RCRA 05-2013-0011, Wedron, Illinois (November 2013) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

Date	Compound	%RSD	Associated Samples	Flag	A or P
12/2/13	Bromomethane Chloroethane Trichlorofluoromethane	17.37342 15.45346 20.24754	All samples in SDG A134906	J (all detects) UJ (all non-detects)	A

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
12/4/13	Acetone 2-Butanone Chloromethane 1,2-Dibromo-3-chloropropane 4-Methyl-2-pentanone Methyl-tert-butyl ether Naphthalene Tetrahydrofuran	23.2 24.4 21.9 26.2 24.9 21.5 21.7 24.8	All samples in SDG A134906	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
12/2/13	Dichlorodifluoromethane 1,2,3-Trichloropropane Trichlorofluoromethane	33.8 20.4 21.8	All samples in SDG A134906	J (all detects) UJ (all non-detects)	A

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
A312011_BLK1	12/4/13	Dichlorodifluoromethane	0.12 ug/L	All samples in SDG A134906

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
Storage Tank	Dichlorodifluoromethane	0.18 ug/L	0.18U ug/L

Sample Equipment Blank was identified as an equipment blank. No volatile contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
Equipment Blank	12/3/13	Acetone Carbon disulfide Chloroform Toluene o-Xylene	5.8 ug/L 0.11 ug/L 0.42 ug/L 0.080 ug/L 0.10 ug/L	No associated samples in this SDG

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

**Wedron Community Groundwater
Volatiles - Data Qualification Summary - SDG A134906**

SDG	Sample	Compound	Flag	A or P	Reason
A134906	Storage Tank Equipment Blank	Bromomethane Chloroethane Trichlorofluoromethane	J (all detects) UJ (all non-detects)	A	Initial calibration (%RSD)
A134906	Storage Tank Equipment Blank	Acetone 2-Butanone Chloromethane 1,2-Dibromo-3-chloropropane 4-Methyl-2-pentanone Methyl-tert-butyl ether Naphthalene Tetrahydrofuran	J (all detects) UJ (all non-detects)	A	Continuing calibration (CCV %D)
A134906	Storage Tank Equipment Blank	Dichlorodifluoromethane 1,2,3-Trichloropropane Trichlorofluoromethane	J (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D)

**Wedron Community Groundwater
Volatiles - Laboratory Blank Data Qualification Summary - SDG A134906**

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
A134906	Storage Tank	Dichlorodifluoromethane	0.18U ug/L	A

**Wedron Community Groundwater
Volatiles - Field Blank Data Qualification Summary - SDG A134906**

No Sample Data Qualified in this SDG



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

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GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/12/2014
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Storage Tank
A134906-01 (Water)
Date Sampled
12/03/2013 14:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch: A312011

Acetone	ND <i>U</i>	3.4	20	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Benzene	0.80	0.089	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Bromomethane	ND <i>U</i>	0.59	5.0	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
2-Butanone	ND <i>U</i>	3.0	20	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Carbon disulfide	ND	0.053	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Chloroethane	ND <i>U</i>	0.25	5.0	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Chloroform	ND	0.062	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Chloromethane	0.18 <i>U</i>	0.16	2.0	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	J
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND <i>U</i>	0.25	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Dibromomethane	ND	0.14	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Dichlorodifluoromethane	0.18 <i>U</i>	0.11	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	B, J
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	

02/11/14



2525 Advance Road
 Madison, WI 53718
 608.221.8700 Phone
 608.221.4889 Fax

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Storage Tank
 A134906-01 (Water)
 Date Sampled
 12/03/2013 14:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap Preparation Batch: A312011

Ethylbenzene	ND	0.054	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Methylene chloride	0.14	0.14	2.0	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	J
4-Methyl-2-pentanone	ND \checkmark	0.77	20	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Methyl t-Butyl Ether	ND \checkmark	0.14	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Naphthalene	ND \checkmark	0.088	5.0	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Tetrachloroethene	ND	0.081	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Tetrahydrofuran	ND \checkmark	1.2	10	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Toluene	0.12	0.053	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	J
1,2,3-Trichlorobenzene	0.14	0.045	2.0	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	J
1,2,4-Trichlorobenzene	0.11	0.077	2.0	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	J
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Trichlorofluoromethane	ND \checkmark	0.13	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	LC
1,2,3-Trichloropropane	ND \checkmark	0.15	1.0	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	
m,p-Xylene	0.13	0.057	1.0	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	J
o-Xylene	ND	0.058	0.50	ug/L	1	12/04/2013	12/04/2013 17:32	EPA 8260B	

Surrogate: Dibromofluoromethane		103 %	82.2-117		12/04/2013	12/04/2013 17:32	EPA 8260B
Surrogate: Toluene-d8		99.7 %	82.6-111		12/04/2013	12/04/2013 17:32	EPA 8260B
Surrogate: 4-Bromofluorobenzene		94.7 %	88.4-108		12/04/2013	12/04/2013 17:32	EPA 8260B

02/15/14



2525 Advance Road
 Madison, WI 53718
 608.221.8700 Phone
 608.221.4889 Fax

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Equipment Blank
 A134906-02 (Water)

Date Sampled
 12/03/2013 15:45

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch: A312011

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Acetone	5.8 J	3.4	20	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	J
Benzene	ND	0.089	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Bromobenzene	ND	0.084	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Bromochloromethane	ND	0.31	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Bromodichloromethane	ND	0.077	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Bromoform	ND	0.088	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Bromomethane	ND S	0.59	5.0	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
2-Butanone	ND S	3.0	20	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
n-Butyl Benzene	ND	0.14	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
sec-Butyl Benzene	ND	0.13	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
tert-Butylbenzene	ND	0.12	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Carbon disulfide	0.11	0.053	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	J
Carbon tetrachloride	ND	0.038	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Chlorobenzene	ND	0.073	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Chloroethane	ND S	0.25	5.0	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Chloroform	0.42	0.062	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	J
Chloromethane	ND S	0.16	2.0	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
2-Chlorotoluene	ND	0.075	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
4-Chlorotoluene	ND	0.073	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND S	0.25	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Dibromochloromethane	ND	0.091	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.13	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Dibromomethane	ND	0.14	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,2-Dichlorobenzene	ND	0.076	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,4-Dichlorobenzene	ND	0.070	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,3-Dichlorobenzene	ND	0.096	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Dichlorodifluoromethane	ND S	0.11	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,1-Dichloroethane	ND	0.12	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,2-Dichloroethane	ND	0.078	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
trans-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
cis-1,2-Dichloroethene	ND	0.11	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,1-Dichloroethene	ND	0.14	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
2,2-Dichloropropane	ND	0.14	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,2-Dichloropropane	ND	0.10	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,3-Dichloropropane	ND	0.11	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
cis-1,3-Dichloropropene	ND	0.061	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.096	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,1-Dichloropropene	ND	0.11	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Diisopropyl Ether	ND	0.15	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Ethylbenzene	ND	0.054	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	

02/15/14



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/12/2014
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Equipment Blank
A134906-02 (Water)

Date Sampled
12/03/2013 15:45

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch: A312011

Hexachlorobutadiene	ND	0.13	2.0	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
n-Hexane	ND	0.21	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
2-Hexanone	ND	0.95	20	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Isopropylbenzene	ND	0.081	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
p-Isopropyltoluene	ND	0.085	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Methylene chloride	ND	0.14	2.0	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
4-Methyl-2-pentanone	ND JS	0.77	20	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Methyl t-Butyl Ether	ND JS	0.14	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Naphthalene	ND JS	0.088	5.0	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
n-Propyl Benzene	ND	0.10	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Styrene	ND	0.065	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.11	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	0.099	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Tetrachloroethene	ND	0.081	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Tetrahydrofuran	ND JS	1.2	10	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Toluene	0.080	0.053	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	J
1,2,3-Trichlorobenzene	ND	0.045	2.0	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,2,4-Trichlorobenzene	ND	0.077	2.0	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,1,1-Trichloroethane	ND	0.10	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,1,2-Trichloroethane	ND	0.10	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Trichloroethene	ND	0.062	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Trichlorofluoromethane	ND JS	0.13	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	LC
1,2,3-Trichloropropane	ND JS	0.15	1.0	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	0.13	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,3,5-Trimethylbenzene	ND	0.075	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.060	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
Vinyl chloride	ND	0.16	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
m,p-Xylene	ND	0.057	1.0	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	
o-Xylene	0.10	0.058	0.50	ug/L	1	12/04/2013	12/04/2013 18:01	EPA 8260B	J
Surrogate: Dibromofluoromethane			97.1 %	82.2-117		12/04/2013	12/04/2013 18:01	EPA 8260B	
Surrogate: Toluene-d8			98.7 %	82.6-111		12/04/2013	12/04/2013 18:01	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			95.6 %	88.4-108		12/04/2013	12/04/2013 18:01	EPA 8260B	

02/11/14

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: <u>12/03/13</u>
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	<u>2 RSD ≤ 30/15% r✓</u>
IV.	Continuing calibration/ICV	SW	<u>CCV/ICV ≤ 20%</u>
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	<u>ICS</u>
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	SW	<u>EB = 2</u>

Note: A = Acceptable ND = No compounds detected D = Duplicate
 N = Not provided/applicable R = Rinsate TB = Trip blank
 SW = See worksheet FB = Field blank EB = Equipment blank

Validated Samples:

Water

1	Storage Tank	<u>11</u>	<u>A312011-B1k1</u>	21		31
2	Equipment Blank	12		22		32
3	Equipment BlankMS	13		23		33
4	Equipment BlankMSD	14		24		34
5		15		25		35
6		16		26		36
7		17		27		37
8		18		28		38
9		19		29		39
10		20		30		40

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC. 1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl chloride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO. 1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP. <i>n-Hexane</i>
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ. <i>Tetrahydrofuran</i>
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 31068 B1

VALIDATION FINDINGS WORKSHEET Blanks

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: OL

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- N N/A Was a method blank associated with every sample in this SDG?
 N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
 N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 12/04/13

Conc. units: ug/L

Associated Samples: All

(MD)

Compound	Blank ID	Sample Identification							
	<u>A312011-BK1</u>								
<u>JJ</u>	<u>0.12</u>	<u>1</u>	<u>0.18</u>	<u>U</u>					

Blank analysis date: _____

Conc. units: _____

Associated Samples: _____

Compound	Blank ID	Sample Identification							

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 310 08 B1

VALIDATION FINDINGS WORKSHEET Field Blanks

Page: 1 of 1

Reviewer: JVG

2nd Reviewer: [Signature]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target compounds detected in the field blanks?

Blank units: ug/L Associated sample units: ug/L

Sampling date: 12/03/13

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: EB Associated Samples: None

Compound	Blank ID	Sample Identification							
	2	10x/5x							
F	5.8	58							
G	0.11	0.55							
K	0.42	2.1							
CC	0.080	0.4							
SSS	0.10	0.5							

Blank units: Associated sample units:

Sampling date:

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: Associated Samples:

Compound	Blank ID	Sample Identification							

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as Methylene chloride, Acetone, 2-Butanone and Carbon disulfide that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

**Laboratory Data Consultants, Inc.
Data Validation Report**

Project/Site Name: Wedron Community Groundwater
Collection Date: December 3 through December 4, 2013
LDC Report Date: January 17, 2014
Matrix: Soil
Parameters: Volatiles
Validation Level: EPA Level III & IV
Laboratory: Environmental Chemistry Consulting Services, Inc.
Sample Delivery Group (SDG): A134908

Sample Identification

WS-SB-GP-1 (6-8')	Duplicate 2
WS-SB-GP-1 (18-20)**	WS-SB-GP-14 (6-8')
WS-SB-GP-2 (14-16')	WS-SB-GP-14 (12-15')
WS-SB-GP-2 (18-20')	MeOH Blank
WS-SB-GP-3 (4-6')	WS-SB-GP-1 (6-8')MS
WS-SB-GP-4 (4-6')	WS-SB-GP-1 (6-8')MSD
WS-SB-GP-5 (2-4)**	WS-SB-GP-11 (8-10')MS
WS-SB-GP-6 (0-2')	WS-SB-GP-11 (8-10')MSD
Duplicate 1	
WS-SB-GP-7 (2-4')	
WS-SB-GP-8 (2-4')	
WS-SB-GP-7 (8-9')	
WS-SB-GP-8 (8-10')	
WS-SB-GP-9 (8-10')	
WS-SB-GP-10 (8-10')	
WS-SB-GP-11 (8-10')	
WS-SB-GP-12 (6-8')	
WS-SB-GP-12 (12-15')	
WS-SB-GP-13 (6-8)**	
WS-SB-GP-13 (13-15')	

**Indicates sample underwent EPA Level IV review

Introduction

This data review covers 28 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows the Quality Assurance Project Plan for EPA Docket No. RCRA 05-2013-0011, Wedron, Illinois (November 2013) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent an EPA Level IV review. An EPA Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by EPA Level III criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

Date	Compound	%RSD	Associated Samples	Flag	A or P
12/6/13	Bromomethane n-Hexane Naphthalene	26.10564 15.69199 30.93799	All samples in SDG A134908	J (all detects) UJ (all non-detects)	A

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
12/9/13 (A3L0901-CCV2)	n-Butylbenzene tert-Butylbenzene n-Propylbenzene 1,3,5-Trimethylbenzene 1,2,4-Trimethylbenzene	30.6 25.3 27.9 23.6 23.2	WS-SB-GP-1 (18-20)** WS-SB-GP-2 (14-16') WS-SB-GP-2 (18-20') WS-SB-GP-3 (4-6') WS-SB-GP-7 (2-4')	J (all detects) UJ (all non-detects)	A

Date	Compound	%D	Associated Samples	Flag	A or P
12/9/13 (A3L0901-CCV2)	sec-Butylbenzene 2-Chlorotoluene 4-Chlorotoluene 1,3-Dichlorobenzene 1,1-Dichloroethane Hexachlorobutadiene p-Isopropyltoluene 1,1,2-Trichloroethane Trichlorofluoromethane 1,1,2-Trichlorotrifluoroethane	24.5 25.0 21.6 22.7 20.6 33.9 27.5 21.2 76.4 22.8	WS-SB-GP-1 (18-20')** WS-SB-GP-2 (14-16') WS-SB-GP-2 (18-20') WS-SB-GP-3 (4-6') WS-SB-GP-4 (4-6') WS-SB-GP-5 (2-4')** WS-SB-GP-7 (2-4')	J (all detects) UJ (all non-detects)	A
12/10/13 (A3L001-CCV1)	Trichlorofluoromethane	43.8	WS-SB-GP-6 (0-2') Duplicate 1 WS-SB-GP-8 (2-4') WS-SB-GP-7 (8-9') WS-SB-GP-8 (8-10')	J (all detects) UJ (all non-detects)	A
12/10/13 (A3L001-CCV2)	Acetone Benzene Bromobenzene 2-Butanone n-Butylbenzene sec-Butylbenzene tert-Butylbenzene Chloroform 2-Chlorotoluene 4-Chlorotoluene 1,2-Dichlorobenzene 1,4-Dichlorobenzene 1,3-Dichlorobenzene 1,1-Dichloroethane 1,2-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene 1,1-Dichloropropene Di-isopropyl ether Hexachlorobutadiene Isopropylbenzene p-Isopropyltoluene Methylene chloride Methyl-tert-butyl ether Styrene 1,1,2,2-Tetrachloroethane Tetrahydrofuran 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,1,1-Trichloroethane Trichlorofluoromethane 1,1,2-Trichlorotrifluoroethane 1,3,5-Trimethylbenzene m,p-Xylenes o-Xylene	25.5 22.5 22.4 23.3 30.3 28.6 30.2 23.2 26.0 25.9 23.1 23.8 21.4 26.8 22.2 20.6 23.6 21.5 31.3 26.7 24.0 29.9 21.6 22.1 23.5 20.7 21.9 20.8 24.2 24.4 63.5 25.0 30.1 21.2 20.5	WS-SB-GP-9 (8-10') WS-SB-GP-10 (8-10') WS-SB-GP-12 (6-8') WS-SB-GP-12 (12-15') WS-SB-GP-13 (6-8')** WS-SB-GP-13 (13-15') Duplicate 2 WS-SB-GP-14 (6-8') WS-SB-GP-14 (12-15')	J (all detects) UJ (all non-detects)	A
12/10/13 (A3L001-CCV2)	Ethylbenzene	21.9	WS-SB-GP-9 (8-10') WS-SB-GP-10 (8-10') WS-SB-GP-12 (6-8') WS-SB-GP-12 (12-15') WS-SB-GP-13 (6-8')** WS-SB-GP-13 (13-15') WS-SB-GP-14 (6-8') WS-SB-GP-14 (12-15')	J (all detects) UJ (all non-detects)	A

Date	Compound	%D	Associated Samples	Flag	A or P
12/10/13 (A3L001-CCV2)	n-Propylbenzene	29.1	WS-SB-GP-9 (8-10') WS-SB-GP-10 (8-10') WS-SB-GP-12 (6-8') WS-SB-GP-12 (12-15') WS-SB-GP-13 (6-8')** Duplicate 2 WS-SB-GP-14 (6-8') WS-SB-GP-14 (12-15')	J (all detects) UJ (all non-detects)	A
12/10/13 (A3L001-CCV2)	1,2,4-Trimethylbenzene	28.3	WS-SB-GP-9 (8-10') WS-SB-GP-10 (8-10') WS-SB-GP-12 (6-8') WS-SB-GP-12 (12-15') WS-SB-GP-13 (6-8')** WS-SB-GP-14 (6-8') WS-SB-GP-14 (12-15')	J (all detects) UJ (all non-detects)	A
12/10/13 (A3L001-CCV3)	Acetone Benzene n-Butylbenzene sec-Butylbenzene tert-Butylbenzene Chloroethane Chloroform 2-Chlorotoluene 1,1-Dichloroethane cis-1,2-Dichloroethene Di-isopropyl ether Hexachlorobutadiene Isopropylbenzene Naphthalene n-Propylbenzene 1,1,1-Trichloroethane Trichlorofluoromethane 1,1,2-Trichlorotrifluoroethane 1,3,5-Trimethylbenzene	21.3 22.4 33.2 22.3 21.2 31.8 22.9 39.6 22.2 20.8 22.3 20.6 23.6 20.7 39.2 20.8 57.1 21.9 51.9	MeOH Blank	J (all detects) UJ (all non-detects)	A
12/10/13 (A3L001-CCV3)	Ethylbenzene	43.9	WS-SB-GP-5 (2-4')** MeOH Blank	J (all detects) UJ (all non-detects)	A
12/10/13 (A3L001-CCV3)	Toluene 1,2,4-Trimethylbenzene	70.0 130	WS-SB-GP-4 (4-6') WS-SB-GP-5 (2-4')** WS-SB-GP-6 (0-2') Duplicate 1 MeOH Blank	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A
12/10/13 (A3L001-CCV3)	m,p-Xylenes	81.0	WS-SB-GP-4 (4-6') WS-SB-GP-5 (2-4')** WS-SB-GP-6 (0-2') MeOH Blank	J (all detects) UJ (all non-detects)	A
12/10/13 (A3L001-CCV3)	o-Xylene	51.7	WS-SB-GP-4 (4-6') WS-SB-GP-5 (2-4')** MeOH Blank	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
12/9/13 (A3L0604-SCV1)	Methyl-tert-butyl ether Acetone 2-Butanone Bromoform	21.4 22.9 23.6 25.0	All samples in SDG A134908	J (all detects) UJ (all non-detects)	A

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
A312036_BLK1	12/9/13	Naphthalene m,p-Xylenes o-Xylene	13 ug/Kg 4.5 ug/Kg 5.0 ug/Kg	WS-SB-GP-1 (6-8') WS-SB-GP-1 (18-20')** WS-SB-GP-2 (14-16') WS-SB-GP-2 (18-20') WS-SB-GP-3 (4-6') WS-SB-GP-4 (4-6') WS-SB-GP-5 (2-4')** WS-SB-GP-6 (0-2') Duplicate 1 WS-SB-GP-7 (2-4') WS-SB-GP-8 (2-4') WS-SB-GP-7 (8-9') WS-SB-GP-8 (8-10') WS-SB-GP-9 (8-10') WS-SB-GP-10 (8-10')
A312037-BLK1	12/9/13	Dichlorodifluoromethane Naphthalene o-Xylene	6.0 ug/Kg 9.0 ug/Kg 5.0 ug/Kg	WS-SB-GP-11 (8-10') WS-SB-GP-12 (6-8') WS-SB-GP-12 (12-15') WS-SB-GP-13 (6-8')** WS-SB-GP-13 (13-15') Duplicate 2 WS-SB-GP-14 (6-8') WS-SB-GP-14 (12-15') MeOH Blank

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
WS-SB-GP-2 (18-20')	Naphthalene m,p-Xylenes o-Xylene	8.9 ug/Kg 22 ug/Kg 13 ug/Kg	8.9U ug/Kg 22U ug/Kg 13U ug/Kg

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
WS-SB-GP-7 (8-9')	m,p-Xylenes o-Xylene	18 ug/Kg 10 ug/Kg	18U ug/Kg 10U ug/Kg
WS-SB-GP-9 (8-10')	m,p-Xylenes o-Xylene	5.9 ug/Kg 5.9 ug/Kg	5.9U ug/Kg 5.9U ug/Kg
WS-SB-GP-10 (8-10')	m,p-Xylenes o-Xylene	6.3 ug/Kg 5.8 ug/Kg	6.3U ug/Kg 5.8U ug/Kg
WS-SB-GP-11 (8-10')	o-Xylene	6.7 ug/Kg	6.7U ug/Kg
WS-SB-GP-12 (6-8')	o-Xylene	8.6 ug/Kg	8.6U ug/Kg
WS-SB-GP-12 (12-15')	o-Xylene	18 ug/Kg	18U ug/Kg
WS-SB-GP-13 (6-8')**	o-Xylene	8.8 ug/Kg	8.8U ug/Kg
Duplicate 2	Dichlorodifluoromethane	7.0 ug/Kg	7.0U ug/Kg
WS-SB-GP-14 (6-8')	Dichlorodifluoromethane	7.0 ug/Kg	7.0U ug/Kg
WS-SB-GP-14 (12-15')	o-Xylene	25 ug/Kg	25U ug/Kg

Sample MeOH Blank was identified as a trip blank. No volatile contaminants were found.

Sample Equipment Blank (from SDG A134906) was identified as an equipment blank. No volatile contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
Equipment Blank	12/3/13	Acetone Carbon disulfide Chloroform Toluene 1,3-Dichloropropane	5.8 ug/L 0.11 ug/L 0.42 ug/L 0.080 ug/L 0.10 ug/L	WS-SB-GP-1 (6-8') WS-SB-GP-1 (18-20')** WS-SB-GP-2 (14-16') WS-SB-GP-2 (18-20') WS-SB-GP-3 (4-6') WS-SB-GP-4 (4-6') WS-SB-GP-5 (2-4')** WS-SB-GP-6 (0-2') Duplicate 1 WS-SB-GP-7 (2-4') WS-SB-GP-8 (2-4') WS-SB-GP-7 (8-9') WS-SB-GP-8 (8-10') WS-SB-GP-9 (8-10') WS-SB-GP-10 (8-10') WS-SB-GP-11 (8-10') WS-SB-GP-12 (6-8') WS-SB-GP-12 (12-15') WS-SB-GP-13 (6-8')** WS-SB-GP-13 (13-15') Duplicate 2 WS-SB-GP-14 (6-8') WS-SB-GP-14 (12-15')

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated field blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
WS-SB-GP-4 (4-6')	Bromofluorobenzene	56.3 (90.3-110)	All TCL compounds except Benzene n-Butylbenzene tert-Butylbenzene Ethylbenzene n-Hexane Naphthalene n-Propylbenzene Toluene 1,3,5-Trimethylbenzene 1,2,4-Trimethylbenzene m,p-Xylenes o-Xylene	J (all detects) UJ (all non-detects)	A

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
WS-SB-GP-1 (6-8')MS/MSD (WS-SB-GP-1 (6-8'))	1,2,4-Trimethylbenzene m,p-Xylenes	123 (84.3-121) 121 (87.9-119)	- -	- -	J (all detects) J (all detects)	A
WS-SB-GP-11 (8-10')MS/MSD (WS-SB-GP-11 (8-10'))	1,3,5-Trimethylbenzene 1,2,4-Trimethylbenzene m,p-Xylenes	- - -	123 (90.4-120) 134 (84.3-121) 125 (83.3-117)	- - -	J (all detects) J (all detects) J (all detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits with the following exceptions:

Sample	Internal Standards	Area (Limits)	Compound	Flag	A or P
WS-SB-GP-4 (4-6')	Chlorobenzene-d5	1210502 (269944-1079776)	Tetrachloroethene 1,3-Dichloropropane 2-Hexanone Dibromochloromethane Chlorobenzene 1,1,1,2-Tetrachloroethane Styrene Bromoform Isopropylbenzene	J (all detects) UJ (all non-detects)	A

XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples on which an EPA Level IV review. Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

XII. Compound Quantitation

All compound quantitations were within validation criteria for samples on which an EPA Level IV review was performed. Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable for samples on which an EPA Level IV review was performed. Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples WS-SB-GP-6 (0-2') and Duplicate 1 and samples WS-SB-GP-13 (13-15') and Duplicate 2 were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)
	WS-SB-GP-6 (0-2')	Duplicate 1	
Benzene	18000	13000	32 (≤50)
n-Butylbenzene	64U	15000	NC
sec-Butylbenzene	48U	2700	NC
tert-Butylbenzene	54U	23000	NC
Ethylbenzene	80000	61000	27 (≤50)
n-Hexane	47000	31000	41 (≤50)
Isopropylbenzene	6700	5400	21 (≤50)
p-Isopropyltoluene	1200	54U	NC
Naphthalene	36000	36000	0 (≤50)
n-Propylbenzene	32000	25000	25 (≤50)
Toluene	220000	210000	5 (≤50)
1,3,5-Trimethylbenzene	60000	47000	24 (≤50)

Compound	Concentration (ug/Kg)		RPD (Limits)
	WS-SB-GP-6 (0-2')	Duplicate 1	
1,2,4-Trimethylbenzene	210000	170000	21 (≤50)
m,p-Xylenes	320000	240000	29 (≤50)
o-Xylene	120000	88000	31 (≤50)

Compound	Concentration (ug/Kg)		RPD (Limits)
	WS-SB-GP-13 (13-15')	Duplicate 2	
Benzene	30	98	NC
n-Butylbenzene	1000	180	139 (≤50)
sec-Butylbenzene	390	95	NC
tert-Butylbenzene	1100	940	16 (≤50)
Dichlorodifluoromethane	5.8U	7.0	NC
Ethylbenzene	280	7800	186 (≤50)
n-Hexane	120	640	NC
Isopropylbenzene	600	730	20 (≤50)
p-Isopropyltoluene	120	140	NC
Naphthalene	720	440	NC
n-Propylbenzene	2600	2300	12 (≤50)
Toluene	17	23	NC
1,3,5-Trimethylbenzene	1400	1600	13 (≤50)
1,2,4-Trimethylbenzene	7100	6400	10 (≤50)
m,p-Xylenes	670	300	76 (≤50)
o-Xylene	35	27	NC

NC = Not calculated. One or both samples were either non detected or less than 5x LOQ.

**Wedron Community Groundwater
Volatiles - Data Qualification Summary - SDG A134908**

SDG	Sample	Compound	Flag	A or P	Reason
A134908	WS-SB-GP-1 (6-8') WS-SB-GP-1 (18-20')** WS-SB-GP-2 (14-16') WS-SB-GP-2 (18-20') WS-SB-GP-3 (4-6') WS-SB-GP-4 (4-6') WS-SB-GP-5 (2-4')** WS-SB-GP-6 (0-2') Duplicate 1 WS-SB-GP-7 (2-4') WS-SB-GP-8 (2-4') WS-SB-GP-7 (8-9') WS-SB-GP-8 (8-10') WS-SB-GP-9 (8-10') WS-SB-GP-10 (8-10') WS-SB-GP-11 (8-10') WS-SB-GP-12 (6-8') WS-SB-GP-12 (12-15') WS-SB-GP-13 (6-8')** WS-SB-GP-13 (13-15') Duplicate 2 WS-SB-GP-14 (6-8') WS-SB-GP-14 (12-15') MeOH Blank	Bromomethane n-Hexane Naphthalene	J (all detects) UJ (all non-detects)	A	Initial calibration (%RSD)
A134908	WS-SB-GP-1 (18-20')** WS-SB-GP-2 (14-16') WS-SB-GP-2 (18-20') WS-SB-GP-3 (4-6') WS-SB-GP-7 (2-4')	n-Butylbenzene tert-Butylbenzene n-Propylbenzene 1,3,5-Trimethylbenzene 1,2,4-Trimethylbenzene	J (all detects) UJ (all non-detects)	A	Continuing calibration (CCV %D)
A134908	WS-SB-GP-1 (18-20')** WS-SB-GP-2 (14-16') WS-SB-GP-2 (18-20') WS-SB-GP-3 (4-6') WS-SB-GP-4 (4-6') WS-SB-GP-5 (2-4')** WS-SB-GP-7 (2-4')	sec-Butylbenzene 2-Chlorotoluene 4-Chlorotoluene 1,3-Dichlorobenzene 1,1-Dichloroethane Hexachlorobutadiene p-Isopropyltoluene 1,1,2-Trichloroethane Trichlorofluoromethane 1,1,2-Trichlorotrifluoroethane	J (all detects) UJ (all non-detects)	A	Continuing calibration (CCV %D)
A134908	WS-SB-GP-6 (0-2') Duplicate 1 WS-SB-GP-8 (2-4') WS-SB-GP-7 (8-9') WS-SB-GP-8 (8-10')	Trichlorofluoromethane	J (all detects) UJ (all non-detects)	A	Continuing calibration (CCV %D)

SDG	Sample	Compound	Flag	A or P	Reason
A134908	WS-SB-GP-9 (8-10') WS-SB-GP-10 (8-10') WS-SB-GP-12 (6-8') WS-SB-GP-12 (12-15') WS-SB-GP-13 (6-8')** WS-SB-GP-13 (13-15') Duplicate 2 WS-SB-GP-14 (6-8') WS-SB-GP-14 (12-15')	Acetone Benzene Bromobenzene 2-Butanone n-Butylbenzene sec-Butylbenzene tert-Butylbenzene Chloroform 2-Chlorotoluene 4-Chlorotoluene 1,2-Dichlorobenzene 1,4-Dichlorobenzene 1,3-Dichlorobenzene 1,1-Dichloroethane 1,2-Dichloroethane trans-1,2-Dichloroethene cis-1,2-Dichloroethene 1,1-Dichloropropene Di-isopropyl ether Hexachlorobutadiene Isopropylbenzene p-Isopropyltoluene Methylene chloride Methyl-tert-butyl ether Styrene 1,1,2,2-Tetrachloroethane Tetrahydrofuran 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,1,1-Trichloroethane Trichlorofluoromethane 1,1,2-Trichlorotrifluoroethane 1,3,5-Trimethylbenzene m,p-Xylenes o-Xylene	J (all detects) UJ (all non-detects)	A	Continuing calibration (CCV %D)
A134908	WS-SB-GP-9 (8-10') WS-SB-GP-10 (8-10') WS-SB-GP-12 (6-8') WS-SB-GP-12 (12-15') WS-SB-GP-13 (6-8')** WS-SB-GP-13 (13-15') WS-SB-GP-14 (6-8') WS-SB-GP-14 (12-15')	Ethylbenzene	J (all detects) UJ (all non-detects)	A	Continuing calibration (CCV %D)
A134908	WS-SB-GP-9 (8-10') WS-SB-GP-10 (8-10') WS-SB-GP-12 (6-8') WS-SB-GP-12 (12-15') WS-SB-GP-13 (6-8')** Duplicate 2 WS-SB-GP-14 (6-8') WS-SB-GP-14 (12-15')	n-Propylbenzene	J (all detects) UJ (all non-detects)	A	Continuing calibration (CCV %D)
A134908	WS-SB-GP-9 (8-10') WS-SB-GP-10 (8-10') WS-SB-GP-12 (6-8') WS-SB-GP-12 (12-15') WS-SB-GP-13 (6-8')** WS-SB-GP-14 (6-8') WS-SB-GP-14 (12-15')	1,2,4-Trimethylbenzene	J (all detects) UJ (all non-detects)	A	Continuing calibration (CCV %D)

SDG	Sample	Compound	Flag	A or P	Reason
A134908	MeOH Blank	Acetone Benzene n-Butylbenzene sec-Butylbenzene tert-Butylbenzene Chloroethane Chloroform 2-Chlorotoluene 1,1-Dichloroethane cis-1,2-Dichloroethene Di-isopropyl ether Hexachlorobutadiene Isopropylbenzene Naphthalene n-Propylbenzene 1,1,1-Trichloroethane Trichlorofluoromethane 1,1,2-Trichlorotrifluoroethane 1,3,5-Trimethylbenzene	J (all detects) UJ (all non-detects)	A	Continuing calibration (CCV %D)
A134908	WS-SB-GP-5 (2-4)** MeOH Blank	Ethylbenzene	J (all detects) UJ (all non-detects)	A	Continuing calibration (CCV %D)
A134908	WS-SB-GP-4 (4-6') WS-SB-GP-5 (2-4)** WS-SB-GP-6 (0-2') Duplicate 1 MeOH Blank	Toluene 1,2,4-Trimethylbenzene	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Continuing calibration (CCV %D)
A134908	WS-SB-GP-4 (4-6') WS-SB-GP-5 (2-4)** WS-SB-GP-6 (0-2') MeOH Blank	m,p-Xylenes	J (all detects) UJ (all non-detects)	A	Continuing calibration (CCV %D)
A134908	WS-SB-GP-4 (4-6') WS-SB-GP-5 (2-4)** MeOH Blank	o-Xylene	J (all detects) UJ (all non-detects)	A	Continuing calibration (CCV %D)
A134908	WS-SB-GP-1 (6-8') WS-SB-GP-1 (18-20)** WS-SB-GP-2 (14-16') WS-SB-GP-2 (18-20') WS-SB-GP-3 (4-6') WS-SB-GP-4 (4-6') WS-SB-GP-5 (2-4)** WS-SB-GP-6 (0-2') Duplicate 1 WS-SB-GP-7 (2-4') WS-SB-GP-8 (2-4') WS-SB-GP-7 (8-9') WS-SB-GP-8 (8-10') WS-SB-GP-9 (8-10') WS-SB-GP-10 (8-10') WS-SB-GP-11 (8-10') WS-SB-GP-12 (6-8') WS-SB-GP-12 (12-15') WS-SB-GP-13 (6-8)** WS-SB-GP-13 (13-15') Duplicate 2 WS-SB-GP-14 (6-8') WS-SB-GP-14 (12-15') MeOH Blank	Methyl-tert-butyl ether Acetone 2-Butanone Bromoform	J (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D)

SDG	Sample	Compound	Flag	A or P	Reason
A134908	WS-SB-GP-4 (4-6')	All TCL compounds except Benzene n-Butylbenzene tert-Butylbenzene Ethylbenzene n-Hexane Naphthalene n-Propylbenzene Toluene 1,3,5-Trimethylbenzene 1,2,4-Trimethylbenzene m,p-Xylenes o-Xylene	J (all detects) UJ (all non-detects)	A	Surrogate spikes (%R)
A134908	WS-SB-GP-1 (6-8')	1,2,4-Trimethylbenzene m,p-Xylenes	J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)
A134908	WS-SB-GP-11 (8-10')	1,3,5-Trimethylbenzene 1,2,4-Trimethylbenzene m,p-Xylenes	J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)
A134908	WS-SB-GP-4 (4-6')	Tetrachloroethene 1,3-Dichloropropane 2-Hexanone Dibromochloromethane Chlorobenzene 1,1,1,2-Tetrachloroethane Styrene Bromoform Isopropylbenzene	J (all detects) UJ (all non-detects)	A	Internal standards (area)

**Wedron Community Groundwater
Volatiles - Laboratory Blank Data Qualification Summary - SDG A134908**

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
A134908	WS-SB-GP-2 (18-20')	Naphthalene m,p-Xylenes o-Xylene	8.9U ug/Kg 22U ug/Kg 13U ug/Kg	A
A134908	WS-SB-GP-7 (8-9')	m,p-Xylenes o-Xylene	18U ug/Kg 10U ug/Kg	A
A134908	WS-SB-GP-9 (8-10')	m,p-Xylenes o-Xylene	5.9U ug/Kg 5.9U ug/Kg	A
A134908	WS-SB-GP-10 (8-10')	m,p-Xylenes o-Xylene	6.3U ug/Kg 5.8U ug/Kg	A
A134908	WS-SB-GP-11 (8-10')	o-Xylene	6.7U ug/Kg	A
A134908	WS-SB-GP-12 (6-8')	o-Xylene	8.6U ug/Kg	A

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
A134908	WS-SB-GP-12 (12-15')	o-Xylene	18U ug/Kg	A
A134908	WS-SB-GP-13 (6-8)**	o-Xylene	8.8U ug/Kg	A
A134908	Duplicate 2	Dichlorodifluoromethane	7.0U ug/Kg	A
A134908	WS-SB-GP-14 (6-8')	Dichlorodifluoromethane	7.0U ug/Kg	A
A134908	WS-SB-GP-14 (12-15')	o-Xylene	25U ug/Kg	A

**Wedron Community Groundwater
Volatiles - Field Blank Data Qualification Summary - SDG A134908**

No Sample Data Qualified in this SDG



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
Waukesha WI, 53186

Project: Wedron Silica - Wedron, IL
Project Number: 20.0151178.51
Project Manager: Bernard Fenelon

Reported:
01/14/2014

WS-SB-GP-1 (6-8')

Date Sampled

A134908-01 (Soil)

12/03/2013 09:15

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Acetone	ND JS	170	1100	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Benzene	ND	1.8	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Bromobenzene	ND	5.8	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Bromochloromethane	ND JS	11	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Bromodichloromethane	ND	3.8	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Bromoform	ND JS	17	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Bromomethane	ND	280	280	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
2-Butanone	ND JS	200	1100	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
n-Butyl Benzene	ND	3.6	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
sec-Butyl Benzene	ND	2.7	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
tert-Butylbenzene	ND	3.1	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Carbon disulfide	ND	2.6	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Carbon tetrachloride	ND	4.6	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Chlorobenzene	ND	4.2	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Chloroethane	ND	280	280	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Chloroform	ND	4.3	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Chloromethane	ND	8.9	57	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
2-Chlorotoluene	ND	2.9	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
4-Chlorotoluene	ND	3.5	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	12	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Dibromochloromethane	ND	6.0	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.5	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Dibromomethane	ND	12	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,2-Dichlorobenzene	ND	3.1	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,4-Dichlorobenzene	ND	4.5	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,3-Dichlorobenzene	ND	5.3	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Dichlorodifluoromethane	ND	5.8	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,1-Dichloroethane	ND	11	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,2-Dichloroethane	ND	5.2	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.1	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
cis-1,2-Dichloroethene	ND	9.1	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,1-Dichloroethene	ND	8.3	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
2,2-Dichloropropane	ND	11	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,2-Dichloropropane	ND	8.7	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,3-Dichloropropane	ND	5.2	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
cis-1,3-Dichloropropene	ND	6.3	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.9	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,1-Dichloropropene	ND	4.1	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Diisopropyl Ether	ND	16	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	

02/15/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-1 (6-8')

A134908-01 (Soil)

Date Sampled
12/03/2013 09:15

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Ethylbenzene	ND	2.4	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Hexachlorobutadiene	ND	7.2	110	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
n-Hexane	ND \checkmark	12	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
2-Hexanone	ND	33	1100	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Isopropylbenzene	ND	2.6	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
p-Isopropyltoluene	ND	3.2	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Methylene chloride	ND	7.9	110	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
4-Methyl-2-pentanone	ND	44	1100	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Methyl t-Butyl Ether	ND \checkmark	4.9	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Naphthalene	ND \checkmark	4.3	280	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
n-Propyl Benzene	ND	3.8	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Styrene	ND	4.5	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	8.7	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	6.8	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Tetrachloroethene	ND	6.5	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Tetrahydrofuran	ND	120	570	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Toluene	ND	4.5	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,2,3-Trichlorobenzene	ND	6.2	110	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,2,4-Trichlorobenzene	ND	7.2	110	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,1,1-Trichloroethane	ND	8.3	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,1,2-Trichloroethane	ND	7.1	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Trichloroethene	ND	4.6	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Trichlorofluoromethane	ND	6.1	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,2,3-Trichloropropane	ND	7.4	57	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	4.6	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.7	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
1,2,4-Trimethylbenzene	ND	4.0	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Vinyl chloride	ND	6.6	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
m,p-Xylene	ND	3.5	57	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
o-Xylene	ND	3.4	28	ug/kg dry	1	12/09/2013	12/11/2013 11:54	EPA 8260B	
Surrogate: Dibromofluoromethane			99.0 %	80.4-125		12/09/2013	12/11/2013 11:54	EPA 8260B	
Surrogate: Toluene-d8			99.1 %	94.1-107		12/09/2013	12/11/2013 11:54	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			95.8 %	90.3-110		12/09/2013	12/11/2013 11:54	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	81.8	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B	
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02/15/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-1 (18-20')

Date Sampled
12/03/2013 09:21

A134908-02 (Soil)

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Acetone	ND <i>5</i>	160	1000	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Benzene	ND	1.7	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Bromobenzene	ND	5.3	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Bromochloromethane	ND	10	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Bromodichloromethane	ND	3.6	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Bromoform	ND <i>5</i>	16	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Bromomethane	ND <i>5</i>	260	260	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
2-Butanone	ND <i>5</i>	190	1000	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
n-Butyl Benzene	ND <i>5</i>	3.3	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
sec-Butyl Benzene	ND <i>5</i>	2.5	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
tert-Butylbenzene	ND <i>5</i>	2.8	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Carbon disulfide	ND	2.4	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Carbon tetrachloride	ND	4.3	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Chlorobenzene	ND	3.9	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Chloroethane	ND	260	260	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Chloroform	ND	4.0	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Chloromethane	ND	8.3	52	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
2-Chlorotoluene	ND <i>5</i>	2.7	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
4-Chlorotoluene	ND <i>5</i>	3.2	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	11	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Dibromochloromethane	ND	5.5	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.1	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Dibromomethane	ND	11	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,2-Dichlorobenzene	ND	2.8	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,4-Dichlorobenzene	ND	4.2	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,3-Dichlorobenzene	ND <i>5</i>	4.9	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Dichlorodifluoromethane	ND	5.3	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,1-Dichloroethane	ND <i>5</i>	9.7	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,2-Dichloroethane	ND	4.8	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
trans-1,2-Dichloroethene	ND	4.7	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
cis-1,2-Dichloroethene	ND	8.4	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,1-Dichloroethene	ND	7.6	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
2,2-Dichloropropane	ND	10	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,2-Dichloropropane	ND	8.0	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,3-Dichloropropane	ND	4.8	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
cis-1,3-Dichloropropene	ND	5.9	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.5	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,1-Dichloropropene	ND	3.8	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Diisopropyl Ether	ND	15	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	

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608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-1 (18-20')

Date Sampled

A134908-02 (Soil)

12/03/2013 09:21

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Ethylbenzene	ND	2.2	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Hexachlorobutadiene	ND <i>U</i>	6.7	100	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
n-Hexane	ND <i>U</i>	11	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
2-Hexanone	ND	30	1000	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Isopropylbenzene	ND	2.4	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
p-Isopropyltoluene	ND <i>U</i>	2.9	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Methylene chloride	ND	7.3	100	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
4-Methyl-2-pentanone	ND	41	1000	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Methyl t-Butyl Ether	ND <i>U</i>	4.5	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Naphthalene	ND <i>U</i>	4.0	260	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
n-Propyl Benzene	ND <i>U</i>	3.6	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Styrene	ND	4.2	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	8.0	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	6.3	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Tetrachloroethene	ND	6.0	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Tetrahydrofuran	ND	110	520	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Toluene	ND	4.2	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,2,3-Trichlorobenzene	ND	5.7	100	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,2,4-Trichlorobenzene	ND	6.7	100	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,1,1-Trichloroethane	ND	7.6	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,1,2-Trichloroethane	ND <i>U</i>	6.6	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Trichloroethene	ND	4.3	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Trichlorofluoromethane	ND <i>U</i>	5.6	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,2,3-Trichloropropane	ND	6.8	52	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND <i>U</i>	4.3	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,3,5-Trimethylbenzene	ND <i>U</i>	2.5	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
1,2,4-Trimethylbenzene	ND <i>U</i>	3.7	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Vinyl chloride	ND	6.1	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
m,p-Xylene	ND	3.2	52	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
o-Xylene	ND	3.1	26	ug/kg dry	1	12/09/2013	12/09/2013 23:10	EPA 8260B	
Surrogate: Dibromofluoromethane			105 %	80.4-125		12/09/2013	12/09/2013 23:10	EPA 8260B	
Surrogate: Toluene-d8			94.8 %	94.1-107		12/09/2013	12/09/2013 23:10	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			96.1 %	90.3-110		12/09/2013	12/09/2013 23:10	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	87.3	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B	
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608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-2 (14-16')

Date Sampled

A134908-03 (Soil)

12/03/2013 10:14

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Acetone	ND <i>JS</i>	170	1100	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Benzene	ND	1.8	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Bromobenzene	ND	5.7	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Bromochloromethane	ND	11	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Bromodichloromethane	ND	3.8	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Bromoform	ND <i>JS</i>	17	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Bromomethane	ND <i>JS</i>	280	280	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
2-Butanone	ND <i>JS</i>	200	1100	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
n-Butyl Benzene	ND <i>JS</i>	3.6	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
sec-Butyl Benzene	ND <i>JS</i>	2.7	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
tert-Butylbenzene	ND <i>JS</i>	3.0	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Carbon disulfide	ND	2.6	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Carbon tetrachloride	ND	4.6	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Chlorobenzene	ND	4.2	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Chloroethane	ND	280	280	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Chloroform	ND	4.3	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Chloromethane	ND	8.9	56	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
2-Chlorotoluene	ND <i>JS</i>	2.9	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
4-Chlorotoluene	ND <i>JS</i>	3.5	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	12	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Dibromochloromethane	ND	6.0	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.5	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Dibromomethane	ND	12	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,2-Dichlorobenzene	ND	3.0	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,4-Dichlorobenzene	ND	4.5	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,3-Dichlorobenzene	ND <i>JS</i>	5.3	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Dichlorodifluoromethane	ND	5.7	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,1-Dichloroethane	ND <i>JS</i>	10	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,2-Dichloroethane	ND	5.2	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.1	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
cis-1,2-Dichloroethene	ND	9.0	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,1-Dichloroethene	ND	8.2	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
2,2-Dichloropropane	ND	11	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,2-Dichloropropane	ND	8.7	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,3-Dichloropropane	ND	5.2	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
cis-1,3-Dichloropropene	ND	6.3	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.8	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,1-Dichloropropene	ND	4.1	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Diisopropyl Ether	ND	16	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	

02/15/14



2525 Advance Road
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608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
Waukesha WI, 53186

Project: Wedron Silica - Wedron, IL
Project Number: 20.0151178.51
Project Manager: Bernard Fenelon

Reported:
01/14/2014

WS-SB-GP-2 (14-16')

A134908-03 (Soil)

Date Sampled
12/03/2013 10:14

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Ethylbenzene	ND	2.4	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Hexachlorobutadiene	ND <i>5</i>	7.2	110	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
n-Hexane	ND <i>5</i>	12	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
2-Hexanone	ND	33	1100	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Isopropylbenzene	ND	2.6	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
p-Isopropyltoluene	ND <i>5</i>	3.2	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Methylene chloride	ND	7.9	110	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
4-Methyl-2-pentanone	ND	44	1100	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Methyl t-Butyl Ether	ND <i>5</i>	4.8	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Naphthalene	ND <i>5</i>	4.3	280	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
n-Propyl Benzene	ND <i>5</i>	3.8	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Styrene	ND	4.5	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	8.7	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	6.8	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Tetrachloroethene	ND	6.4	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Tetrahydrofuran	ND	120	560	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Toluene	ND	4.5	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,2,3-Trichlorobenzene	ND	6.2	110	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,2,4-Trichlorobenzene	ND	7.2	110	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,1,1-Trichloroethane	ND	8.2	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,1,2-Trichloroethane	ND <i>5</i>	7.1	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Trichloroethene	ND	4.6	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Trichlorofluoromethane	ND <i>5</i>	6.1	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,2,3-Trichloropropane	ND	7.3	56	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND <i>5</i>	4.6	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,3,5-Trimethylbenzene	ND <i>5</i>	2.7	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
1,2,4-Trimethylbenzene	ND <i>5</i>	3.9	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Vinyl chloride	ND	6.5	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
m,p-Xylene	ND	3.5	56	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
o-Xylene	ND	3.4	28	ug/kg dry	1	12/09/2013	12/09/2013 23:38	EPA 8260B	
Surrogate: Dibromofluoromethane			108 %	80.4-125		12/09/2013	12/09/2013 23:38	EPA 8260B	
Surrogate: Toluene-d8			95.7 %	94.1-107		12/09/2013	12/09/2013 23:38	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			97.2 %	90.3-110		12/09/2013	12/09/2013 23:38	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	81.1	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B	
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Pace Analytical

02/15/14



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608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-2 (18-20')

Date Sampled

A134908-04 (Soil)

12/03/2013 10:20

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Acetone	ND <i>CS</i>	180	1200	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Benzene	7.7	1.9	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	J
Bromobenzene	ND	6.1	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Bromochloromethane	ND	11	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Bromodichloromethane	ND	4.0	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Bromoform	ND <i>CS</i>	18	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Bromomethane	ND <i>CS</i>	300	300	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
2-Butanone	ND <i>CS</i>	210	1200	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
n-Butyl Benzene	ND <i>CS</i>	3.8	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
sec-Butyl Benzene	ND <i>CS</i>	2.9	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
tert-Butylbenzene	ND <i>CS</i>	3.2	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Carbon disulfide	ND	2.7	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Carbon tetrachloride	ND	4.9	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Chlorobenzene	ND	4.4	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Chloroethane	ND	300	300	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Chloroform	ND	4.5	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Chloromethane	ND	9.4	60	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
2-Chlorotoluene	ND <i>CS</i>	3.1	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
4-Chlorotoluene	ND <i>CS</i>	3.7	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Dibromochloromethane	ND	6.3	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.8	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Dibromomethane	ND	13	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,2-Dichlorobenzene	ND	3.2	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,4-Dichlorobenzene	ND	4.8	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,3-Dichlorobenzene	ND <i>CS</i>	5.6	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Dichlorodifluoromethane	ND	6.1	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,1-Dichloroethane	ND <i>CS</i>	11	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,2-Dichloroethane	ND	5.5	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.4	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
cis-1,2-Dichloroethene	ND	9.5	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,1-Dichloroethene	ND	8.7	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
2,2-Dichloropropane	ND	12	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,2-Dichloropropane	ND	9.2	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,3-Dichloropropane	ND	5.5	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
cis-1,3-Dichloropropene	ND	6.7	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
trans-1,3-Dichloropropene	ND	5.1	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,1-Dichloropropene	ND	4.3	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Diisopropyl Ether	ND	17	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Ethylbenzene	7.7	2.5	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	J

2/11/14



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608.221.8700 Phone
608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-2 (18-20')

Date Sampled

A134908-04 (Soil)

12/03/2013 10:20

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Hexachlorobutadiene	ND \checkmark	7.6	120	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
n-Hexane	ND \checkmark	13	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
2-Hexanone	ND	35	1200	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Isopropylbenzene	ND	2.7	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
p-Isopropyltoluene	ND \checkmark	3.3	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Methylene chloride	ND	8.3	120	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
4-Methyl-2-pentanone	ND	46	1200	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Methyl t-Butyl Ether	ND \checkmark	5.1	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Naphthalene	8.9 \checkmark	4.5	300	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	B, J
n-Propyl Benzene	ND \checkmark	4.0	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Styrene	ND	4.8	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	9.2	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	7.1	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Tetrachloroethene	ND	6.8	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Tetrahydrofuran	ND	130	600	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Toluene	25	4.8	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	J
1,2,3-Trichlorobenzene	ND	6.5	120	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,2,4-Trichlorobenzene	ND	7.6	120	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,1,1-Trichloroethane	ND	8.7	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,1,2-Trichloroethane	ND \checkmark	7.5	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Trichloroethene	ND	4.9	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
Trichlorofluoromethane	ND \checkmark	6.4	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,2,3-Trichloropropane	ND	7.7	60	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND \checkmark	4.9	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,3,5-Trimethylbenzene	ND \checkmark	2.9	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
1,2,4-Trimethylbenzene	5.4 \checkmark	4.2	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	J
Vinyl chloride	ND	6.9	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	
m,p-Xylene	22 \checkmark	3.7	60	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	B, J
o-Xylene	13 \checkmark	3.6	30	ug/kg dry	1	12/09/2013	12/10/2013 00:06	EPA 8260B	J
Surrogate: Dibromofluoromethane			106 %	80.4-125		12/09/2013	12/10/2013 00:06	EPA 8260B	
Surrogate: Toluene-d8			95.8 %	94.1-107		12/09/2013	12/10/2013 00:06	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			97.5 %	90.3-110		12/09/2013	12/10/2013 00:06	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312035

% Solids	80.1	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B
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Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

02/11/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-3 (4-6')

A134908-05 (Soil)

Date Sampled
12/03/2013 10:55

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Acetone	ND <i>JS</i>	150	990	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Benzene	3400	16	250	ug/kg dry	10	12/09/2013	12/10/2013 12:14	EPA 8260B	D
Bromobenzene	ND	5.1	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Bromochloromethane	ND	9.5	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Bromodichloromethane	ND	3.4	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Bromoform	ND <i>JS</i>	15	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Bromomethane	ND <i>J</i>	250	250	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
2-Butanone	ND <i>J</i>	180	990	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
n-Butyl Benzene	560 <i>J</i>	3.2	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	HC
sec-Butyl Benzene	60 <i>J</i>	2.4	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
tert-Butylbenzene	1500 <i>J</i>	2.7	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Carbon disulfide	ND	2.3	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Carbon tetrachloride	ND	4.1	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Chloroethane	ND	250	250	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Chloroform	ND	3.8	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Chloromethane	ND	7.8	50	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
2-Chlorotoluene	ND <i>JS</i>	2.6	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
4-Chlorotoluene	ND <i>JS</i>	3.1	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	11	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Dibromochloromethane	ND	5.3	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	4.9	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Dibromomethane	ND	11	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,2-Dichlorobenzene	ND	2.7	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,4-Dichlorobenzene	ND	4.0	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,3-Dichlorobenzene	ND <i>JS</i>	4.7	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Dichlorodifluoromethane	ND	5.1	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,1-Dichloroethane	ND <i>JS</i>	9.2	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,2-Dichloroethane	ND	4.6	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
trans-1,2-Dichloroethene	ND	4.5	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
cis-1,2-Dichloroethene	ND	7.9	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,1-Dichloroethene	ND	7.2	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
2,2-Dichloropropane	ND	9.9	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,2-Dichloropropane	ND	7.6	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,3-Dichloropropane	ND	4.6	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
cis-1,3-Dichloropropene	ND	5.6	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.3	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,1-Dichloropropene	ND	3.6	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Diisopropyl Ether	ND	14	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Ethylbenzene	6500	21	250	ug/kg dry	10	12/09/2013	12/10/2013 12:14	EPA 8260B	HC, D

cc/15/14



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608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-3 (4-6')

Date Sampled

A134908-05 (Soil)

12/03/2013 10:55

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Hexachlorobutadiene	ND \checkmark	6.4	99	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
n-Hexane	880 \checkmark	11	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
2-Hexanone	ND	29	990	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Isopropylbenzene	310	2.3	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
p-Isopropyltoluene	27 \checkmark	2.8	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Methylene chloride	ND	7.0	99	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
4-Methyl-2-pentanone	ND	39	990	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Methyl t-Butyl Ether	ND \checkmark	4.3	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Naphthalene	2800 \checkmark	38	2500	ug/kg dry	10	12/09/2013	12/10/2013 12:14	EPA 8260B	D
n-Propyl Benzene	1300 \checkmark	3.4	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Styrene	ND	4.0	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	7.6	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	6.0	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Tetrachloroethene	ND	5.7	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Tetrahydrofuran	ND	110	500	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Toluene	17000	40	250	ug/kg dry	10	12/09/2013	12/10/2013 12:14	EPA 8260B	D
1,2,3-Trichlorobenzene	ND	5.5	99	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,2,4-Trichlorobenzene	ND	6.4	99	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,1,1-Trichloroethane	ND	7.2	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,1,2-Trichloroethane	ND \checkmark	6.3	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Trichloroethene	ND	4.1	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
Trichlorofluoromethane	ND \checkmark	5.4	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,2,3-Trichloropropane	ND	6.5	50	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND \checkmark	4.1	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
1,3,5-Trimethylbenzene	2700 \checkmark	24	250	ug/kg dry	10	12/09/2013	12/10/2013 12:14	EPA 8260B	D
1,2,4-Trimethylbenzene	9800 \checkmark	35	250	ug/kg dry	10	12/09/2013	12/10/2013 12:14	EPA 8260B	D
Vinyl chloride	ND	5.8	25	ug/kg dry	1	12/09/2013	12/10/2013 00:34	EPA 8260B	
m,p-Xylene	28000	31	500	ug/kg dry	10	12/09/2013	12/10/2013 12:14	EPA 8260B	D
o-Xylene	11000	30	250	ug/kg dry	10	12/09/2013	12/10/2013 12:14	EPA 8260B	D
Surrogate: Dibromofluoromethane			103 %	80.4-125		12/09/2013	12/10/2013 00:34	EPA 8260B	
Surrogate: Toluene-d8			95.1 %	94.1-107		12/09/2013	12/10/2013 00:34	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			97.6 %	90.3-110		12/09/2013	12/10/2013 00:34	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	89.6	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B
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Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

02/15/14



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 608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-4 (4-6')
 A134908-06 (Soil)

Date Sampled
 12/03/2013 11:25

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Acetone	ND ⁵⁵	160	1100	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Benzene	3800 ⁵⁵	17	270	ug/kg dry	10	12/09/2013	12/10/2013 12:42	EPA 8260B	D
Bromobenzene	ND ⁵⁵	5.5	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Bromochloromethane	ND ↓	10	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Bromodichloromethane	ND ↓	3.7	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Bromoform	ND ⁵⁵	16	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Bromomethane	ND ↓	270	270	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
2-Butanone	ND ↓	200	1100	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
n-Butyl Benzene	4500	35	270	ug/kg dry	10	12/09/2013	12/10/2013 12:42	EPA 8260B	D
sec-Butyl Benzene	56 ⁵⁵	2.6	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
tert-Butylbenzene	8600	29	270	ug/kg dry	10	12/09/2013	12/10/2013 12:42	EPA 8260B	D
Carbon disulfide	ND ⁵⁵	2.5	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Carbon tetrachloride	ND ↓	4.4	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Chlorobenzene	ND ↓	4.0	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Chloroethane	ND ↓	270	270	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Chloroform	ND ↓	4.1	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Chloromethane	ND ↓	8.6	54	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
2-Chlorotoluene	ND ⁵⁵	2.8	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
4-Chlorotoluene	ND ⁵⁵	3.4	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND ⁵⁵	12	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Dibromochloromethane	ND ↓	5.7	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,2-Dibromoethane (EDB)	ND ↓	5.3	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Dibromomethane	ND ↓	12	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,2-Dichlorobenzene	ND ↓	2.9	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,4-Dichlorobenzene	ND ↓	4.3	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,3-Dichlorobenzene	ND ⁵⁵	5.1	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Dichlorodifluoromethane	6.5 ⁵⁵	5.5	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	B, J
1,1-Dichloroethane	ND ⁵⁵	10	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,2-Dichloroethane	ND ⁵⁵	5.0	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
trans-1,2-Dichloroethene	ND ↓	4.9	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
cis-1,2-Dichloroethene	ND ↓	8.7	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,1-Dichloroethene	ND ↓	7.9	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
2,2-Dichloropropane	ND ↓	11	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,2-Dichloropropane	ND ↓	8.4	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,3-Dichloropropane	ND ↓	5.0	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
cis-1,3-Dichloropropene	ND ↓	6.1	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
trans-1,3-Dichloropropene	ND ↓	4.7	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,1-Dichloropropene	ND ↓	3.9	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Diisopropyl Ether	ND ↓	15	27	ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Ethylbenzene	22000	23	270	ug/kg dry	10	12/09/2013	12/10/2013 12:42	EPA 8260B	HC, D

22/15/14



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-4 (4-6')

A134908-06 (Soil)

Date Sampled
12/03/2013 11:25

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Hexachlorobutadiene	ND	5	6.9	110 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
n-Hexane	3300	5	120	270 ug/kg dry	10	12/09/2013	12/10/2013 12:42	EPA 8260B	D
2-Hexanone	ND	5	31	1100 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Isopropylbenzene	860	5	2.5	27 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
p-Isopropyltoluene	960	5	3.0	27 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Methylene chloride	ND	5	7.6	110 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
4-Methyl-2-pentanone	ND	5	42	1100 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Methyl t-Butyl Ether	ND	5	4.7	27 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Naphthalene	18000	5	41	2700 ug/kg dry	10	12/09/2013	12/10/2013 12:42	EPA 8260B	D
n-Propyl Benzene	7300	5	37	270 ug/kg dry	10	12/09/2013	12/10/2013 12:42	EPA 8260B	D
Styrene	ND	5	4.3	27 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	5	8.4	27 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	6.5	27 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Tetrachloroethene	ND	5	6.2	27 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Tetrahydrofuran	ND	5	120	540 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Toluene	43000	5	220	1400 ug/kg dry	50	12/09/2013	12/10/2013 23:59	EPA 8260B	HC, D
1,2,3-Trichlorobenzene	ND	5	6.0	110 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,2,4-Trichlorobenzene	ND	5	6.9	110 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,1,1-Trichloroethane	ND	5	7.9	27 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,1,2-Trichloroethane	ND	5	6.8	27 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Trichloroethene	ND	5	4.4	27 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
Trichlorofluoromethane	ND	5	5.9	27 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,2,3-Trichloropropane	ND	5	7.1	54 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	5	4.4	27 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
1,3,5-Trimethylbenzene	18000	5	26	270 ug/kg dry	10	12/09/2013	12/10/2013 12:42	EPA 8260B	D
1,2,4-Trimethylbenzene	61000	5	190	1400 ug/kg dry	50	12/09/2013	12/10/2013 23:59	EPA 8260B	HC, D
Vinyl chloride	ND	5	6.3	27 ug/kg dry	1	12/09/2013	12/10/2013 01:02	EPA 8260B	
m,p-Xylene	110000	5	170	2700 ug/kg dry	50	12/09/2013	12/10/2013 23:59	EPA 8260B	HC, D
o-Xylene	41000	5	160	1400 ug/kg dry	50	12/09/2013	12/10/2013 23:59	EPA 8260B	HC, D
Surrogate: Dibromofluoromethane			95.8 %	80.4-125		12/09/2013	12/10/2013 01:02	EPA 8260B	
Surrogate: Toluene-d8			95.5 %	94.1-107		12/09/2013	12/10/2013 01:02	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			56.3 %	90.3-110		12/09/2013	12/10/2013 01:02	EPA 8260B	S

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	86.0	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B
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Pace Analytical

ASTM D2974-87

Preparation Batch:PMST 9272

02/15/14



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608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-5 (2-4')
A134908-07 (Soil)

Date Sampled
12/03/2013 11:59

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Acetone	ND \checkmark	150	1000	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Benzene	8200	16	250	ug/kg dry	10	12/09/2013	12/10/2013 13:10	EPA 8260B	D
Bromobenzene	ND	5.1	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Bromochloromethane	ND	9.7	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Bromodichloromethane	ND	3.4	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Bromoform	ND \checkmark	15	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Bromomethane	ND \downarrow	250	250	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
2-Butanone	ND \downarrow	180	1000	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
n-Butyl Benzene	8500	32	250	ug/kg dry	10	12/09/2013	12/10/2013 13:10	EPA 8260B	D
sec-Butyl Benzene	95 \checkmark	2.4	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
tert-Butylbenzene	4700	2.7	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	E
Carbon disulfide	ND	2.3	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Carbon tetrachloride	ND	4.1	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Chloroethane	ND	250	250	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Chloroform	ND	3.8	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Chloromethane	ND	8.0	50	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
2-Chlorotoluene	ND \checkmark	2.6	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
4-Chlorotoluene	ND \checkmark	3.1	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	11	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Dibromochloromethane	ND	5.3	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	4.9	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Dibromomethane	ND	11	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,2-Dichlorobenzene	ND	2.7	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,4-Dichlorobenzene	ND	4.0	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,3-Dichlorobenzene	ND \checkmark	4.7	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Dichlorodifluoromethane	6.0	5.1	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	B, J
1,1-Dichloroethane	ND \checkmark	9.4	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,2-Dichloroethane	ND	4.6	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
trans-1,2-Dichloroethene	ND	4.5	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
cis-1,2-Dichloroethene	ND	8.1	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,1-Dichloroethene	ND	7.4	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
2,2-Dichloropropane	ND	10	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,2-Dichloropropane	ND	7.8	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,3-Dichloropropane	ND	4.6	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
cis-1,3-Dichloropropene	ND	5.6	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.3	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,1-Dichloropropene	ND	3.6	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Diisopropyl Ether	ND	14	25	ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Ethylbenzene	28000 \checkmark	110	1300	ug/kg dry	50	12/09/2013	12/11/2013 00:27	EPA 8260B	HC, D

02/11/14



2525 Advance Road
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608.221.8700 Phone
608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-5 (2-4')
A134908-07 (Soil)

Date Sampled
12/03/2013 11:59

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Hexachlorobutadiene	ND	5	6.4	100 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
n-Hexane	10000	5	110	250 ug/kg dry	10	12/09/2013	12/10/2013 13:10	EPA 8260B	D
2-Hexanone	ND		29	1000 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Isopropylbenzene	2200		2.3	25 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
p-Isopropyltoluene	2000	5	2.8	25 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Methylene chloride	ND		7.1	100 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
4-Methyl-2-pentanone	ND		39	1000 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Methyl t-Butyl Ether	ND	5	4.3	25 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Naphthalene	18000	5	38	2500 ug/kg dry	10	12/09/2013	12/10/2013 13:10	EPA 8260B	D
n-Propyl Benzene	11000		34	250 ug/kg dry	10	12/09/2013	12/10/2013 13:10	EPA 8260B	D
Styrene	ND		4.0	25 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND		7.8	25 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND		6.0	25 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Tetrachloroethene	ND		5.7	25 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Tetrahydrofuran	ND		110	500 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Toluene	54000	5	200	1300 ug/kg dry	50	12/09/2013	12/11/2013 00:27	EPA 8260B	HC, D
1,2,3-Trichlorobenzene	ND		5.5	100 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,2,4-Trichlorobenzene	ND		6.4	100 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,1,1-Trichloroethane	ND		7.4	25 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,1,2-Trichloroethane	ND	5	6.3	25 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Trichloroethene	ND		4.1	25 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
Trichlorofluoromethane	ND	5	5.4	25 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,2,3-Trichloropropane	ND		6.6	50 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	5	4.1	25 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
1,3,5-Trimethylbenzene	24000		24	250 ug/kg dry	10	12/09/2013	12/10/2013 13:10	EPA 8260B	D
1,2,4-Trimethylbenzene	81000	5	180	1300 ug/kg dry	50	12/09/2013	12/11/2013 00:27	EPA 8260B	HC, D
Vinyl chloride	ND		5.8	25 ug/kg dry	1	12/09/2013	12/10/2013 01:30	EPA 8260B	
m,p-Xylene	120000	5	160	2500 ug/kg dry	50	12/09/2013	12/11/2013 00:27	EPA 8260B	HC, D
o-Xylene	45000	5	150	1300 ug/kg dry	50	12/09/2013	12/11/2013 00:27	EPA 8260B	HC, D
Surrogate: Dibromofluoromethane			97.6 %	80.4-125		12/09/2013	12/10/2013 01:30	EPA 8260B	
Surrogate: Toluene-d8			95.8 %	94.1-107		12/09/2013	12/10/2013 01:30	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			102 %	90.3-110		12/09/2013	12/10/2013 01:30	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	84.5		0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B	
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Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

02-11-14



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Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-6 (0-2')

Date Sampled

A134908-08 (Soil)

12/03/2013 12:26

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Acetone	ND ^{US}	3000	20000	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Benzene	18000	32	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	D
Bromobenzene	ND	100	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Bromochloromethane	ND	190	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Bromodichloromethane	ND	68	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Bromoform	ND ^{US}	300	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Bromomethane	ND ↓	5000	5000	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
2-Butanone	ND ↓	3600	20000	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
n-Butyl Benzene	ND	64	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
sec-Butyl Benzene	ND	48	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
tert-Butylbenzene	ND	54	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Carbon disulfide	ND	46	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Carbon tetrachloride	ND	82	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Chlorobenzene	ND	74	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Chloroethane	ND	5000	5000	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Chloroform	ND	76	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Chloromethane	ND	160	1000	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
2-Chlorotoluene	ND	52	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
4-Chlorotoluene	ND	62	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	220	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Dibromochloromethane	ND	110	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	98	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Dibromomethane	ND	220	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,2-Dichlorobenzene	ND	54	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,4-Dichlorobenzene	ND	80	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,3-Dichlorobenzene	ND	94	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Dichlorodifluoromethane	ND	100	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,1-Dichloroethane	ND	190	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,2-Dichloroethane	ND	92	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
trans-1,2-Dichloroethene	ND	90	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
cis-1,2-Dichloroethene	ND	160	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,1-Dichloroethene	ND	150	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
2,2-Dichloropropane	ND	200	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,2-Dichloropropane	ND	150	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,3-Dichloropropane	ND	92	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
cis-1,3-Dichloropropene	ND	110	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
trans-1,3-Dichloropropene	ND	86	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,1-Dichloropropene	ND	72	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Diisopropyl Ether	ND	280	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Ethylbenzene	80000	110	1300	ug/kg dry	50	12/09/2013	12/10/2013 14:07	EPA 8260B	HC, D

2/15/14



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-6 (0-2')

A134908-08 (Soil)

Date Sampled
12/03/2013 12:26

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Hexachlorobutadiene	ND	130	2000	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
n-Hexane	47000 J	550	1300	ug/kg dry	50	12/09/2013	12/10/2013 14:07	EPA 8260B	D
2-Hexanone	ND	580	20000	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Isopropylbenzene	6700	46	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	D
p-Isopropyltoluene	1200	56	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	D
Methylene chloride	ND	140	2000	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
4-Methyl-2-pentanone	ND	780	20000	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Methyl t-Butyl Ether	ND S	86	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Naphthalene	36000 J	76	5000	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	D
n-Propyl Benzene	32000	68	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	D
Styrene	ND	80	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	150	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	120	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Tetrachloroethene	ND	110	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Tetrahydrofuran	ND	2200	10000	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Toluene	220000 J	400	2500	ug/kg dry	100	12/09/2013	12/11/2013 00:55	EPA 8260B	HC, D
1,2,3-Trichlorobenzene	ND	110	2000	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,2,4-Trichlorobenzene	ND	130	2000	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,1,1-Trichloroethane	ND	150	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,1,2-Trichloroethane	ND	130	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Trichloroethene	ND	82	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
Trichlorofluoromethane	ND S	110	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,2,3-Trichloropropane	ND	130	1000	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	82	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
1,3,5-Trimethylbenzene	60000	120	1300	ug/kg dry	50	12/09/2013	12/10/2013 14:07	EPA 8260B	D
1,2,4-Trimethylbenzene	210000 J	350	2500	ug/kg dry	100	12/09/2013	12/11/2013 00:55	EPA 8260B	HC, D
Vinyl chloride	ND	120	500	ug/kg dry	20	12/09/2013	12/10/2013 13:39	EPA 8260B	
m,p-Xylene	320000 J	310	5000	ug/kg dry	100	12/09/2013	12/11/2013 00:55	EPA 8260B	HC, D
o-Xylene	120000	150	1300	ug/kg dry	50	12/09/2013	12/10/2013 14:07	EPA 8260B	D
Surrogate: Dibromofluoromethane			96.4 %	80.4-125		12/09/2013	12/10/2013 13:39	EPA 8260B	
Surrogate: Toluene-d8			98.6 %	94.1-107		12/09/2013	12/10/2013 13:39	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			101 %	90.3-110		12/09/2013	12/10/2013 13:39	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	84.9	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B
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Pace Analytical

ASTM D2974-87

Preparation Batch:PMST 9272

02/15/14



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608.221.8700 Phone
608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
Waukesha WI, 53186

Project: Wedron Silica - Wedron, IL
Project Number: 20.0151178.51
Project Manager: Bernard Fenelon

Reported:
01/14/2014

Duplicate 1[WS-SB-GP-6 (0'-2')]
A134908-09 (Soil)

Date Sampled
12/03/2013 12:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Acetone	ND ⁵	2900	19000	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Benzene	13000	31	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	D
Bromobenzene	ND	98	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Bromochloromethane	ND	180	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Bromodichloromethane	ND	65	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Bromoform	ND ⁵	290	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Bromomethane	ND ↓	4800	4800	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
2-Butanone	ND	3400	19000	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
n-Butyl Benzene	15000	61	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	D
sec-Butyl Benzene	2700	46	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	D
tert-Butylbenzene	23000	52	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	D
Carbon disulfide	ND	44	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Carbon tetrachloride	ND	78	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Chlorobenzene	ND	71	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Chloroethane	ND	4800	4800	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Chloroform	ND	73	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Chloromethane	ND	150	960	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
2-Chlorotoluene	ND	50	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
4-Chlorotoluene	ND	59	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	210	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Dibromochloromethane	ND	100	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	94	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Dibromomethane	ND	210	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,2-Dichlorobenzene	ND	52	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,4-Dichlorobenzene	ND	77	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,3-Dichlorobenzene	ND	90	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Dichlorodifluoromethane	ND	98	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,1-Dichloroethane	ND	180	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,2-Dichloroethane	ND	88	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
trans-1,2-Dichloroethene	ND	86	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
cis-1,2-Dichloroethene	ND	150	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,1-Dichloroethene	ND	140	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
2,2-Dichloropropane	ND	190	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,2-Dichloropropane	ND	150	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,3-Dichloropropane	ND	88	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
cis-1,3-Dichloropropene	ND	110	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
trans-1,3-Dichloropropene	ND	82	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,1-Dichloropropene	ND	69	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Diisopropyl Ether	ND	270	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Ethylbenzene	61000	100	1200	ug/kg dry	50	12/09/2013	12/10/2013 15:04	EPA 8260B	HC, D

PP-1/15/14



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
Waukesha WI, 53186

Project: Wedron Silica - Wedron, IL
Project Number: 20.0151178.51
Project Manager: Bernard Fenelon

Reported:
01/14/2014

Duplicate 1 [WS-SB-GP-6 (0'-2')]
A134908-09 (Soil)

Date Sampled
12/03/2013 12:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Hexachlorobutadiene	ND	120	1900	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
n-Hexane	31000	210	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	D
2-Hexanone	ND	560	19000	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Isopropylbenzene	5400	44	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	D
p-Isopropyltoluene	ND	54	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Methylene chloride	ND	130	1900	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
4-Methyl-2-pentanone	ND	750	19000	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Methyl t-Butyl Ether	ND	82	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Naphthalene	36000	73	4800	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	D
n-Propyl Benzene	25000	65	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	D
Styrene	ND	77	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	150	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	110	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Tetrachloroethene	ND	110	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Tetrahydrofuran	ND	2100	9600	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Toluene	210000	380	2400	ug/kg dry	100	12/09/2013	12/11/2013 01:23	EPA 8260B	HC, D
1,2,3-Trichlorobenzene	ND	110	1900	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,2,4-Trichlorobenzene	ND	120	1900	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,1,1-Trichloroethane	ND	140	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,1,2-Trichloroethane	ND	120	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Trichloroethene	ND	78	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
Trichlorofluoromethane	ND	100	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,2,3-Trichloropropane	ND	120	960	ug/kg dry	20	12/09/2013	12/10/2013 02:25	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	78	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
1,3,5-Trimethylbenzene	47000	110	1200	ug/kg dry	50	12/09/2013	12/10/2013 15:04	EPA 8260B	D
1,2,4-Trimethylbenzene	170000	330	2400	ug/kg dry	100	12/09/2013	12/11/2013 01:23	EPA 8260B	HC, D
Vinyl chloride	ND	110	480	ug/kg dry	20	12/09/2013	12/10/2013 14:35	EPA 8260B	
m,p-Xylene	240000	150	2400	ug/kg dry	50	12/09/2013	12/10/2013 15:04	EPA 8260B	D
o-Xylene	88000	140	1200	ug/kg dry	50	12/09/2013	12/10/2013 15:04	EPA 8260B	D
Surrogate: Dibromofluoromethane			98.4 %	80.4-125		12/09/2013	12/10/2013 14:35	EPA 8260B	
Surrogate: Toluene-d8			97.8 %	94.1-107		12/09/2013	12/10/2013 14:35	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			102 %	90.3-110		12/09/2013	12/10/2013 14:35	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	90.7	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B
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Pace Analytical

ASTM D2974-87

Preparation Batch:PMST 9272

12/15/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-7 (2-4')

Date Sampled

A134908-10 (Soil)

12/03/2013 14:08

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Acetone	ND	5	170	1100	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Benzene	29		1.8	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Bromobenzene	ND		5.8	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Bromochloromethane	ND		11	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Bromodichloromethane	ND		3.8	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Bromoform	ND	5	17	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Bromomethane	ND		280	280	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
2-Butanone	ND		200	1100	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
n-Butyl Benzene	110	5	3.6	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	HC
sec-Butyl Benzene	14	5	2.7	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	J
tert-Butylbenzene	94	5	3.1	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Carbon disulfide	ND		2.6	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Carbon tetrachloride	ND		4.6	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Chlorobenzene	ND		4.2	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Chloroethane	ND		280	280	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Chloroform	ND		4.3	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Chloromethane	ND		8.9	57	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
2-Chlorotoluene	ND	5	2.9	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
4-Chlorotoluene	ND	5	3.5	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND		12	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Dibromochloromethane	ND		6.0	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
1,2-Dibromoethane (EDB)	ND		5.5	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Dibromomethane	ND		12	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
1,2-Dichlorobenzene	ND		3.1	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
1,4-Dichlorobenzene	ND		4.5	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
1,3-Dichlorobenzene	ND	5	5.3	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Dichlorodifluoromethane	ND		5.8	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
1,1-Dichloroethane	ND		11	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
1,2-Dichloroethane	ND		5.2	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
trans-1,2-Dichloroethene	ND		5.1	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
cis-1,2-Dichloroethene	ND		9.1	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
1,1-Dichloroethene	ND	5	8.3	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
2,2-Dichloropropane	ND		11	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
1,2-Dichloropropane	ND		8.7	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
1,3-Dichloropropane	ND		5.2	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
cis-1,3-Dichloropropene	ND		6.3	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
trans-1,3-Dichloropropene	ND		4.9	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
1,1-Dichloropropene	ND		4.1	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Diisopropyl Ether	ND		16	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	
Ethylbenzene	130		2.4	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B	

02/15/14



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608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
Waukesha WI, 53186

Project: Wedron Silica - Wedron, IL
Project Number: 20.0151178.51
Project Manager: Bernard Fenelon

Reported:
01/14/2014

WS-SB-GP-7 (2-4')
A134908-10 (Soil)

Date Sampled
12/03/2013 14:08

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Hexachlorobutadiene	ND	5	7.2	110	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
n-Hexane	68	5	12	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
2-Hexanone	ND		33	1100	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
Isopropylbenzene	17		2.6	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B J
p-Isopropyltoluene	9.1	5	3.2	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B J
Methylene chloride	ND		7.9	110	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
4-Methyl-2-pentanone	ND		44	1100	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
Methyl t-Butyl Ether	ND	5	4.9	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
Naphthalene	730	5	4.3	280	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
n-Propyl Benzene	66	5	3.8	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
Styrene	ND		4.5	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
1,1,1,2-Tetrachloroethane	ND		8.7	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
1,1,2,2-Tetrachloroethane	ND		6.8	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
Tetrachloroethene	ND		6.5	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
Tetrahydrofuran	ND		120	570	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
Toluene	340		4.5	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
1,2,3-Trichlorobenzene	ND		6.2	110	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
1,2,4-Trichlorobenzene	ND		7.2	110	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
1,1,1-Trichloroethane	ND		8.3	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
1,1,2-Trichloroethane	ND	5	7.1	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
Trichloroethene	ND		4.6	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
Trichlorofluoromethane	ND	5	6.1	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
1,2,3-Trichloropropane	ND		7.4	57	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
1,1,2-Trichlorotrifluoroethane	ND	5	4.6	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
1,3,5-Trimethylbenzene	170	5	2.7	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
1,2,4-Trimethylbenzene	640	5	4.0	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
Vinyl chloride	ND		6.6	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
m,p-Xylene	550		3.5	57	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
o-Xylene	290		3.4	28	ug/kg dry	1	12/09/2013	12/10/2013 02:53	EPA 8260B
Surrogate: Dibromofluoromethane				100 %	80.4-125		12/09/2013	12/10/2013 02:53	EPA 8260B
Surrogate: Toluene-d8				97.3 %	94.1-107		12/09/2013	12/10/2013 02:53	EPA 8260B
Surrogate: 4-Bromofluorobenzene				98.8 %	90.3-110		12/09/2013	12/10/2013 02:53	EPA 8260B

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	86.3		0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B
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Pace Analytical

ASTM D2974-87

Preparation Batch:PMST 9272

02/15/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-8 (2-4')

Date Sampled

A134908-11 (Soil)

12/03/2013 14:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Acetone	ND	160	1100	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Benzene	8.7	1.7	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	J
Bromobenzene	ND	5.5	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Bromochloromethane	ND	10	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Bromodichloromethane	ND	3.7	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Bromoform	ND	16	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Bromomethane	ND	270	270	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
2-Butanone	ND	200	1100	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
n-Butyl Benzene	21	3.5	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	J
sec-Butyl Benzene	ND	2.6	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
tert-Butylbenzene	30	2.9	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Carbon disulfide	ND	2.5	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Carbon tetrachloride	ND	4.4	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Chlorobenzene	ND	4.0	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Chloroethane	ND	270	270	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Chloroform	ND	4.1	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Chloromethane	ND	8.6	54	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
2-Chlorotoluene	ND	2.8	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
4-Chlorotoluene	ND	3.4	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	12	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Dibromochloromethane	ND	5.8	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.3	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Dibromomethane	ND	12	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,2-Dichlorobenzene	ND	2.9	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,4-Dichlorobenzene	ND	4.3	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,3-Dichlorobenzene	ND	5.1	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,1-Dichloroethane	ND	10	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,2-Dichloroethane	ND	5.0	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
trans-1,2-Dichloroethene	ND	4.9	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
cis-1,2-Dichloroethene	ND	8.7	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,1-Dichloroethene	ND	7.9	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
2,2-Dichloropropane	ND	11	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,2-Dichloropropane	ND	8.4	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,3-Dichloropropane	ND	5.0	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
cis-1,3-Dichloropropene	ND	6.1	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.7	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,1-Dichloropropene	ND	3.9	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Diisopropyl Ether	ND	15	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Ethylbenzene	64	2.3	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	HC

02/15/14



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608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-8 (2-4')

A134908-11 (Soil)

Date Sampled
12/03/2013 14:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Hexachlorobutadiene	ND	6.9	110	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
n-Hexane	26	12	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	J
2-Hexanone	ND	31	1100	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Isopropylbenzene	ND	2.5	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
p-Isopropyltoluene	ND	3.0	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Methylene chloride	ND	7.6	110	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
4-Methyl-2-pentanone	ND	42	1100	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Methyl t-Butyl Ether	ND	4.7	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Naphthalene	190	4.1	270	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	J
n-Propyl Benzene	29	3.7	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Styrene	ND	4.3	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	8.4	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	6.5	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Tetrachloroethene	ND	6.2	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Tetrahydrofuran	ND	120	540	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Toluene	140	4.3	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,2,3-Trichlorobenzene	ND	6.0	110	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,2,4-Trichlorobenzene	ND	6.9	110	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,1,1-Trichloroethane	ND	7.9	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,1,2-Trichloroethane	ND	6.8	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Trichloroethene	ND	4.4	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Trichlorofluoromethane	ND	5.9	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,2,3-Trichloropropane	ND	7.1	54	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	4.4	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,3,5-Trimethylbenzene	63	2.6	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
1,2,4-Trimethylbenzene	220	3.8	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Vinyl chloride	ND	6.3	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
m,p-Xylene	280	3.4	54	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
o-Xylene	91	3.3	27	ug/kg dry	1	12/09/2013	12/10/2013 15:32	EPA 8260B	
Surrogate: Dibromofluoromethane			100 %	80.4-125		12/09/2013	12/10/2013 15:32	EPA 8260B	
Surrogate: Toluene-d8			98.0 %	94.1-107		12/09/2013	12/10/2013 15:32	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			99.2 %	90.3-110		12/09/2013	12/10/2013 15:32	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	93.3	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B
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Pace Analytical

ASTM D2974-87

Preparation Batch:PMST 9272

02/15/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-7 (8-9')

Date Sampled

A134908-12 (Soil)

12/03/2013 14:46

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Acetone	ND	180	1200	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Benzene	ND	1.9	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Bromobenzene	ND	6.0	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Bromochloromethane	ND	11	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Bromodichloromethane	ND	4.0	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Bromoform	ND	18	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Bromomethane	ND	290	290	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
2-Butanone	ND	210	1200	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
n-Butyl Benzene	ND	3.8	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
sec-Butyl Benzene	ND	2.8	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
tert-Butylbenzene	ND	3.2	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Carbon disulfide	ND	2.7	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Carbon tetrachloride	ND	4.8	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Chlorobenzene	ND	4.3	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Chloroethane	ND	290	290	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Chloroform	ND	4.5	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Chloromethane	ND	9.3	59	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
2-Chlorotoluene	ND	3.1	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
4-Chlorotoluene	ND	3.6	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Dibromochloromethane	ND	6.2	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.8	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Dibromomethane	ND	13	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,2-Dichlorobenzene	ND	3.2	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,4-Dichlorobenzene	ND	4.7	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,3-Dichlorobenzene	ND	5.5	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Dichlorodifluoromethane	ND	6.0	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,1-Dichloroethane	ND	11	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,2-Dichloroethane	ND	5.4	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.3	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
cis-1,2-Dichloroethene	ND	9.4	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,1-Dichloroethene	ND	8.6	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
2,2-Dichloropropane	ND	12	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,2-Dichloropropane	ND	9.0	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,3-Dichloropropane	ND	5.4	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
cis-1,3-Dichloropropene	ND	6.6	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
trans-1,3-Dichloropropene	ND	5.1	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,1-Dichloropropene	ND	4.2	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Diisopropyl Ether	ND	16	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	

ce 1/15/14



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608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-7 (8-9')
A134908-12 (Soil)

Date Sampled
12/03/2013 14:46

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Ethylbenzene	5.3	2.5	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	J
Hexachlorobutadiene	ND	7.5	120	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
n-Hexane	14 J	13	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	J
2-Hexanone	ND	34	1200	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Isopropylbenzene	ND	2.7	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
p-Isopropyltoluene	ND	3.3	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Methylene chloride	ND	8.2	120	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
4-Methyl-2-pentanone	ND	46	1200	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Methyl t-Butyl Ether	ND JS	5.1	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Naphthalene	ND JS	4.5	290	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
n-Propyl Benzene	ND	4.0	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Styrene	ND	4.7	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	9.0	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	7.0	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Tetrachloroethene	ND	6.7	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Tetrahydrofuran	ND	130	590	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Toluene	12	4.7	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	J
1,2,3-Trichlorobenzene	ND	6.5	120	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,2,4-Trichlorobenzene	ND	7.5	120	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,1,1-Trichloroethane	ND	8.6	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,1,2-Trichloroethane	ND	7.4	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Trichloroethene	ND	4.8	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
Trichlorofluoromethane	ND JS	6.3	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,2,3-Trichloropropane	ND	7.6	59	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	4.8	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.8	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
1,2,4-Trimethylbenzene	13	4.1	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	J
Vinyl chloride	ND	6.8	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	
m,p-Xylene	18 U	3.6	59	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	B, J
o-Xylene	10 U	3.5	29	ug/kg dry	1	12/09/2013	12/10/2013 16:00	EPA 8260B	B, J
Surrogate: Dibromofluoromethane			99.8 %	80.4-125		12/09/2013	12/10/2013 16:00	EPA 8260B	
Surrogate: Toluene-d8			97.2 %	94.1-107		12/09/2013	12/10/2013 16:00	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			101 %	90.3-110		12/09/2013	12/10/2013 16:00	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	87.1	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B
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Pace Analytical

CR 115/14



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608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
Waukesha WI, 53186

Project: Wedron Silica - Wedron, IL
Project Number: 20.0151178.51
Project Manager: Bernard Fenelon

Reported:
01/14/2014

WS-SB-GP-8 (8-10')
A134908-13 (Soil)

Date Sampled
12/03/2013 14:55

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Acetone	ND	170	1100	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Benzene	ND	1.8	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Bromobenzene	ND	5.8	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Bromochloromethane	ND	11	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Bromodichloromethane	ND	3.9	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Bromoform	ND	17	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Bromomethane	ND	280	280	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
2-Butanone	ND	200	1100	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
n-Butyl Benzene	ND	3.6	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
sec-Butyl Benzene	ND	2.7	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
tert-Butylbenzene	ND	3.1	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Carbon disulfide	ND	2.6	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Carbon tetrachloride	ND	4.6	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Chlorobenzene	ND	4.2	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Chloroethane	ND	280	280	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Chloroform	ND	4.3	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Chloromethane	ND	9.0	57	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
2-Chlorotoluene	ND	2.9	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
4-Chlorotoluene	ND	3.5	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	12	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Dibromochloromethane	ND	6.0	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.6	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Dibromomethane	ND	12	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,2-Dichlorobenzene	ND	3.1	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,4-Dichlorobenzene	ND	4.5	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,3-Dichlorobenzene	ND	5.3	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Dichlorodifluoromethane	ND	5.8	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,1-Dichloroethane	ND	11	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,2-Dichloroethane	ND	5.2	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.1	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
cis-1,2-Dichloroethene	ND	9.1	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,1-Dichloroethene	ND	8.3	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
2,2-Dichloropropane	ND	11	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,2-Dichloropropane	ND	8.7	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,3-Dichloropropane	ND	5.2	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
cis-1,3-Dichloropropene	ND	6.3	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.9	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,1-Dichloropropene	ND	4.1	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Diisopropyl Ether	ND	16	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	

02/15/14



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608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-8 (8-10')

Date Sampled
12/03/2013 14:55

A134908-13 (Soil)

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Ethylbenzene	ND	2.4	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Hexachlorobutadiene	ND	7.3	110	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
n-Hexane	ND <i>5</i>	12	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
2-Hexanone	ND	33	1100	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Isopropylbenzene	ND	2.6	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
p-Isopropyltoluene	ND	3.2	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Methylene chloride	ND	7.9	110	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
4-Methyl-2-pentanone	ND	44	1100	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Methyl t-Butyl Ether	ND <i>5</i>	4.9	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Naphthalene	ND <i>5</i>	4.3	280	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
n-Propyl Benzene	ND	3.9	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Styrene	ND	4.5	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	8.7	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	6.8	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Tetrachloroethene	ND	6.5	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Tetrahydrofuran	ND	120	570	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Toluene	5.7	4.5	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	J
1,2,3-Trichlorobenzene	ND	6.2	110	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,2,4-Trichlorobenzene	ND	7.3	110	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,1,1-Trichloroethane	ND	8.3	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,1,2-Trichloroethane	ND	7.1	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Trichloroethene	ND	4.6	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Trichlorofluoromethane	ND <i>5</i>	6.1	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,2,3-Trichloropropane	ND	7.4	57	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	4.6	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.7	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
1,2,4-Trimethylbenzene	ND	4.0	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Vinyl chloride	ND	6.6	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
m,p-Xylene	ND	3.5	57	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
o-Xylene	ND	3.4	28	ug/kg dry	1	12/09/2013	12/10/2013 16:29	EPA 8260B	
Surrogate: Dibromofluoromethane			101 %	80.4-125		12/09/2013	12/10/2013 16:29	EPA 8260B	
Surrogate: Toluene-d8			98.4 %	94.1-107		12/09/2013	12/10/2013 16:29	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			99.9 %	90.3-110		12/09/2013	12/10/2013 16:29	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	92.8	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B
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Pace Analytical

02/15/14



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc
20900 Swenson Drive, Suite 150
Waukesha WI, 53186

Project: Wedron Silica - Wedron, IL
Project Number: 20.0151178.51
Project Manager: Bernard Fenelon

Reported:
01/14/2014

WS-SB-GP-9 (8-10')
A134908-14 (Soil)

Date Sampled
12/03/2013 15:40

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Acetone	ND	160	1100	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Benzene	ND	1.7	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Bromobenzene	ND	5.5	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Bromochloromethane	ND	10	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Bromodichloromethane	ND	3.6	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Bromoform	ND	16	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Bromomethane	ND	270	270	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
2-Butanone	ND	190	1100	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
n-Butyl Benzene	ND	3.4	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
sec-Butyl Benzene	ND	2.6	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
tert-Butylbenzene	ND	2.9	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Carbon disulfide	ND	2.5	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Carbon tetrachloride	ND	4.4	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Chlorobenzene	ND	4.0	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Chloroethane	ND	270	270	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Chloroform	ND	4.1	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Chloromethane	ND	8.4	53	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
2-Chlorotoluene	ND	2.8	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
4-Chlorotoluene	ND	3.3	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	12	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Dibromochloromethane	ND	5.7	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.2	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Dibromomethane	ND	12	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,2-Dichlorobenzene	ND	2.9	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,4-Dichlorobenzene	ND	4.3	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,3-Dichlorobenzene	ND	5.0	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Dichlorodifluoromethane	ND	5.5	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,1-Dichloroethane	ND	9.9	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,2-Dichloroethane	ND	4.9	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
trans-1,2-Dichloroethene	ND	4.8	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
cis-1,2-Dichloroethene	ND	8.6	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,1-Dichloroethene	ND	7.8	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
2,2-Dichloropropane	ND	11	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,2-Dichloropropane	ND	8.2	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,3-Dichloropropane	ND	4.9	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
cis-1,3-Dichloropropene	ND	6.0	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.6	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,1-Dichloropropene	ND	3.8	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Diisopropyl Ether	ND	15	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	

02/15/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-9 (8-10')
A134908-14 (Soil)

Date Sampled
12/03/2013 15:40

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Ethylbenzene	ND \checkmark	2.2	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Hexachlorobutadiene	ND \checkmark	6.8	110	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
n-Hexane	ND \checkmark	12	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
2-Hexanone	ND	31	1100	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Isopropylbenzene	ND \checkmark	2.5	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
p-Isopropyltoluene	ND \checkmark	3.0	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Methylene chloride	ND \checkmark	7.5	110	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
4-Methyl-2-pentanone	ND	42	1100	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Methyl t-Butyl Ether	ND \checkmark	4.6	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Naphthalene	ND \checkmark	4.1	270	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
n-Propyl Benzene	ND \checkmark	3.6	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Styrene	ND \checkmark	4.3	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	8.2	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND \checkmark	6.4	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Tetrachloroethene	ND	6.1	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Tetrahydrofuran	ND \checkmark	120	530	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Toluene	6.4	4.3	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	HC, J
1,2,3-Trichlorobenzene	ND \checkmark	5.9	110	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,2,4-Trichlorobenzene	ND	6.8	110	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,1,1-Trichloroethane	ND \checkmark	7.8	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,1,2-Trichloroethane	ND	6.7	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Trichloroethene	ND	4.4	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Trichlorofluoromethane	ND \checkmark	5.8	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,2,3-Trichloropropane	ND	6.9	53	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND \checkmark	4.4	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,3,5-Trimethylbenzene	ND \checkmark	2.6	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
1,2,4-Trimethylbenzene	ND \checkmark	3.7	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
Vinyl chloride	ND	6.2	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	
m,p-Xylene	5.9 \checkmark	3.3	53	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	B, HC, J
o-Xylene	5.9 \checkmark	3.2	27	ug/kg dry	1	12/09/2013	12/10/2013 17:54	EPA 8260B	B, HC, J
Surrogate: Dibromofluoromethane			106 %	80.4-125		12/09/2013	12/10/2013 17:54	EPA 8260B	
Surrogate: Toluene-d8			98.0 %	94.1-107		12/09/2013	12/10/2013 17:54	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			99.0 %	90.3-110		12/09/2013	12/10/2013 17:54	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	91.5	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B
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02/11/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-10 (8-10')

A134908-15 (Soil)

Date Sampled
12/03/2013 15:50

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Acetone	ND	↵	160	1100	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Benzene	ND	↓	1.7	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Bromobenzene	ND	↓	5.4	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Bromochloromethane	ND		10	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Bromodichloromethane	ND		3.6	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Bromoform	ND	↵	16	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Bromomethane	ND	↓	260	260	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
2-Butanone	ND	↓	190	1100	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
n-Butyl Benzene	ND	↵	3.4	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
sec-Butyl Benzene	ND	↓	2.5	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
tert-Butylbenzene	ND	↓	2.8	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Carbon disulfide	ND		2.4	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Carbon tetrachloride	ND		4.3	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Chlorobenzene	ND		3.9	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Chloroethane	ND		260	260	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Chloroform	ND	↵	4.0	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Chloromethane	ND		8.3	53	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
2-Chlorotoluene	ND	↵	2.7	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
4-Chlorotoluene	ND	↵	3.3	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
1,2-Dibromo-3-chloropropane	ND		12	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Dibromochloromethane	ND		5.6	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
1,2-Dibromoethane (EDB)	ND		5.2	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Dibromomethane	ND		12	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
1,2-Dichlorobenzene	ND	↵	2.8	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
1,4-Dichlorobenzene	ND	↓	4.2	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
1,3-Dichlorobenzene	ND	↓	5.0	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Dichlorodifluoromethane	ND		5.4	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
1,1-Dichloroethane	ND	↵	9.8	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
1,2-Dichloroethane	ND	↓	4.8	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
trans-1,2-Dichloroethene	ND	↓	4.7	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
cis-1,2-Dichloroethene	ND	↓	8.4	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
1,1-Dichloroethene	ND		7.7	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
2,2-Dichloropropane	ND		11	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
1,2-Dichloropropane	ND		8.1	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
1,3-Dichloropropane	ND		4.8	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
cis-1,3-Dichloropropene	ND		5.9	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
trans-1,3-Dichloropropene	ND		4.5	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
1,1-Dichloropropene	ND	↵	3.8	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B
Diisopropyl Ether	ND	↵	15	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B

CE 1/15/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-10 (8-10')

A134908-15 (Soil)

Date Sampled
12/03/2013 15:50

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312036

Ethylbenzene	ND	5	2.2	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
Hexachlorobutadiene	ND	5	6.7	110	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
n-Hexane	ND	5	12	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
2-Hexanone	ND	5	31	1100	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
Isopropylbenzene	ND	5	2.4	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
p-Isopropyltoluene	ND	5	2.9	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
Methylene chloride	ND	5	7.4	110	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
4-Methyl-2-pentanone	ND	5	41	1100	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
Methyl t-Butyl Ether	ND	5	4.5	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
Naphthalene	ND	5	4.0	260	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
n-Propyl Benzene	ND	5	3.6	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
Styrene	ND	5	4.2	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	5	8.1	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	6.3	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
Tetrachloroethene	ND	5	6.0	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
Tetrahydrofuran	ND	5	120	530	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
Toluene	7.4	5	4.2	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	HC, J
1,2,3-Trichlorobenzene	ND	5	5.8	110	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
1,2,4-Trichlorobenzene	ND	5	6.7	110	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
1,1,1-Trichloroethane	ND	5	7.7	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
1,1,2-Trichloroethane	ND	5	6.6	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
Trichloroethene	ND	5	4.3	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
Trichlorofluoromethane	ND	5	5.7	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
1,2,3-Trichloropropane	ND	5	6.8	53	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	5	4.3	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
1,3,5-Trimethylbenzene	ND	5	2.5	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
1,2,4-Trimethylbenzene	ND	5	3.7	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
Vinyl chloride	ND	5	6.1	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	
m,p-Xylene	6.3	5	3.3	53	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	B, HC, J
o-Xylene	5.8	5	3.2	26	ug/kg dry	1	12/09/2013	12/10/2013 18:22	EPA 8260B	B, HC, J
Surrogate: Dibromofluoromethane				100 %	80.4-125		12/09/2013	12/10/2013 18:22	EPA 8260B	
Surrogate: Toluene-d8				96.6 %	94.1-107		12/09/2013	12/10/2013 18:22	EPA 8260B	
Surrogate: 4-Bromofluorobenzene				99.2 %	90.3-110		12/09/2013	12/10/2013 18:22	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	87.8		0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B	
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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-11 (8-10')

Date Sampled

A134908-16 (Soil)

12/03/2013 16:27

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Acetone	ND	180	1200	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Benzene	ND	1.9	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Bromobenzene	ND	6.2	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Bromochloromethane	ND	12	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Bromodichloromethane	ND	4.1	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Bromoform	ND	18	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Bromomethane	ND	300	300	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
2-Butanone	ND	220	1200	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
n-Butyl Benzene	ND	3.9	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
sec-Butyl Benzene	ND	2.9	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
tert-Butylbenzene	ND	3.3	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Carbon disulfide	ND	2.8	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Carbon tetrachloride	ND	5.0	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Chlorobenzene	ND	4.5	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Chloroethane	ND	300	300	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Chloroform	ND	4.6	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Chloromethane	ND	9.6	61	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
2-Chlorotoluene	ND	3.2	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
4-Chlorotoluene	ND	3.8	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Dibromochloromethane	ND	6.4	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	6.0	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Dibromomethane	ND	13	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,2-Dichlorobenzene	ND	3.3	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,4-Dichlorobenzene	ND	4.9	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,3-Dichlorobenzene	ND	5.7	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Dichlorodifluoromethane	ND	6.2	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,1-Dichloroethane	ND	11	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,2-Dichloroethane	ND	5.6	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
trans-1,2-Dichloroethene	ND	5.5	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
cis-1,2-Dichloroethene	ND	9.7	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,1-Dichloroethene	ND	8.9	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
2,2-Dichloropropane	ND	12	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,2-Dichloropropane	ND	9.4	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,3-Dichloropropane	ND	5.6	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
cis-1,3-Dichloropropene	ND	6.8	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
trans-1,3-Dichloropropene	ND	5.2	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,1-Dichloropropene	ND	4.4	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Diisopropyl Ether	ND	17	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	

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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-11 (8-10')

A134908-16 (Soil)

Date Sampled
12/03/2013 16:27

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Ethylbenzene	ND	2.6	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Hexachlorobutadiene	ND	7.8	120	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
n-Hexane	ND ⁵	13	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
2-Hexanone	ND	35	1200	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Isopropylbenzene	ND	2.8	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
p-Isopropyltoluene	ND	3.4	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Methylene chloride	ND	8.5	120	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
4-Methyl-2-pentanone	ND	47	1200	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Methyl t-Butyl Ether	ND ⁵	5.2	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Naphthalene	ND ⁵	4.6	300	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
n-Propyl Benzene	ND	4.1	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Styrene	ND	4.9	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	9.4	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	7.3	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Tetrachloroethene	ND	6.9	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Tetrahydrofuran	ND	130	610	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Toluene	6.7	4.9	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	J
1,2,3-Trichlorobenzene	ND	6.7	120	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,2,4-Trichlorobenzene	ND	7.8	120	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,1,1-Trichloroethane	ND	8.9	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,1,2-Trichloroethane	ND	7.7	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Trichloroethene	ND	5.0	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Trichlorofluoromethane	ND	6.6	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,2,3-Trichloropropane	ND	7.9	61	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	5.0	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.9	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
1,2,4-Trimethylbenzene	ND	4.3	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
Vinyl chloride	ND	7.0	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	
m,p-Xylene	5.5 ⁵	3.8	61	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	B, J
o-Xylene	6.7 ⁵	3.6	30	ug/kg dry	1	12/09/2013	12/11/2013 12:23	EPA 8260B	B, J
Surrogate: Dibromofluoromethane			99.3 %	80.4-125		12/09/2013	12/11/2013 12:23	EPA 8260B	
Surrogate: Toluene-d8			98.5 %	94.1-107		12/09/2013	12/11/2013 12:23	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			97.6 %	90.3-110		12/09/2013	12/11/2013 12:23	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	95.3	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B
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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-12 (6-8")
A134908-17 (Soil)

Date Sampled
12/04/2013 08:10

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Acetone	ND	↘	160	1100	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Benzene	ND	↓	1.7	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Bromobenzene	ND	↓	5.5	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Bromochloromethane	ND		10	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Bromodichloromethane	ND		3.6	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Bromoform	ND	↘	16	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Bromomethane	ND	↓	270	270	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
2-Butanone	ND	↓	190	1100	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
n-Butyl Benzene	ND	↘	3.4	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
sec-Butyl Benzene	ND	↓	2.6	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
tert-Butylbenzene	ND	↓	2.9	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Carbon disulfide	ND		2.5	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Carbon tetrachloride	ND		4.4	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Chlorobenzene	ND		4.0	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Chloroethane	ND		270	270	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Chloroform	ND	↘	4.1	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Chloromethane	ND		8.5	54	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
2-Chlorotoluene	ND	↘	2.8	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
4-Chlorotoluene	ND	↘	3.3	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
1,2-Dibromo-3-chloropropane	ND		12	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Dibromochloromethane	ND		5.7	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
1,2-Dibromoethane (EDB)	ND		5.3	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Dibromomethane	ND		12	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
1,2-Dichlorobenzene	ND	↘	2.9	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
1,4-Dichlorobenzene	ND	↓	4.3	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
1,3-Dichlorobenzene	ND	↓	5.0	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Dichlorodifluoromethane	ND		5.5	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
1,1-Dichloroethane	ND	↘	10	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
1,2-Dichloroethane	ND	↓	4.9	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
trans-1,2-Dichloroethene	ND		4.8	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
cis-1,2-Dichloroethene	ND	↓	8.6	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
1,1-Dichloroethene	ND		7.8	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
2,2-Dichloropropane	ND		11	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
1,2-Dichloropropane	ND		8.3	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
1,3-Dichloropropane	ND		4.9	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
cis-1,3-Dichloropropene	ND		6.0	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
trans-1,3-Dichloropropene	ND		4.6	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
1,1-Dichloropropene	ND	↘	3.9	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B
Diisopropyl Ether	ND	↘	15	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B

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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-12 (6-8')
A134908-17 (Soil)

Date Sampled
12/04/2013 08:10

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Ethylbenzene	7.0 <i>5</i>	2.3	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	HC, J
Hexachlorobutadiene	ND <i>5</i>	6.9	110	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
n-Hexane	ND <i>5</i>	12	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
2-Hexanone	ND	31	1100	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
Isopropylbenzene	ND <i>5</i>	2.5	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
p-Isopropyltoluene	ND <i>5</i>	3.0	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
Methylene chloride	ND <i>5</i>	7.5	110	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
4-Methyl-2-pentanone	ND	42	1100	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
Methyl t-Butyl Ether	ND <i>5</i>	4.6	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
Naphthalene	ND <i>↓</i>	4.1	270	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
n-Propyl Benzene	ND <i>5</i>	3.6	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
Styrene	ND <i>↓</i>	4.3	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	8.3	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND <i>5</i>	6.4	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
Tetrachloroethene	ND	6.1	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
Tetrahydrofuran	ND <i>5</i>	120	540	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
Toluene	7.5	4.3	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	HC, J
1,2,3-Trichlorobenzene	ND <i>5</i>	5.9	110	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
1,2,4-Trichlorobenzene	ND <i>↓</i>	6.9	110	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
1,1,1-Trichloroethane	ND <i>↓</i>	7.8	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
1,1,2-Trichloroethane	ND	6.8	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
Trichloroethene	ND <i>5</i>	4.4	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
Trichlorofluoromethane	ND	5.8	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
1,2,3-Trichloropropane	ND <i>5</i>	7.0	54	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND <i>↓</i>	4.4	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
1,3,5-Trimethylbenzene	ND <i>↓</i>	2.6	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
1,2,4-Trimethylbenzene	8.0	3.8	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	HC, J
Vinyl chloride	ND	6.2	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	
m,p-Xylene	19 <i>5</i>	3.3	54	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	B, HC, J
o-Xylene	8.6 <i>5</i>	3.2	27	ug/kg dry	1	12/09/2013	12/10/2013 19:18	EPA 8260B	B, HC, J

Surrogate: Dibromofluoromethane			102 %	80.4-125		12/09/2013	12/10/2013 19:18	EPA 8260B	
Surrogate: Toluene-d8			95.9 %	94.1-107		12/09/2013	12/10/2013 19:18	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			98.8 %	90.3-110		12/09/2013	12/10/2013 19:18	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	85.6		0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B	
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Pace Analytical

CR 1/15/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-12 (12-15')

A134908-18 (Soil)

Date Sampled
12/04/2013 08:20

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Acetone	ND	5	170	1100	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Benzene	16	5	1.8	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	J
Bromobenzene	ND	5	5.7	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Bromochloromethane	ND		11	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Bromodichloromethane	ND		3.8	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Bromoform	ND	5	17	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Bromomethane	ND	↓	280	280	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
2-Butanone	ND	↓	200	1100	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
n-Butyl Benzene	170	5	3.6	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	HC
sec-Butyl Benzene	38	↓	2.7	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
tert-Butylbenzene	290	↓	3.0	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Carbon disulfide	ND		2.6	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Carbon tetrachloride	ND		4.6	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Chlorobenzene	ND		4.1	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Chloroethane	ND		280	280	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Chloroform	ND	5	4.2	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Chloromethane	ND		8.8	56	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
2-Chlorotoluene	ND	5	2.9	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
4-Chlorotoluene	ND	5	3.5	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND		12	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Dibromochloromethane	ND		5.9	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,2-Dibromoethane (EDB)	ND		5.5	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Dibromomethane	ND		12	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,2-Dichlorobenzene	ND	5	3.0	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,4-Dichlorobenzene	ND	↓	4.5	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,3-Dichlorobenzene	ND	↓	5.3	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Dichlorodifluoromethane	ND		5.7	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,1-Dichloroethane	ND	5	10	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,2-Dichloroethane	ND	↓	5.1	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
trans-1,2-Dichloroethane	ND	↓	5.0	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
cis-1,2-Dichloroethane	ND	↓	8.9	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,1-Dichloroethene	ND		8.2	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
2,2-Dichloropropane	ND		11	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,2-Dichloropropane	ND		8.6	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,3-Dichloropropane	ND		5.1	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
cis-1,3-Dichloropropene	ND		6.3	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
trans-1,3-Dichloropropene	ND		4.8	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,1-Dichloropropene	ND		4.0	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Diisopropyl Ether	ND	5	16	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Ethylbenzene	820	5	2.3	28	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	HC

02/15/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-12 (12-15')

A134908-18 (Soil)

Date Sampled
12/04/2013 08:20

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Hexachlorobutadiene	ND ^{0.5} 7.2	110	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
n-Hexane	84 ^J	12	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
2-Hexanone	ND ^{0.5} 32	1100	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Isopropylbenzene	130 ^J	2.6	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
p-Isopropyltoluene	ND ^{0.5}	3.1	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Methylene chloride	ND ^{0.5}	7.8	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
4-Methyl-2-pentanone	ND	44	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Methyl t-Butyl Ether	ND ^{0.5}	4.8	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Naphthalene	110 ^J	4.2	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	HC, J
n-Propyl Benzene	560 ^J	3.8	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	HC
Styrene	ND ^{0.5}	4.5	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	8.6	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND ^{0.5}	6.7	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Tetrachloroethene	ND	6.4	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Tetrahydrofuran	ND ^{0.5}	120	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Toluene	18	4.5	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	HC, J
1,2,3-Trichlorobenzene	ND ^{0.5}	6.1	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,2,4-Trichlorobenzene	ND	7.2	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,1,1-Trichloroethane	ND	8.2	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,1,2-Trichloroethane	ND	7.0	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Trichloroethene	ND ^{0.5}	4.6	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
Trichlorofluoromethane	ND	6.0	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,2,3-Trichloropropane	ND ^{0.5}	7.3	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	4.6	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
1,3,5-Trimethylbenzene	220 ^J	2.7	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	HC
1,2,4-Trimethylbenzene	2000	3.9	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	HC
Vinyl chloride	ND	6.5	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	
m,p-Xylene	88 ^J	3.5	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	HC
o-Xylene	18 ^{0.5}	3.4	ug/kg dry	1	12/09/2013	12/10/2013 19:47	EPA 8260B	B, HC, J
Surrogate: Dibromofluoromethane		105 %	80.4-125		12/09/2013	12/10/2013 19:47	EPA 8260B	
Surrogate: Toluene-d8		96.7 %	94.1-107		12/09/2013	12/10/2013 19:47	EPA 8260B	
Surrogate: 4-Bromofluorobenzene		100 %	90.3-110		12/09/2013	12/10/2013 19:47	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	82.1	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B	
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ASTM D2974-87

Preparation Batch:WET 17181

02/11/14



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GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-13 (6-8')
A134908-19 (Soil)

Date Sampled
12/04/2013 08:53

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Acetone	ND <i>JS</i>	180	1200	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Benzene	ND <i>↓</i>	1.9	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Bromobenzene	ND <i>↓</i>	6.0	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Bromochloromethane	ND	11	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Bromodichloromethane	ND	4.0	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Bromoform	ND <i>JS</i>	18	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Bromomethane	ND <i>↓</i>	290	290	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
2-Butanone	ND <i>↓</i>	210	1200	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
n-Butyl Benzene	ND <i>JS</i>	3.8	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
sec-Butyl Benzene	ND <i>↓</i>	2.8	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
tert-Butylbenzene	ND <i>↓</i>	3.2	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Carbon disulfide	ND	2.7	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Carbon tetrachloride	ND	4.8	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Chlorobenzene	ND	4.4	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Chloroethane	ND	290	290	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Chloroform	ND <i>JS</i>	4.5	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Chloromethane	ND	9.3	59	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
2-Chlorotoluene	ND <i>JS</i>	3.1	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
4-Chlorotoluene	ND <i>JS</i>	3.7	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Dibromochloromethane	ND	6.2	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.8	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Dibromomethane	ND	13	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,2-Dichlorobenzene	ND <i>JS</i>	3.2	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,4-Dichlorobenzene	ND <i>↓</i>	4.7	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,3-Dichlorobenzene	ND <i>↓</i>	5.5	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Dichlorodifluoromethane	ND	6.0	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,1-Dichloroethane	ND <i>JS</i>	11	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,2-Dichloroethane	ND <i>↓</i>	5.4	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
trans-1,2-Dichloroethane	ND	5.3	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
cis-1,2-Dichloroethane	ND <i>↓</i>	9.4	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,1-Dichloroethene	ND	8.6	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
2,2-Dichloropropane	ND	12	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,2-Dichloropropane	ND	9.1	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,3-Dichloropropane	ND	5.4	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
cis-1,3-Dichloropropene	ND	6.6	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
trans-1,3-Dichloropropene	ND	5.1	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,1-Dichloropropene	ND <i>JS</i>	4.2	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Diisopropyl Ether	ND <i>JS</i>	17	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	

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608.221.4889 Fax

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GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-13 (6-8')
A134908-19 (Soil)

Date Sampled
12/04/2013 08:53

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Ethylbenzene	5.3 <i>S</i>	2.5	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	HC, J
Hexachlorobutadiene	ND <i>US</i>	7.5	120	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
n-Hexane	ND <i>US</i>	13	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
2-Hexanone	ND	34	1200	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Isopropylbenzene	ND <i>US</i>	2.7	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
p-Isopropyltoluene	ND <i>US</i>	3.3	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Methylene chloride	ND <i>US</i>	8.3	120	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
4-Methyl-2-pentanone	ND	46	1200	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Methyl t-Butyl Ether	ND <i>US</i>	5.1	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Naphthalene	22 <i>S</i>	4.5	290	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	B, HC, J
n-Propyl Benzene	ND <i>US</i>	4.0	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Styrene	ND <i>US</i>	4.7	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	9.1	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND <i>US</i>	7.1	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Tetrachloroethene	ND	6.7	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Tetrahydrofuran	ND <i>US</i>	130	590	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Toluene	8.3	4.7	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	HC, J
1,2,3-Trichlorobenzene	ND <i>US</i>	6.5	120	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,2,4-Trichlorobenzene	ND ↓	7.5	120	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,1,1-Trichloroethane	ND ↓	8.6	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,1,2-Trichloroethane	ND	7.4	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Trichloroethene	ND <i>US</i>	4.8	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
Trichlorofluoromethane	ND	6.4	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,2,3-Trichloropropane	ND <i>US</i>	7.7	59	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND ↓	4.8	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,3,5-Trimethylbenzene	ND ↓	2.8	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
1,2,4-Trimethylbenzene	17	4.1	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	HC, J
Vinyl chloride	ND	6.8	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	
m,p-Xylene	15 <i>S</i>	3.7	59	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	B, HC, J
o-Xylene	8.8 <i>US</i>	3.5	29	ug/kg dry	1	12/09/2013	12/10/2013 20:15	EPA 8260B	B, HC, J

Surrogate: Dibromofluoromethane		106 %	80.4-125			12/09/2013	12/10/2013 20:15	EPA 8260B	
Surrogate: Toluene-d8		96.1 %	94.1-107			12/09/2013	12/10/2013 20:15	EPA 8260B	
Surrogate: 4-Bromofluorobenzene		98.0 %	90.3-110			12/09/2013	12/10/2013 20:15	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	90.9	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B		
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02/15/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-13 (13-15')
A134908-20 (Soil)

Date Sampled
12/04/2013 09:03

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Acetone	ND	5	170	1100	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Benzene	30	5	1.8	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Bromobenzene	ND	5	5.8	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Bromochloromethane	ND		11	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Bromodichloromethane	ND		3.9	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Bromoform	ND	5	17	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Bromomethane	ND		290	290	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
2-Butanone	ND		210	1100	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
n-Butyl Benzene	1000		3.7	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	HC
sec-Butyl Benzene	390	5	2.7	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
tert-Butylbenzene	1100	5	3.1	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Carbon disulfide	ND		2.6	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Carbon tetrachloride	ND		4.7	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Chlorobenzene	ND		4.2	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Chloroethane	ND		290	290	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Chloroform	ND	5	4.3	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Chloromethane	ND		9.0	57	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
2-Chlorotoluene	ND	5	3.0	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
4-Chlorotoluene	ND	5	3.5	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND		13	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Dibromochloromethane	ND		6.0	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,2-Dibromoethane (EDB)	ND		5.6	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Dibromomethane	ND		13	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,2-Dichlorobenzene	ND	5	3.1	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,4-Dichlorobenzene	ND	5	4.6	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,3-Dichlorobenzene	ND	5	5.4	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Dichlorodifluoromethane	ND		5.8	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,1-Dichloroethane	ND	5	11	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,2-Dichloroethane	ND	5	5.3	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
trans-1,2-Dichloroethane	ND	5	5.1	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
cis-1,2-Dichloroethane	ND	5	9.1	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,1-Dichloroethene	ND		8.3	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
2,2-Dichloropropane	ND		11	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,2-Dichloropropane	ND		8.8	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,3-Dichloropropane	ND		5.3	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
cis-1,3-Dichloropropene	ND		6.4	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
trans-1,3-Dichloropropene	ND		4.9	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,1-Dichloropropene	ND	5	4.1	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Diisopropyl Ether	ND	5	16	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Ethylbenzene	280	5	2.4	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	HC

CE 1/15/14



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Revised Report

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WS-SB-GP-13 (13-15')

A134908-20 (Soil)

Date Sampled
12/04/2013 09:03

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Hexachlorobutadiene	ND <i>JS</i>	7.3	110	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
n-Hexane	120 <i>JS</i>	13	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
2-Hexanone	ND	33	1100	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Isopropylbenzene	600 <i>JS</i>	2.6	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
p-Isopropyltoluene	120 <i>JS</i>	3.2	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Methylene chloride	ND <i>JS</i>	8.0	110	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
4-Methyl-2-pentanone	ND	45	1100	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Methyl t-Butyl Ether	ND <i>JS</i>	4.9	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Naphthalene	720 <i>JS</i>	4.3	290	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	HC
n-Propyl Benzene	2600 <i>JS</i>	39	290	ug/kg dry	10	12/09/2013	12/11/2013 12:51	EPA 8260B	D
Styrene	ND <i>JS</i>	4.6	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	8.8	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND <i>JS</i>	6.8	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Tetrachloroethene	ND	6.5	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Tetrahydrofuran	ND <i>JS</i>	130	570	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Toluene	17	4.6	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	HC, J
1,2,3-Trichlorobenzene	ND <i>JS</i>	6.3	110	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,2,4-Trichlorobenzene	ND <i>JS</i>	7.3	110	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,1,1-Trichloroethane	ND <i>JS</i>	8.3	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,1,2-Trichloroethane	ND	7.2	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Trichloroethene	ND	4.7	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
Trichlorofluoromethane	ND <i>JS</i>	6.2	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,2,3-Trichloropropane	ND	7.4	57	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND <i>JS</i>	4.7	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
1,3,5-Trimethylbenzene	1400 <i>JS</i>	2.7	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	HC
1,2,4-Trimethylbenzene	7100	40	290	ug/kg dry	10	12/09/2013	12/11/2013 12:51	EPA 8260B	D
Vinyl chloride	ND	6.6	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	
m,p-Xylene	670 <i>JS</i>	3.5	57	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	HC
o-Xylene	35 <i>JS</i>	3.4	29	ug/kg dry	1	12/09/2013	12/10/2013 20:43	EPA 8260B	HC
Surrogate: Dibromofluoromethane			105 %	80.4-125		12/09/2013	12/10/2013 20:43	EPA 8260B	
Surrogate: Toluene-d8			96.4 %	94.1-107		12/09/2013	12/10/2013 20:43	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			101 %	90.3-110		12/09/2013	12/10/2013 20:43	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312025

% Solids	82.8	0.00	% by Weight	1	12/05/2013	12/06/2013 08:53	SM 2540B
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Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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Duplicate 2 [WS-SB-GP-13 (13'-15')]
A134908-21 (Soil)

Date Sampled
12/04/2013 08:24

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Acetone	ND ^{us}	180	1200	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Benzene	98 ^J	1.9	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Bromobenzene	ND ^{us}	6.0	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Bromochloromethane	ND	11	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Bromodichloromethane	ND	4.0	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Bromoform	ND ^{us}	18	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Bromomethane	ND ↓	290	290	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
2-Butanone	ND ↓	210	1200	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
n-Butyl Benzene	180 ^J	3.7	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	HC
sec-Butyl Benzene	95 ↓	2.8	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
tert-Butylbenzene	940 ↓	3.2	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Carbon disulfide	ND	2.7	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Carbon tetrachloride	ND	4.8	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Chlorobenzene	ND	4.3	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Chloroethane	ND	290	290	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Chloroform	ND ^{us}	4.4	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Chloromethane	ND	9.2	59	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
2-Chlorotoluene	ND ^{us}	3.0	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
4-Chlorotoluene	ND ^{us}	3.6	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	13	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Dibromochloromethane	ND	6.2	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.7	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Dibromomethane	ND	13	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,2-Dichlorobenzene	ND ^{us}	3.2	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,4-Dichlorobenzene	ND ↓	4.7	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,3-Dichlorobenzene	ND ↓	5.5	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Dichlorodifluoromethane	7.0 ^u	6.0	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	B, J
1,1-Dichloroethane	ND ^{us}	11	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,2-Dichloroethane	ND ↓	5.4	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
trans-1,2-Dichloroethene	ND ↓	5.3	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
cis-1,2-Dichloroethene	ND ↓	9.4	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,1-Dichloroethene	ND	8.5	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
2,2-Dichloropropane	ND	12	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,2-Dichloropropane	ND	9.0	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,3-Dichloropropane	ND	5.4	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
cis-1,3-Dichloropropene	ND	6.6	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
trans-1,3-Dichloropropene	ND	5.0	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,1-Dichloropropene	ND ^{us}	4.2	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Diisopropyl Ether	ND ↓	16	29	ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Ethylbenzene	7800	25	290	ug/kg dry	10	12/09/2013	12/11/2013 13:20	EPA 8260B	D

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Duplicate 2 [WS-SB-GP-13 (13'-15')]
A134908-21 (Soil) Date Sampled 12/04/2013 08:24

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap Preparation Batch:A312037

Hexachlorobutadiene	ND	5	7.5	120 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
n-Hexane	640	5	13	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
2-Hexanone	ND	5	34	1200 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Isopropylbenzene	730	5	2.7	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
p-Isopropyltoluene	140	5	3.3	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Methylene chloride	ND	5	8.2	120 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
4-Methyl-2-pentanone	ND	5	46	1200 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Methyl t-Butyl Ether	ND	5	5.0	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Naphthalene	440	5	4.4	290 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	HC
n-Propyl Benzene	2300	5	4.0	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	HC
Styrene	ND	5	4.7	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	5	9.0	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	7.0	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Tetrachloroethene	ND	5	6.7	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Tetrahydrofuran	ND	5	130	590 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Toluene	23	5	4.7	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	HC, J
1,2,3-Trichlorobenzene	ND	5	6.4	120 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,2,4-Trichlorobenzene	ND	5	7.5	120 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,1,1-Trichloroethane	ND	5	8.5	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,1,2-Trichloroethane	ND	5	7.4	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Trichloroethene	ND	5	4.8	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
Trichlorofluoromethane	ND	5	6.3	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,2,3-Trichloropropane	ND	5	7.6	59 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	5	4.8	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
1,3,5-Trimethylbenzene	1600	5	2.8	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	HC
1,2,4-Trimethylbenzene	6400	5	41	290 ug/kg dry	10	12/09/2013	12/11/2013 13:20	EPA 8260B	D
Vinyl chloride	ND	5	6.8	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	
m,p-Xylene	300	5	3.6	59 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	HC
o-Xylene	27	5	3.5	29 ug/kg dry	1	12/09/2013	12/10/2013 21:11	EPA 8260B	B, HC, J
Surrogate: Dibromofluoromethane				101 %	80.4-125	12/09/2013	12/10/2013 21:11	EPA 8260B	
Surrogate: Toluene-d8				97.3 %	94.1-107	12/09/2013	12/10/2013 21:11	EPA 8260B	
Surrogate: 4-Bromofluorobenzene				100 %	90.3-110	12/09/2013	12/10/2013 21:11	EPA 8260B	

Classical Chemistry Parameters Preparation Batch:A312024

% Solids	80.7		0.00	% by Weight	1	12/05/2013	12/06/2013 08:50	SM 2540B	
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021/15/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-14 (6-8')
A134908-22 (Soil)

Date Sampled
12/04/2013 09:52

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Acetone	ND	150	990	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Benzene	ND	1.6	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Bromobenzene	ND	5.1	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Bromochloromethane	ND	9.5	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Bromodichloromethane	ND	3.4	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Bromoform	ND	15	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Bromomethane	ND	250	250	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
2-Butanone	ND	180	990	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
n-Butyl Benzene	10	3.2	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	HC, J
sec-Butyl Benzene	ND	2.4	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
tert-Butylbenzene	15	2.7	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	J
Carbon disulfide	ND	2.3	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Carbon tetrachloride	ND	4.1	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Chloroethane	ND	250	250	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Chloroform	ND	3.8	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Chloromethane	ND	7.8	50	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
2-Chlorotoluene	ND	2.6	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
4-Chlorotoluene	ND	3.1	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	11	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Dibromochloromethane	ND	5.3	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	4.9	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Dibromomethane	ND	11	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,2-Dichlorobenzene	ND	2.7	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,4-Dichlorobenzene	ND	4.0	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,3-Dichlorobenzene	ND	4.7	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Dichlorodifluoromethane	7.0	5.1	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	B, J
1,1-Dichloroethane	ND	9.2	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,2-Dichloroethane	ND	4.6	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
trans-1,2-Dichloroethene	ND	4.5	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
cis-1,2-Dichloroethene	ND	7.9	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,1-Dichloroethene	ND	7.3	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
2,2-Dichloropropane	ND	9.9	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,2-Dichloropropane	ND	7.7	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,3-Dichloropropane	ND	4.6	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
cis-1,3-Dichloropropene	ND	5.6	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.3	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,1-Dichloropropene	ND	3.6	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Diisopropyl Ether	ND	14	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Ethylbenzene	35	2.1	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	HC

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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-14 (6-8')
A134908-22 (Soil)

Date Sampled
12/04/2013 09:52

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Hexachlorobutadiene	ND <i>55</i>	6.4	99	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
n-Hexane	ND <i>55</i>	11	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
2-Hexanone	ND	29	990	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Isopropylbenzene	ND <i>55</i>	2.3	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
p-Isopropyltoluene	ND <i>↓</i>	2.8	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Methylene chloride	ND <i>↓</i>	7.0	99	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
4-Methyl-2-pentanone	ND	39	990	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Methyl t-Butyl Ether	ND <i>55</i>	4.3	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Naphthalene	66 <i>55</i>	3.8	250	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	HC, J
n-Propyl Benzene	16 <i>55</i>	3.4	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	HC, J
Styrene	ND <i>55</i>	4.0	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	7.7	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND <i>55</i>	6.0	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Tetrachloroethene	ND	5.7	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Tetrahydrofuran	ND <i>55</i>	110	500	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Toluene	38	4.0	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	HC
1,2,3-Trichlorobenzene	ND <i>55</i>	5.5	99	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,2,4-Trichlorobenzene	ND <i>↓</i>	6.4	99	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,1,1-Trichloroethane	ND <i>↓</i>	7.3	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,1,2-Trichloroethane	ND	6.3	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Trichloroethene	ND	4.1	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
Trichlorofluoromethane	ND <i>55</i>	5.4	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,2,3-Trichloropropane	ND	6.5	50	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND <i>55</i>	4.1	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
1,3,5-Trimethylbenzene	26 <i>55</i>	2.4	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	HC
1,2,4-Trimethylbenzene	100 <i>↓</i>	3.5	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	HC
Vinyl chloride	ND	5.8	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	
m,p-Xylene	120 <i>55</i>	3.1	50	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	HC
o-Xylene	36 <i>55</i>	3.0	25	ug/kg dry	1	12/09/2013	12/10/2013 21:39	EPA 8260B	HC

Surrogate: Dibromofluoromethane			105 %	80.4-125		12/09/2013	12/10/2013 21:39	EPA 8260B	
Surrogate: Toluene-d8			96.7 %	94.1-107		12/09/2013	12/10/2013 21:39	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			99.2 %	90.3-110		12/09/2013	12/10/2013 21:39	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312024

% Solids	89.6		0.00	% by Weight	1	12/05/2013	12/06/2013 08:50	SM 2540B	
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02/15/14



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608.221.8700 Phone
608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-14 (12-15')

A134908-23 (Soil)

Date Sampled
12/04/2013 10:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Acetone	ND <i>JS</i>	150	1000	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Benzene	4.6 <i>J</i>	1.6	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	J
Bromobenzene	ND <i>JS</i>	5.2	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Bromochloromethane	ND	9.8	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Bromodichloromethane	ND	3.5	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Bromoform	ND <i>JS</i>	15	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Bromomethane	ND ↓	250	250	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
2-Butanone	ND ↓	180	1000	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
n-Butyl Benzene	9.7 <i>J</i>	3.3	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	HC, J
sec-Butyl Benzene	9.2 <i>J</i>	2.4	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	J
tert-Butylbenzene	ND <i>JS</i>	2.7	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Carbon disulfide	ND	2.3	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Carbon tetrachloride	ND	4.2	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Chlorobenzene	ND	3.8	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Chloroethane	ND	250	250	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Chloroform	ND <i>JS</i>	3.9	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Chloromethane	ND	8.0	51	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
2-Chlorotoluene	ND <i>JS</i>	2.6	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
4-Chlorotoluene	ND <i>JS</i>	3.2	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	11	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Dibromochloromethane	ND	5.4	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.0	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Dibromomethane	ND	11	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,2-Dichlorobenzene	ND <i>JS</i>	2.7	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,4-Dichlorobenzene	ND ↓	4.1	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,3-Dichlorobenzene	ND ↓	4.8	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Dichlorodifluoromethane	ND	5.2	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,1-Dichloroethane	ND <i>JS</i>	9.5	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,2-Dichloroethane	ND ↓	4.7	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
trans-1,2-Dichloroethene	ND	4.6	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
cis-1,2-Dichloroethene	ND ↓	8.1	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,1-Dichloroethene	ND	7.4	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
2,2-Dichloropropane	ND	10	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,2-Dichloropropane	ND	7.8	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,3-Dichloropropane	ND	4.7	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
cis-1,3-Dichloropropene	ND	5.7	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.4	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,1-Dichloropropene	ND <i>JS</i>	3.7	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Diisopropyl Ether	ND ↓	14	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Ethylbenzene	17 <i>J</i>	2.1	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	HC, J

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GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-14 (12-15')
A134908-23 (Soil)

Date Sampled
12/04/2013 10:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Hexachlorobutadiene	ND	5	6.5	100	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
n-Hexane	11	5	11	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	J
2-Hexanone	ND		29	1000	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Isopropylbenzene	ND	5	2.3	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
p-Isopropyltoluene	ND		2.8	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Methylene chloride	ND		7.1	100	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
4-Methyl-2-pentanone	ND		40	1000	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Methyl t-Butyl Ether	ND	5	4.4	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Naphthalene	37	5	3.9	250	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	B, HC, J
n-Propyl Benzene	11	5	3.5	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	HC, J
Styrene	ND	5	4.1	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND		7.8	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	6.1	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Tetrachloroethene	ND		5.8	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Tetrahydrofuran	ND	5	110	510	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Toluene	31		4.1	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	HC
1,2,3-Trichlorobenzene	ND	5	5.6	100	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,2,4-Trichlorobenzene	ND		6.5	100	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,1,1-Trichloroethane	ND		7.4	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,1,2-Trichloroethane	ND		6.4	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Trichloroethene	ND		4.2	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
Trichlorofluoromethane	ND	5	5.5	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,2,3-Trichloropropane	ND		6.6	51	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND	5	4.2	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
1,3,5-Trimethylbenzene	18	5	2.4	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	HC, J
1,2,4-Trimethylbenzene	62		3.6	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	HC
Vinyl chloride	ND		5.9	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	
m,p-Xylene	74	5	3.2	51	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	HC
o-Xylene	25	5	3.1	25	ug/kg dry	1	12/09/2013	12/10/2013 22:07	EPA 8260B	B, HC
Surrogate: Dibromofluoromethane				103 %	80.4-125		12/09/2013	12/10/2013 22:07	EPA 8260B	
Surrogate: Toluene-d8				97.3 %	94.1-107		12/09/2013	12/10/2013 22:07	EPA 8260B	
Surrogate: 4-Bromofluorobenzene				101 %	90.3-110		12/09/2013	12/10/2013 22:07	EPA 8260B	

Classical Chemistry Parameters

Preparation Batch:A312024

% Solids	85.0		0.00	% by Weight	1	12/05/2013	12/06/2013 08:50	SM 2540B	
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Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

02/15/14



2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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MeOH Blank

A134908-24 (Soil)

Date Sampled
12/04/2013 00:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Acetone	ND JS	150	1000	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Benzene	ND JS	1.6	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Bromobenzene	ND	5.1	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Bromochloromethane	ND	9.6	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Bromodichloromethane	ND	3.4	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Bromoform	ND JS	15	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Bromomethane	ND ↓	250	250	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
2-Butanone	ND ↓	180	1000	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
n-Butyl Benzene	ND JS	3.2	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
sec-Butyl Benzene	ND ↓	2.4	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
tert-Butylbenzene	ND ↓	2.7	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Carbon disulfide	ND	2.3	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Carbon tetrachloride	ND	4.1	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Chlorobenzene	ND	3.7	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Chloroethane	ND JS	250	250	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Chloroform	ND JS	3.8	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Chloromethane	ND	7.9	50	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
2-Chlorotoluene	ND JS	2.6	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
4-Chlorotoluene	ND	3.1	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	11	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Dibromochloromethane	ND	5.3	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	4.9	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Dibromomethane	ND	11	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,2-Dichlorobenzene	ND	2.7	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,4-Dichlorobenzene	ND	4.0	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,3-Dichlorobenzene	ND	4.7	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Dichlorodifluoromethane	ND	5.1	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,1-Dichloroethane	ND JS	9.3	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,2-Dichloroethane	ND	4.6	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
trans-1,2-Dichloroethene	ND	4.5	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
cis-1,2-Dichloroethene	ND JS	8.0	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,1-Dichloroethene	ND	7.3	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
2,2-Dichloropropane	ND	10	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,2-Dichloropropane	ND	7.7	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,3-Dichloropropane	ND	4.6	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
cis-1,3-Dichloropropene	ND	5.6	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
trans-1,3-Dichloropropene	ND	4.3	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,1-Dichloropropene	ND	3.6	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Diisopropyl Ether	ND JS	14	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	

CEI/K/14



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608.221.8700 Phone
608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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MeOH Blank
A134908-24 (Soil)
Date Sampled
12/04/2013 00:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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ECCS

Volatile Organic Compounds by Method 8260 - Purge and Trap

Preparation Batch:A312037

Ethylbenzene	ND <i>US</i>	2.1	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Hexachlorobutadiene	ND <i>US</i>	6.4	100	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
n-Hexane	ND <i>US</i>	11	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
2-Hexanone	ND	29	1000	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Isopropylbenzene	ND <i>US</i>	2.3	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
p-Isopropyltoluene	ND	2.8	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Methylene chloride	ND	7.0	100	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
4-Methyl-2-pentanone	ND	39	1000	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Methyl t-Butyl Ether	ND <i>US</i>	4.3	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Naphthalene	ND <i>↓</i>	3.8	250	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
n-Propyl Benzene	ND <i>US</i>	3.4	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Styrene	ND	4.0	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	7.7	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	6.0	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Tetrachloroethene	ND	5.7	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Tetrahydrofuran	ND	110	500	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Toluene	ND <i>US</i>	4.0	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,2,3-Trichlorobenzene	ND	5.5	100	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,2,4-Trichlorobenzene	ND	6.4	100	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,1,1-Trichloroethane	ND <i>US</i>	7.3	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,1,2-Trichloroethane	ND	6.3	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Trichloroethene	ND	4.1	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Trichlorofluoromethane	ND <i>US</i>	5.4	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,2,3-Trichloropropane	ND	6.5	50	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	ND <i>US</i>	4.1	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,3,5-Trimethylbenzene	ND <i>US</i>	2.4	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
1,2,4-Trimethylbenzene	ND <i>US</i>	3.5	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Vinyl chloride	ND	5.8	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
m,p-Xylene	ND <i>US</i>	3.1	50	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
o-Xylene	ND <i>US</i>	3.0	25	ug/kg wet	1	12/09/2013	12/10/2013 23:31	EPA 8260B	
Surrogate: Dibromofluoromethane			105 %	80.4-125		12/09/2013	12/10/2013 23:31	EPA 8260B	
Surrogate: Toluene-d8			95.2 %	94.1-107		12/09/2013	12/10/2013 23:31	EPA 8260B	
Surrogate: 4-Bromofluorobenzene			98.2 %	90.3-110		12/09/2013	12/10/2013 23:31	EPA 8260B	

CEC/15/14

LDC #: 31068B1

VALIDATION COMPLETENESS WORKSHEET

Date: 1/16/14

SDG #: A134908

Level III/IV

Page: 1 of 1

Laboratory: Environmental Chemistry Consulting Services, Inc.

Reviewer: JY

2nd Reviewer: JY

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12/03-04/13
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	2 RSD \leq 30/15% r2
IV.	Continuing calibration/ICV	SW	CV/ICV \leq 20%
V.	Blanks	SW	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	SW	
XI.	Target compound identification	A	Not reviewed for Level III validation.
XII.	Compound quantitation/RL/LOQ/LODs	A	Not reviewed for Level III validation.
XIII.	Tentatively identified compounds (TICs)	N	Not reviewed for Level III validation.
XIV.	System performance	A	Not reviewed for Level III validation.
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D ₁ = 8, 9 D ₂ = 20, 21
XVII.	Field blanks	SW	*TB = 24 EB = Equipment Blank (A134906)

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

*ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

	Sample ID	Depth	Sample ID	Depth	Notes	Sample ID	Depth	Notes
1	WS-SB-GP-1 (6-8')	11	WS-SB-GP-8 (2-4')	21	Duplicate 2	31	11	A 312036-Blk ₁
2	WS-SB-GP-1 (18-20)**	12	WS-SB-GP-7 (8-9')	22		32	12	A 312037-1
3	WS-SB-GP-2 (14-16')	13	WS-SB-GP-8 (8-10')	23		33		
4	WS-SB-GP-2 (18-20')	14	WS-SB-GP-9 (8-10')	24	MeOH Blank	34		
5	WS-SB-GP-3 (4-6')	15	WS-SB-GP-10 (8-10')	25	WS-SB-GP-1 (6-8')MS	35		
6	WS-SB-GP-4 (4-6')	16	WS-SB-GP-11 (8-10')	26	WS-SB-GP-1 (6-8')MSD	36		
7	WS-SB-GP-5 (2-4)**	17	WS-SB-GP-12 (6-8')	27	WS-SB-GP-11 (8-10')MS	37		
8	WS-SB-GP-6 (0-2')	18	WS-SB-GP-12 (12-15')	28	WS-SB-GP-11 (8-10')MSD	38		
9	Duplicate 1	19	WS-SB-GP-13 (6-8)**	29		39		
10	WS-SB-GP-7 (2-4')	20	WS-SB-GP-13 (13-15')	30		40		

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cooler temperature criteria was met.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples analyzed within the 12 hour clock criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was a curve fit used for evaluation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Did the initial calibration meet the curve fit acceptance criteria of > 0.990 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all percent relative standard deviations (%RSD) $\leq 30\%/15\%$ and relative response factors (RRF) ≥ 0.05 ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all percent differences (%D) $\leq 20\%$ and relative response factors (RRF) ≥ 0.05 ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
V. Blanks				
Was a method blank associated with every sample in this SDG?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was a MS/MSD analyzed every 20 samples of each matrix?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	/			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	/			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		/		
Were the performance evaluation (PE) samples within the acceptance limits?			/	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?		/		
Were retention times within + 30 seconds of the associated calibration standard?	/			
XI. Target compound identification				
Were relative retention times (RRT's) within + 0.06 RRT units of the standard?	/			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	/			
Were chromatogram peaks verified and accounted for?	/			
XII. Compound quantitation/RLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	/			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	/			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			/	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			/	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?		/		
XIV. System performance				
System performance was found to be acceptable.	/			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	/			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.	/			
Target compounds were detected in the field duplicates.	/			
XVII. Field blanks				
Field blanks were identified in this SDG.	/			
Target compounds were detected in the field blanks.	/			

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC. 1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl chloride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethane	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethane, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO. 1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP. <i>n-Hexane</i>
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ. <i>Tetrahydrofuran</i>
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR. <i>1,1,2-Trichlorotrifluoroethane</i>
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A
Y N N/A
Y (N) N/A

Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?

Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?

Were all %D and RRFs within the validation criteria of $\leq 20\%$ %D and ≥ 0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: $\leq 20.0\%$)	Finding RRF (Limit: ≥ 0.05)	Associated Samples	Qualifications
	12/09/13	A3L0604-CCV1 (1cv)	LL	21.4		A11	J/W/A
			F	22.9			
			M	23.6			
			X	25.0			
	12/09/13	A3L0901-CCV2 (CCV)	III	30.6		2-5, 10	
			EE	24.5		2-7, 10	
			CCC	25.3		2-5, 10	
			ZZ	25.0		2-7, 10	
			BBB	21.6			
			FFF	22.7			
			I	20.6			
			LLL	33.9			
			GGG	27.5			
			YY	27.9		2-5, 10	
			U	21.2		2-7, 10	
			KK	76.4			
			RRRR	22.8			
			AAA	23.6		2-5, 10	
			DDD	23.2			
8.7)	12/6/13	A3L001-CCV1	KK	43.8		8, 9, 11-13	
	12/10/13	A3L001-CCV2	F	25.5		14, 15, 17-23	
			V	22.5			
			NW	22.4			
			M	23.2			

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
- N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's?
- N N/A Were all %D and RRFs within the validation criteria of $\leq 20\%$ %D and ≥ 0.05 RRF?

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from
p. 1

#	Date	Standard ID	Compound	Finding %D (Limit: $\leq 20.0\%$)	Finding RRF (Limit: > 0.05)	Associated Samples	Qualifications
	12/10/13	A3L001-COV2	III	30.3		14, 15, 17-23	J/WJ A
			EE	28.6			
			CCC	30.2			
			K	23.2			
			ZZ	26.0			
			BBB	25.9			
			JJJ	23.1			
			HHH	23.8			
			FFF	21.4			
			I	26.8			
			L	22.2		✓	
			PPP	20.6			
			QQQ	23.6			
			QQ	21.5			
			XXX	31.3		✓	
			EE	21.9		14, 15, 17-20, 22, 23	
			LLL	26.7		14, 15, 17-23	
			VV	24.0			
			GGG	29.9			
			F	21.6			
			LL	22.1		✓	
			YY	29.1		14, 15, 17-19, 21-23	
			FF	23.5		14, 15, 17-23	
			BB	20.7			
			QQQQ	21.9			
			NNN	20.8			
			KKK	24.2		✓	✓

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
- N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
- N N/A Were all %D and RRFs within the validation criteria of $\leq 20\%$ %D and ≥ 0.05 RRF ?

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#	Date	Standard ID	Compound	Finding %D (Limit: $\leq 20.0\%$)	Finding RRF (Limit: ≥ 0.05)	Associated Samples	Qualifications
	12/10/13	A3L001-CCV2	N	24.4		14, 15, 17-23	J/NT/A
			KK	63.5			
			RRRR	25.0			
			AAA	30.1			
			DDD	28.3		14, 15, 17-19, 22, 23	
			RRR	21.2		14, 15, 17-23	
			SSS	20.5			
	12/10/13	A3L1001-CCV3	F	21.3		24	
			V	22.4			
			III	33.2			
			EEF	22.3			
			CCC	21.2			
			D	31.8			
			K	22.9			
			ZZ	39.6			
			I	22.2			
			QQQ	20.8			
			XXX	22.3			
			EE	43.9		24, 7	
			LLL	20.6		24	
			VV	23.6			
			MMM	20.7			
			YY	39.2			
			CC	70.0		24, 6-9	
			N	20.8		24	
			KKK	57.1			

LDC #: 31068B1

VALIDATION FINDINGS WORKSHEET

Blanks

Page: 1 of 2

Reviewer: JVG

2nd Reviewer: CL

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?

Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?

Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 12/09/13

Conc. units: ug/kg

Associated Samples: 1-15

Compound	Blank ID	Sample Identification									
	A312036-B1	1 (5x)	4	12	14	15					
MMM	13	65	8.9/u								
RKR	4.5	22.5	22/u	18/u	5.9/u	6.3/u					
SSS	5.0	25	13/u	10/u	5.9/u	5.8/u					

Blank analysis date: 12/09/13

Conc. units: ug/kg

Associated Samples: 16-24

Compound	Blank ID	Sample Identification									
	A312037-B1	1 (5x)	16	17	18	19	21	22	23		
JJ	6.0	30					7.0/u	7.0/u			
MMM	9.0	45									
SSS	5.0	25	6.7/u	8.6/u	18/u	8.8/u			25/u		

All results were qualified using the criteria stated below except those circled.

Note: samples reanalyzed at DL w/o MB.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

METHOD : GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.
- N N/A Was a MS/MSD analyzed every 20 samples of each matrix?
- Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	25 / 26	DDD	123 (84.3-121)	()	()	1	J detx / A
		RRR	121 (87.9-119)	()	()	↓	
			()	()	()		
			()	()	()		
	27 / 28	AAA	X ()	123 (90.4-120)	()	16	
		DDD	()	134 (84.3-121)	()	↓	
		RRR	()	125 (83.3-117)	()		↓
			()	()	()		
			()	()	()		
			()	()	()		
			()	()	()		
			()	()	()		
			()	()	()		
			()	()	()		
			()	()	()		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
H.	1,1-Dichloroethene	59-172%	< 22%	61-145%	< 14%
S.	Trichloroethene	62-137%	< 24%	71-120%	< 14%
V.	Benzene	66-142%	< 21%	76-127%	< 11%
CC.	Toluene	59-139%	< 21%	76-125%	< 13%
DD.	Chlorobenzene	60-133%	< 21%	75-130%	< 13%

Field Duplicates

Reviewer: JVG

2nd Reviewer: 

Method: GCMS VOA (EPA SW 846 Method 8260B)

Analyte	Concentration (ug/Kg)		RPD (≤50%)
	8	9	
V	18000	13000	32
III	64U	15000	NC
EEE	48U	2700	NC
CCC	54U	23000	NC
EE	80000	61000	27
PPPP	47000	31000	41
VV	6700	5400	21
GGG	1200	54U	NC
MMM	36000	36000	0
YY	32000	25000	25
CC	220000	210000	5
AAA	60000	47000	24
DDD	210000	170000	21
RRR	320000	240000	29
SSS	120000	88000	31

Analyte	Concentration (ug/Kg)		RPD (≤50%)
	20	21	
V	30	98	NC
III	1000	180	139
EEE	390	95	NC
CCC	1100	940	16
JJ	5.8U	7.0	NC
EE	280	7800	186
PPPP	120	640	NC
VV	600	730	20
GGG	120	140	NC
MMM	720	440	NC
YY	2600	2300	12
CC	17	23	NC
AAA	1400	1600	13
DDD	7100	6400	10
RRR	670	300	76
SSS	35	27	NC

NC = not calculated, either one is ND or below 5x LOQ

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$$RRF = (A_x)(C_{is}) / (A_{is})(C_x)$$

average RRF = sum of the RRFs/number of standards

$$\%RSD = 100 * (S/X)$$

A_x = Area of Compound

C_x = Concentration of compound,

S= Standard deviation of the RRFs

A_{is} = Area of associated internal standard

C_{is} = Concentration of internal standard

X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (IS)	Reported RRF (RRF 25 std)	Recalculated RRF (RRF 25 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL 2979	12/6/2013 to 12/9/2013	Benzene (IS1)	2.58389	2.58389	2.77964	2.77964	7.751	7.751
			Toluene (IS2)	0.82004	0.82004	0.92229	0.92229	7.554	7.554
			Ethylbenzene (IS3)	1.59568	1.59568	1.73818	1.73818	7.336	7.336
			1,1,2,2-TCA (IS4)	0.68489	0.68489	0.70298	0.70298	6.398	6.398

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

$$\% \text{ Difference} = 100 * (\text{ave. RRF} - \text{RRF}) / \text{ave. RRF}$$

$$\text{RRF} = (\text{Ax})(\text{Cis}) / (\text{Ais})(\text{Cx})$$

Where:

ave. RRF = initial calibration average RRF

RRF = continuing calibration RRF

Ax = Area of compound

Cx = Concentration of compound,

Ais = Area of associated internal standard

Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Average RRF (Initial)	Reported RRF (CCV)	Recalculated RRF (CCV)	Reported % D	Recalculated %D
1	A3L0901-CCV1	12/9/2013	Benzene (IS1)	2.779635	2.810624	2.810624	1.1	1.1
			Toluene (IS2)	0.922287	0.949349	0.949349	2.9	2.9
			Ethylbenzene (IS3)	1.738182	1.815947	1.815947	4.5	4.5
			1,1,2,2-TCA (IS4)	0.702984	0.700346	0.700346	0.4	0.4
2	A3L0901-CCV2	12/9/2013	Benzene (IS1)	2.779635	3.261138	3.261138	17.3	17.3
			Toluene (IS2)	0.922287	1.087178	1.087178	17.9	17.9
			Ethylbenzene (IS3)	1.738182	2.060881	2.060881	18.6	18.6
			1,1,2,2-TCA (IS4)	0.702984	0.819161	0.819161	16.5	16.5
3	A3L1001-CCV2	12/10/2013	Benzene (IS1)	2.779635	3.405661	3.405661	22.5	22.5
			Toluene (IS2)	0.922287	1.079930	1.079930	17.1	17.1
			Ethylbenzene (IS3)	1.738182	2.118759	2.118759	21.9	21.9
			1,1,2,2-TCA (IS4)	0.702984	0.848214	0.848214	20.7	20.7

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
 SS = Surrogate Spiked

Sample ID: # 2

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	25.0	26.1	105	105	0
1,2-Dichloroethane-d4	↓				↓
Toluene-d8		23.7	94.8	94.8	
Bromofluorobenzene	↓	24.0	96.1	96.1	↓

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 31068B1

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
 Reviewer: JVG
 2nd Reviewer: OL

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = $100 * (SSC - SC) / SA$

Where: SSC = Spiked sample concentration
 SA = Spike added

SC = Sample concentration

RPD = $|MSC - MSC| * 2 / (MSC + MSC)$

MSC = Matrix spike concentration

MSDC = Matrix spike duplicate concentration

MS/MSD sample: 25 / 26

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike		Matrix Spike Duplicate		MS/MSD	
	MS	MSD		MS	MSD	Percent Recovery		Percent Recovery		RPD	
						Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	<u>5.0</u>	<u>5.0</u>	<u>0</u>	<u>5.31</u>	<u>5.31</u>	<u>106</u>	<u>106</u>	<u>106</u>	<u>106</u>	<u>0</u>	<u>0</u>
Trichloroethene	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>5.22</u>	<u>5.32</u>	<u>104</u>	<u>104</u>	<u>106</u>	<u>106</u>	<u>1.90</u>	<u>1.9</u>
Benzene	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>5.11</u>	<u>5.16</u>	<u>102</u>	<u>102</u>	<u>103</u>	<u>103</u>	<u>0.974</u>	<u>0.974</u>
Toluene	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>5.41</u>	<u>5.31</u>	<u>108</u>	<u>108</u>	<u>106</u>	<u>106</u>	<u>1.87</u>	<u>1.87</u>
Chlorobenzene	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>5.12</u>	<u>5.12</u>	<u>102</u>	<u>102</u>	<u>102</u>	<u>102</u>	<u>0</u>	<u>0</u>

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 31068 B1

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
 Reviewer: JVG
 2nd Reviewer: [Signature]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA

Where: SSC = Spiked sample concentration
 SA = Spike added

RPD = | LCSC - LCSDC | * 2 / (LCSC + LCSDC)

LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS ID: A 312036 - B51

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS		LCSD		LCS/LCSD	
	LCS	LCSD	LCS	LCSD	Percent Recovery		Percent Recovery		RPD	
					Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene	5.00	NA	4.93	NA	98.6	98.6				
Trichloroethene	↓	↓	5.07	↓	101	101				
Benzene	↓	↓	5.03	↓	101	101				
Toluene	↓	↓	5.10	↓	102	102				
Chlorobenzene	↓	↓	5.02	↓	100	100				

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Wedron Community Groundwater
Collection Date: December 3, 2012
LDC Report Date: January 15, 2014
Matrix: Soil
Parameters: Lead
Validation Level: EPA Level III & IV
Laboratory: Environmental Chemistry Consulting Services, Inc./
Pace Analytical Services, Inc.

Sample Delivery Group (SDG): A134908/4089524

Sample Identification

WS-SB-GP-3 (4-6')
WS-SB-GP-4 (4-6')
WS-SB-GP-5 (2-4')**
WS-SB-GP-6 (0-2')
Duplicate 1
WS-SB-GP-7 (2-4')
WS-SB-GP-8 (2-4')
WS-SB-GP-7 (8-9')
WS-SB-GP-8 (8-10')
WS-SB-GP-9 (8-10')
WS-SB-GP-10 (8-10')
WS-SB-GP-11 (8-10')

**Indicates sample underwent EPA Level IV review

Introduction

This data review covers 12 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010 for Lead.

This review follows the Quality Assurance Project Plan for EPA Docket No. RCRA 05-2013-0011, Wedron, Illinois (November 2013) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent an EPA Level IV review. An EPA Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by EPA Level III criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

The initial and continuing calibrations were performed at the required frequency.

The calibration standards criteria were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No metal contaminants were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XI. Sample Result Verification

All sample result verifications were acceptable for samples on which an EPA Level IV review was performed. Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

Samples WS-SB-GP-6 (0-2') and Duplicate 1 were identified as field duplicates. No metals were detected greater than 5x the reporting limit in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)
	WS-SB-GP-6 (0-2')	Duplicate 1	
Lead	8.9	7.3	20 (≤50)

**Wedron Community Groundwater
Lead - Data Qualification Summary - SDG A134908/4089524**

No Sample Data Qualified in this SDG

**Wedron Community Groundwater
Lead - Laboratory Blank Data Qualification Summary - SDG A134908/4089524**

No Sample Data Qualified in this SDG

**Wedron Community Groundwater
Lead - Field Blank Data Qualification Summary - SDG A134908/4089524**

No Sample Data Qualified in this SDG

METHOD: Lead (EPA SW 846 Method 6010)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12/3/12
II.	ICP/MS Tune	N	Not utilized
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	
VI.	Matrix Spike Analysis	N	CS
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	Not utilized
X.	Furnace Atomic Absorption QC	N	↓
XI.	ICP Serial Dilution	✓	
XII.	Sample Result Verification	A	Not reviewed for Level III validation.
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates (75%)	SW	(4,5)
XV.	Field Blanks	N	

Note: A = Acceptable ND = No compounds detected D = Duplicate
 N = Not provided/applicable R = Rinsate TB = Trip blank
 SW = See worksheet FB = Field blank EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

1	WS-SB-GP-3 (4-6')	11	WS-SB-GP-10 (8-10')	21		31	
2	WS-SB-GP-4 (4-6')	12	WS-SB-GP-11 (8-10')	22		32	
3	WS-SB-GP-5 (2-4')**	13		23		33	
4	WS-SB-GP-6 (0-2')	14		24		34	
5	Duplicate 1	15		25		35	
6	WS-SB-GP-7 (2-4')	16		26		36	
7	WS-SB-GP-8 (2-4')	17		27		37	
8	WS-SB-GP-7 (8-9')	18		28		38	
9	WS-SB-GP-8 (8-10')	19		29		39	
10	WS-SB-GP-9 (8-10')	20		30		40	

Notes: _____

Method: Metals (EPA SW 846 Method 6010B/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	/			
Cooler temperature criteria was met.	/			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?			/	
Were %RSD of isotopes in the tuning solution $\leq 5\%$?			/	
III. Calibration				
Were all instruments calibrated daily, each set-up time?	/			
Were the proper number of standards used?	/			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	/			
Were all initial calibration correlation coefficients ≥ 0.995 ?	/			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	/			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		/		
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	/			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	/			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.		/		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.			/	
Were the MS/MSD or duplicate relative percent differences (RPD) $\leq 20\%$ for waters and $\leq 35\%$ for soil samples? A control limit of +/- RL (+/-2X RL for soil) was used for samples that were $\leq 5X$ the RL, including when only one of the duplicate sample values were $< 5X$ the RL.			/	
VII. Laboratory control samples				
Was an LCS analyzed for this SDG?	/			
Was an LCS analyzed per extraction batch?	/			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	/			

Validation Area	Yes	No	NA	Findings/Comments
VIII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			/	
Do all applicable analyses have duplicate injections? (Level IV only)			/	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			/	
Were analytical spike recoveries within the 85-115% QC limits?			/	
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?		/		
Were all percent differences (%Ds) < 10%?			/	
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.			/	
X. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?			/	
If the %Rs were outside the criteria, was a reanalysis performed?			/	
XI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		/		
Were the performance evaluation (PE) samples within the acceptance limits?			/	
XII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	/			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	/			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		/		
Target analytes were detected in the field duplicates.			/	
XV. Field blanks				
Field blanks were identified in this SDG.		/		
Target analytes were detected in the field blanks.			/	

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Method: Metals

Analyte	Concentration (mg/Kg)		RPD (≤ 50)
	4	5	
Lead	8.9	7.3	20

LDC #: 31068B9

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
 Reviewer: GR
 2nd Reviewer: 12

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found}}{\text{True}} \times 100$$
 Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
 True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated	Reported	Acceptable (Y/N)
					%R	%R	
ICV	ICP (Initial calibration)	Pb	503	500	100.6	100.6	Y
	ICP/MS (Initial calibration)						
	CVAA (Initial calibration)						
CCV	ICP (Continuing calibration)	Pb	494	500	98.7	98.7	Y
	ICP/MS (Continuing calibration)						
	CVAA (Continuing calibration)						
	GFAA (Initial calibration)						
	GFAA (Continuing calibration)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 31068B4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: QR
2nd Reviewer: W

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$$\%R = \frac{\text{Found}}{\text{True}} \times 100$$
 Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
 True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$$RPD = \frac{|S-D|}{(S+D)/2} \times 100$$
 Where, S = Original sample concentration
 D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$$\%D = \frac{|I-SDR|}{I} \times 100$$
 Where, I = Initial Sample Result (mg/L)
 SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated	Reported	Acceptable (Y/N)
					%R / RPD / %D	%R / RPD / %D	
<u>ICSA B</u>	ICP interference check	<u>Pb</u>	<u>479.7</u>	<u>500</u>	<u>95.9</u>	<u>95.9</u>	<u>Y</u>
<u>LCS</u>	Laboratory control sample		<u>48.4</u>	<u>50</u>	<u>97</u>	<u>97</u>	<u>Y</u>
<u>N</u>	Matrix spike		(SSR-SR)				
<u>N</u>	Duplicate						
<u>N</u>	ICP serial dilution						

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Wedron Community Groundwater
Collection Date: December 3 through December 4, 2012
LDC Report Date: January 15, 2014
Matrix: Soil
Parameters: Wet Chemistry
Validation Level: EPA Level III & IV
Laboratory: Environmental Chemistry Consulting Services, Inc./
Pace Analytical Services, Inc.

Sample Delivery Group (SDG): A134908/4089524

Sample Identification

WS-SB-GP-2 (14-16')
WS-SB-GP-2 (18-20')
WS-SB-GP-3 (4-6')
WS-SB-GP-4 (4-6')
WS-SB-GP-5 (2-4')**
WS-SB-GP-6 (0-2')
Duplicate 1
WS-SB-GP-7 (2-4')
WS-SB-GP-8 (2-4')
WS-SB-GP-7 (8-9')
WS-SB-GP-8 (8-10')
WS-SB-GP-9 (8-10')
WS-SB-GP-10 (8-10')
WS-SB-GP-11 (8-10')
WS-SB-GP-12 (6-8')
WS-SB-GP-12 (12-15')
WS-SB-GP-13 (13-15')
WS-SB-GP-14 (12-15')
WS-SB-GP-2 (14-16')DUP
WS-SB-GP-3 (4-6')DUP

**Indicates sample underwent EPA Level IV review

Introduction

This data review covers 20 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per ASTM Method D2974-87 for Fractional Organic Carbon and EPA SW 846 Method 9045 for pH.

This review follows the Quality Assurance Project Plan for EPA Docket No. RCRA 05-2013-0011, Wedron, Illinois (November 2013) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent an EPA Level IV review. An EPA Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by EPA Level III criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate analyses were not required by the method.

VI. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Sample Result Verification

All sample result verifications were acceptable for samples on which an EPA Level IV review was performed. Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

Samples WS-SB-GP-6 (0-2') and Duplicate 1 were identified as field duplicates. No contaminant concentrations were detected greater than 5x the reporting limit in any of the samples with the following exceptions:

Analyte	Concentration (units)		RPD (Limits)
	WS-SB-GP-6 (0-2')	Duplicate 1	
pH	9.4	8.3	12 (≤ 50)

**Wedron Community Groundwater
Wet Chemistry - Data Qualification Summary - SDG A134908/4089524**

No Sample Data Qualified in this SDG

**Wedron Community Groundwater
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG
A134908/4089524**

No Sample Data Qualified in this SDG

**Wedron Community Groundwater
Wet Chemistry - Field Blank Data Qualification Summary - SDG A134908/4089524**

No Sample Data Qualified in this SDG

LDC #: 31068B6

VALIDATION COMPLETENESS WORKSHEET

Date: 1/14/13

SDG #: A134908/4089524

Level III/IV

Page: 1 of 1

Laboratory: Environmental Chemistry Consulting Services, Inc./Pace Analytical Services, Inc.

Reviewer: [Signature]

2nd Reviewer: [Signature]

METHOD: (Analyte) Fractional Organic Carbon (ASTM D2974-87), pH (EPA SW846 Method 9045)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12/3-4/17
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Blanks	A	
V	Matrix Spike/Matrix Spike Duplicates	N	Not required
VI.	Duplicates	A	DP
VII.	Laboratory control samples	A	LCS
VIII.	Sample result verification	A	Not reviewed for Level III validation.
IX.	Overall assessment of data	A	
X.	Field duplicates (75x)	SW	(6,7)
XI	Field blanks	N	

Note: A = Acceptable
 N = Not provided/applicable
 SW = See worksheet
 ND = No compounds detected
 R = Rinsate
 FB = Field blank
 D = Duplicate
 TB = Trip blank
 EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

1	WS-SB-GP-2 (14-16')	11	WS-SB-GP-8 (8-10')	21		31	
2	WS-SB-GP-2 (18-20')	12	WS-SB-GP-9 (8-10')	22		32	
3	WS-SB-GP-3 (4-6')	13	WS-SB-GP-10 (8-10')	23		33	
4	WS-SB-GP-4 (4-6')	14	WS-SB-GP-11 (8-10')	24		34	
5	WS-SB-GP-5 (2-4')**	15	WS-SB-GP-12 (6-8')	25		35	
6	WS-SB-GP-6 (0-2')	16	WS-SB-GP-12 (12-15')	26		36	
7	Duplicate 1	17	WS-SB-GP-13 (13-15')	27		37	
8	WS-SB-GP-7 (2-4')	18	WS-SB-GP-14 (12-15')	28		38	
9	WS-SB-GP-8 (2-4')	19	WS-SB-GP-2 (14-16')DUP	29		39	
10	WS-SB-GP-7 (8-9')	20	WS-SB-GP-3 (4-6')DUP	30		40	

Notes: _____

Method: Inorganics (EPA Method See cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	/			
Cooler temperature criteria was met.	/			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	/			
Were the proper number of standards used?	/			
Were all initial calibration correlation coefficients > 0.995?			/	
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?			/	
Were titrant checks performed as required? (Level IV only)			/	
Were balance checks performed as required? (Level IV only)	/			
III. Blanks				
Was a method blank associated with every sample in this SDG?	/			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		/		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	/	/		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.			/	
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL (≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.	/			
V. Laboratory control samples				
Was an LCS analyzed for this SDG?	/			
Was an LCS analyzed per extraction batch?	/			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	/			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		/	/	
Were the performance evaluation (PE) samples within the acceptance limits?			/	

DC #: 31068B6

VALIDATION FINDINGS CHECKLIST

Page: 2 of 3
Reviewer: [Signature]
2nd Reviewer: [Signature]

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	/			
Were detection limits < RL?	/			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	/			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.		/		
Target analytes were detected in the field duplicates.			/	
X. Field blanks				
Field blanks were identified in this SDG.		/		
Target analytes were detected in the field blanks.			/	

LDC: 31068B6

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page 1 of 1
Reviewer: [Signature]
2nd Reviewer: [Signature]

Method: Inorganics (see cover)

Analyte	Concentration (units)		RPD (≤ 50)
	6	7	
pH	9.4	8.3	12



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-2 (14-16')

Date Sampled

A134908-03 (Soil)

12/03/2013 10:14

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

Fractional Organic Carbon	1.1	0.058	0.058	% (w/w)	1	12/06/2013	12/06/2013 13:09	ASTM D2974-87	FOC
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02/15/14



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WS-SB-GP-2 (18-20')

Date Sampled

A134908-04 (Soil)

12/03/2013 10:20

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

Fractional Organic Carbon	1.0	0.058	0.058	% (w/w)	1	12/06/2013	12/06/2013 13:14	ASTM D2974-87	FOC
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WS-SB-GP-3 (4-6')
A134908-05 (Soil)

Date Sampled
 12/03/2013 10:55

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

Fractional Organic Carbon	0.59	0.058	0.058	% (w/w)	1	12/06/2013	12/06/2013 13:15	ASTM D2974-87	FOC
Percent Moisture	14.9	0.10	0.10	% dry	1	12/06/2013	12/06/2013 12:13	ASTM D2974-87	

EPA 6010

Preparation Batch:MPRP 9595

Lead	6.0	0.30	1.0	mg/kg dry	1	12/09/2013	12/10/2013 15:06	EPA 6010	
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EPA 9045

Preparation Batch:WET 17269

pH at 25 Degrees C	8.3	0.010	0.10	Std. Units	1	12/13/2013	12/13/2013 20:25	EPA 9045	H6
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WS-SB-GP-4 (4-6')

Date Sampled
12/03/2013 11:25

A134908-06 (Soil)

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

ASTM D2974-87

Preparation Batch:PMST 9272

Percent Moisture	20.4	0.10	0.10	% dry	1	12/06/2013	12/06/2013 12:13	ASTM D2974-87	
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EPA 6010

Preparation Batch:MPRP 9595

Lead	9.0	0.31	1.1	mg/kg dry	1	12/09/2013	12/10/2013 15:08	EPA 6010	
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EPA 9040

Preparation Batch:WET 17268

pH	8.4	0.010	0.10	Std. Units	1	12/13/2013	12/13/2013 20:15	EPA 9040	H6, 1q
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02/15/14



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WS-SB-GP-5 (2-4')

Date Sampled

A134908-07 (Soil)

12/03/2013 11:59

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

Fractional Organic Carbon	0.66	0.058	0.058	% (w/w)	1	12/06/2013	12/06/2013 13:16	ASTM D2974-87	FOC
Percent Moisture	10.6	0.10	0.10	% dry	1	12/06/2013	12/06/2013 12:13	ASTM D2974-87	

EPA 6010

Preparation Batch:MPRP 9595

Lead	6.8	0.31	1.1	mg/kg dry	1	12/09/2013	12/10/2013 15:10	EPA 6010	
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EPA 9045

Preparation Batch:WET 17269

pH at 25 Degrees C	8.4	0.010	0.10	Std. Units	1	12/13/2013	12/13/2013 20:25	EPA 9045	H6
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Handwritten signature/initials: ce/15/14



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WS-SB-GP-6 (0-2')

Date Sampled
12/03/2013 12:26

A134908-08 (Soil)

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

ASTM D2974-87		Preparation Batch:PMST 9272							
Percent Moisture	16.3	0.10	0.10	% dry	1	12/06/2013	12/06/2013 12:13	ASTM D2974-87	
EPA 6010		Preparation Batch:MPRP 9595							
Lead	8.9	0.32	1.1	mg/kg dry	1	12/09/2013	12/10/2013 15:17	EPA 6010	
EPA 9045		Preparation Batch:WET 17269							
pH at 25 Degrees C	9.4	0.010	0.10	Std. Units	1	12/13/2013	12/13/2013 20:25	EPA 9045	H6

02/15/14



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 608.221.4889 Fax

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Duplicate 1
A134908-09 (Soil)
 Date Sampled
 12/03/2013 12:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

						Preparation Batch:PMST 9272			
ASTM D2974-87									
Percent Moisture	9.5	0.10	0.10	% dry	1	12/06/2013	12/06/2013 12:13	ASTM D2974-87	
						Preparation Batch:MPRP 9595			
EPA 6010									
Lead	7.3	0.32	1.1	mg/kg dry	1	12/09/2013	12/10/2013 15:19	EPA 6010	
						Preparation Batch:WET 17269			
EPA 9045									
pH at 25 Degrees C	8.3	0.010	0.10	Std. Units	1	12/13/2013	12/13/2013 20:25	EPA 9045	H6

02/15/14



2525 Advance Road
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 608.221.8700 Phone
 608.221.4889 Fax

Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-7 (2-4')
A134908-10 (Soil)

Date Sampled
 12/03/2013 14:08

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

						Preparation Batch:PMST 9272			
ASTM D2974-87									
Percent Moisture	12.8	0.10	0.10	% dry	1	12/06/2013	12/06/2013 12:13	ASTM D2974-87	
						Preparation Batch:MPRP 9595			
EPA 6010									
Lead	53.1	0.30	1.0	mg/kg dry	1	12/09/2013	12/10/2013 15:21	EPA 6010	
						Preparation Batch:WET 17269			
EPA 9045									
pH at 25 Degrees C	8.0	0.010	0.10	Std. Units	1	12/13/2013	12/13/2013 20:25	EPA 9045	H6

02/15/14



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WS-SB-GP-8 (2-4')

Date Sampled

A134908-11 (Soil)

12/03/2013 14:30

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

ASTM D2974-87

Preparation Batch:PMST 9272

Percent Moisture	13.3	0.10	0.10	% dry	1	12/06/2013	12/06/2013 12:13	ASTM D2974-87	
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EPA 6010

Preparation Batch:MPRP 9595

Lead	4.0	0.30	1.0	mg/kg dry	1	12/09/2013	12/10/2013 15:24	EPA 6010	
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EPA 9045

Preparation Batch:WET 17269

pH at 25 Degrees C	8.4	0.010	0.10	Std. Units	1	12/13/2013	12/13/2013 20:25	EPA 9045	H6
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WS-SB-GP-7 (8-9')
A134908-12 (Soil)

Date Sampled
12/03/2013 14:46

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

ASTM D2974-87

Preparation Batch:PMST 9272

Percent Moisture	10.2	0.10	0.10	% dry	1	12/06/2013	12/06/2013 12:14	ASTM D2974-87	
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EPA 6010

Preparation Batch:MPRP 9595

Lead	4.7	0.29	1.0	mg/kg dry	1	12/09/2013	12/10/2013 15:26	EPA 6010	
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EPA 9045

Preparation Batch:WET 17269

pH at 25 Degrees C	8.3	0.010	0.10	Std. Units	1	12/13/2013	12/13/2013 20:25	EPA 9045	H6
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GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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**WS-SB-GP-8 (8-10')
 A134908-13 (Soil)**

Date Sampled
 12/03/2013 14:55

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

Fractional Organic Carbon	0.17	0.058	0.058	% (w/w)	1	12/06/2013	12/06/2013 13:16	ASTM D2974-87	FOC
Percent Moisture	7.3	0.10	0.10	% dry	1	12/06/2013	12/06/2013 12:14	ASTM D2974-87	

EPA 6010

Preparation Batch:MPRP 9595

Lead	1.2	0.30	1.0	mg/kg dry	1	12/09/2013	12/10/2013 15:28	EPA 6010	
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EPA 9045

Preparation Batch:WET 17269

pH at 25 Degrees C	8.5	0.010	0.10	Std. Units	1	12/13/2013	12/13/2013 20:25	EPA 9045	H6
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GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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**WS-SB-GP-9 (8-10')
 A134908-14 (Soil)**

Date Sampled
 12/03/2013 15:40

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

Fractional Organic Carbon	0.96	0.058	0.058	% (w/w)	1	12/06/2013	12/06/2013 13:17	ASTM D2974-87	FOC
Percent Moisture	12.1	0.10	0.10	% dry	1	12/06/2013	12/06/2013 12:14	ASTM D2974-87	

EPA 6010

Preparation Batch:MPRP 9595

Lead	6.3	0.31	1.0	mg/kg dry	1	12/09/2013	12/10/2013 15:30	EPA 6010	
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EPA 9045

Preparation Batch:WET 17269

pH at 25 Degrees C	8.5	0.010	0.10	Std. Units	1	12/13/2013	12/13/2013 20:25	EPA 9045	H6
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WS-SB-GP-10 (8-10')
A134908-15 (Soil)

Date Sampled
12/03/2013 15:50

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

						Preparation Batch:PMST 9272			
ASTM D2974-87									
Percent Moisture	10.5	0.10	0.10	% dry	1	12/06/2013	12/06/2013 12:14	ASTM D2974-87	
						Preparation Batch:MPRP 9595			
EPA 6010									
Lead	18.4	0.32	1.1	mg/kg dry	1	12/09/2013	12/10/2013 15:33	EPA 6010	
						Preparation Batch:WET 17269			
EPA 9045									
pH at 25 Degrees C	7.6	0.010	0.10	Std. Units	1	12/13/2013	12/13/2013 20:25	EPA 9045	H6

02/15/14



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GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-11 (8-10")
A134908-16 (Soil)

Date Sampled
12/03/2013 16:27

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

ASTM D2974-87

Preparation Batch:PMST 9272

Percent Moisture	12.2	0.10	0.10	% dry	1	12/06/2013	12/06/2013 12:14	ASTM D2974-87	
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EPA 6010

Preparation Batch:MPRP 9595

Lead	9.2	0.33	1.1	mg/kg dry	1	12/09/2013	12/10/2013 15:35	EPA 6010	
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EPA 9045

Preparation Batch:WET 17269

pH at 25 Degrees C	8.2	0.010	0.10	Std. Units	1	12/13/2013	12/13/2013 20:25	EPA 9045	H6
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GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-12 (6-8')
A134908-17 (Soil)

Date Sampled
 12/04/2013 08:10

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

Fractional Organic Carbon	1.2	0.058	0.058	% (w/w)	1	12/06/2013	12/06/2013 13:18	ASTM D2974-87	FOC
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02/15/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-12 (12-15')

Date Sampled
12/04/2013 08:20

A134908-18 (Soil)

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

Fractional Organic Carbon	0.55	0.058	0.058	% (w/w)	1	12/06/2013	12/06/2013 13:19	ASTM D2974-87	FOC
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01/15/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-13 (13-15')
A134908-20 (Soil)

Date Sampled
12/04/2013 09:03

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

Fractional Organic Carbon	0.78	0.058	0.058	% (w/w)	1	12/06/2013	12/06/2013 13:21	ASTM D2974-87	FOC
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CR1/15/14



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Revised Report

GZA GeoEnvironmental, Inc 20900 Swenson Drive, Suite 150 Waukesha WI, 53186	Project: Wedron Silica - Wedron, IL Project Number: 20.0151178.51 Project Manager: Bernard Fenelon	Reported: 01/14/2014
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WS-SB-GP-14 (12-15')
A134908-23 (Soil)

Date Sampled
12/04/2013 10:00

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
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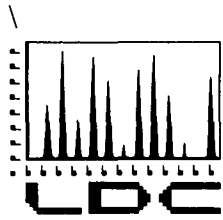
Pace Analytical

ASTM D2974-87

Preparation Batch:WET 17181

Fractional Organic Carbon	0.38	0.058	0.058	% (w/w)	1	12/06/2013	12/06/2013 13:22	ASTM D2974-87	FOC
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cel/15/14



LABORATORY DATA CONSULTANTS, INC.

2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

GZA GeoEnvironmental, Inc.
20900 Swenson Dr. Suite 150
Waukesha, WI 53186
Atten: Bernard G. Fenelon

June 20, 2014

SUBJECT: Wedron Community Groundwater, Data Validation

Dear Mr. Fenelon,

Enclosed is the final validation report for the fractions listed below. This SDG was received on June 5, 2014. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 31923:

<u>SDG #</u>	<u>Fraction</u>
A141916/A142008/ 4096232/4096417	Volatiles, Lead, Wet Chemistry

The data validation was performed under EPA Level III & IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan for EPA Docket No. RCRA 05-2013-0011, Wedron, Illinois, November 2013.
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, January 2010

Please feel free to contact us if you have any questions.

Sincerely,

Christina Rink
Project Manager/Senior Chemist

**Laboratory Data Consultants, Inc.
Data Validation Report**

Project/Site Name: Wedron Community Groundwater
Collection Date: May 8 through May 14, 2014
LDC Report Date: June 19, 2014
Matrix: Soil/Water
Parameters: Volatiles
Validation Level: EPA Level III & IV
Laboratory: Environmental Chemistry Consulting Services, Inc.
Sample Delivery Group (SDG): A14916/A142008

Sample Identification

WS-SB-GP14 (3.3-5.0')**
WS-SB-GP14 (5.0-6.6')
WS-SB-GP14 (11.7-13.3')
WS-SB-GP14 (18.3-20')
WS-SB-GP14 (23.3-25')
Field Blank #1 (MeOH)
WS-SB-GP14 (28.3-30')
WS-SB-GP14 (31.7-33.3')
WS-SB-GP15 (1.7-3.3')
WS-SB-GP15 (6.7-8.3')
WS-SB-GP15 (11.7-13.3')
Equipment Blank #1
WS-SB-GP15 (16.7-18.3')**
Duplicate #1
WS-SB-GP15 (23.3-25')
WS-SB-GP15 (26.7-28.3')
WS-SB-GP16 (3.3-5.0')
WS-SB-GP16 (5.0-6.7')
WS-SB-GP16 (10-11.6')
WS-SB-GP16 (15-16.7')
WS-SB-GP16 (21.7-23.3')
WS-SB-GP16 (28.3-30')
WS-SB-GP18 (1.7-3.3')
Duplicate #2
WS-SB-GP18 (6.7-8.3')
WS-SB-GP18 (13.3-15')
WS-SB-GP18 (16.7-18.3')
WS-SB-GP18 (23.3-25')**
WS-SB-GP18 (28.3-30')
WS-SB-GP18 (31.7-33.3')
Field Blank #2 (MeOH)
Equipment Blank #2
WS-SB-GP17 (3.3-5')
WS-SB-GP17 (6.7-8.3')
WS-SB-GP17 (13.3-15')
WS-SB-GP17 (18.3-20')
Field Blank #3(MeOH)
WS-SB-GP17 (21.7-23')**
WS-SB-GP17 (26.7-28.3')
WS-SB-GP17 (31.7-33.3')

Trip Blank
WS-SB-GP-19 (12-14')
WS-SB-GP-19 (18-20')
GW-19
Field Blank #4 (MeOH)
Duplicate #3
WS-SB-GP-20 (10-12')
WS-SB-GP-20 (18-20')
Equipment Blank #3
GW-20**
GW-Duplicate
WS-SB-GP-21 (6-8')
WS-SB-GP-21 (16-18')
GW-21
WS-SB-GP15 (1.7-3.3')MS
WS-SB-GP15 (1.7-3.3')MSD
WS-SB-GP16 (10-11.6')MS
WS-SB-GP16 (10-11.6')MSD
WS-SB-GP18 (28.3-30')MS
WS-SB-GP18 (28.3-30')MSD
WS-SB-GP-20 (18-20')MS
WS-SB-GP-20 (18-20')MSD
GW-20MS
GW-20MSD

**Indicates sample underwent EPA Level IV review

Introduction

This data review covers 54 soil samples and 10 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows the Quality Assurance Project Plan for EPA Docket No. RCRA 05-2013-0011, Wedron, Illinois (November 2013) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent an EPA Level IV review. An EPA Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by EPA Level III criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
5/16/14	Chloroethane	21.8	WS-SB-GP14 (3.3-5.0)** WS-SB-GP14 (5.0-6.6') WS-SB-GP14 (11.7-13.3') WS-SB-GP14 (18.3-20') WS-SB-GP14 (23.3-25') Duplicate #1 WS-SB-GP15 (23.3-25') WS-SB-GP15 (26.7-28.3') WS-SB-GP16 (3.3-5.0') WS-SB-GP16 (5.0-6.7') WS-SB-GP18 (28.3-30') WS-SB-GP17 (3.3-5') WS-SB-GP17 (6.7-8.3') WS-SB-GP17 (13.3-15') WS-SB-GP17 (26.7-28.3') WS-SB-GP17 (31.7-33.3') WS-SB-GP18 (31.7-33.3') WS-SB-GP17 (18.3-20') WS-SB-GP17 (21.7-23)** WS-SB-GP-19 (12-14') WS-SB-GP-19 (18-20') Field Blank #4 (MeOH) Duplicate #3 WS-SB-GP-20 (10-12') GW-19 GW-20** GW-21 WS-SB-GP18 (28.3-30')MS WS-SB-GP18 (28.3-30')MSD GW-20MS A405028-BLK1 A405065-BLK1	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
Equipment Blank #1 Equipment Blank #2	All TCL compounds	No method blank associated with these samples.	Method blanks required for all samples.	J (all detects)	P

Sample	Compound	Finding	Criteria
WS-SB-GP14 (3.3-5.0')** WS-SB-GP14 (5.0-6.6') WS-SB-GP14 (11.7-13.3') WS-SB-GP14 (18.3-20') WS-SB-GP14 (23.3-25') Field Blank #1 (MeOH) WS-SB-GP14 (28.3-30') WS-SB-GP14 (31.7-33.3') WS-SB-GP15 (1.7-3.3') WS-SB-GP15 (6.7-8.3') WS-SB-GP15 (11.7-13.3') WS-SB-GP15 (16.7-18.3')** Duplicate #1 WS-SB-GP15 (23.3-25') WS-SB-GP15 (26.7-28.3') WS-SB-GP16 (3.3-5.0') WS-SB-GP16 (5.0-6.7') WS-SB-GP16 (10-11.6') WS-SB-GP16 (15-16.7') WS-SB-GP16 (21.7-23.3') WS-SB-GP16 (28.3-30') WS-SB-GP18 (1.7-3.3') Duplicate #2 WS-SB-GP18 (6.7-8.3') WS-SB-GP18 (13.3-15') WS-SB-GP18 (16.7-18.3') WS-SB-GP18 (23.3-25')** WS-SB-GP18 (28.3-30') WS-SB-GP18 (31.7-33.3') Field Blank #2 (MeOH) WS-SB-GP17 (3.3-5') WS-SB-GP17 (6.7-8.3') WS-SB-GP17 (13.3-15') WS-SB-GP17 (18.3-20') Field Blank #3(MeOH) WS-SB-GP17 (21.7-23')** WS-SB-GP17 (26.7-28.3') WS-SB-GP17 (31.7-33.3')	All TCL compounds	More than twenty samples associated to a method blank.	No more than twenty samples to be associated to a method blank.

No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
A405065-BLK1	5/23/14	Naphthalene Toluene 1,2,3-Trichlorobenzene	0.16 ug/L 0.15 ug/L 0.10 ug/L	Trip Blank GW-19 Equipment Blank #3 GW-20** GW-Duplicate GW-21
A405049-BLK1	5/20/14	Methylene chloride 1,2,4-Trimethylbenzene	11 ug/Kg 4.0 ug/Kg	WS-SB-GP-19 (12-14') WS-SB-GP-19 (18-20') Field Blank #4 (MeOH) Duplicate #3 WS-SB-GP-20 (10-12') WS-SB-GP-20 (18-20') WS-SB-GP-21 (6-8') WS-SB-GP-21 (16-18')

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
A405028-BLK1	5/19/14	m,p-Xylenes	5.0 ug/Kg	WS-SB-GP14 (3.3-5.0)** WS-SB-GP14 (5.0-6.6') WS-SB-GP14 (11.7-13.3') WS-SB-GP14 (18.3-20') WS-SB-GP14 (23.3-25') Field Blank #1 (MeOH) WS-SB-GP14 (28.3-30') WS-SB-GP14 (31.7-33.3') WS-SB-GP15 (1.7-3.3') WS-SB-GP15 (6.7-8.3') WS-SB-GP15 (11.7-13.3') Equipment Blank #1 WS-SB-GP15 (16.7-18.3)** Duplicate #1 WS-SB-GP15 (23.3-25') WS-SB-GP15 (26.7-28.3') WS-SB-GP16 (3.3-5.0') WS-SB-GP16 (5.0-6.7') WS-SB-GP16 (10-11.6') WS-SB-GP16 (15-16.7') WS-SB-GP16 (21.7-23.3') WS-SB-GP16 (28.3-30') WS-SB-GP18 (1.7-3.3') Duplicate #2 WS-SB-GP18 (6.7-8.3') WS-SB-GP18 (13.3-15') WS-SB-GP18 (16.7-18.3') WS-SB-GP18 (23.3-25)** WS-SB-GP18 (28.3-30') WS-SB-GP18 (31.7-33.3') Field Blank #2 (MeOH) WS-SB-GP17 (3.3-5') WS-SB-GP17 (6.7-8.3')

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
GW-19	Naphthalene Toluene	0.33 ug/L 0.12 ug/L	0.50U ug/L 0.50U ug/L
Equipment Blank #3	Toluene	0.13 ug/L	0.50U ug/L
GW-20**	Toluene	0.090 ug/L	0.50U ug/L
GW-21	Toluene 1,2,3-Trichlorobenzene	0.17 ug/L 0.14 ug/L	0.50U ug/L 0.50U ug/L
WS-SB-GP-19 (12-14')	1,2,4-Trimethylbenzene	5.0 ug/Kg	28U ug/Kg
WS-SB-GP-19 (18-20')	Methylene chloride	8.1 ug/Kg	110U ug/Kg

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
WS-SB-GP-20 (18-20')	1,2,4-Trimethylbenzene	5.0 ug/Kg	25U ug/Kg
Field Blank #1 (MeOH)	m,p-Xylenes	6.0 ug/Kg	50U ug/Kg
WS-SB-GP15 (6.7-8.3')	m,p-Xylenes	10 ug/Kg	48U ug/Kg
WS-SB-GP15 (11.7-13.3')	m,p-Xylenes	5.9 ug/Kg	54U ug/Kg
Duplicate #1	m,p-Xylenes	8.0 ug/Kg	66U ug/Kg
WS-SB-GP16 (10-11.6')	m,p-Xylenes	5.5 ug/Kg	50U ug/Kg
WS-SB-GP18 (1.7-3.3')	m,p-Xylenes	6.7 ug/Kg	62U ug/Kg

Sample Trip Blank was identified as a trip blank. No volatile contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
Trip Blank	5/14/14	Methylene chloride 1,2,4-Trimethylbenzene	0.14 ug/L 0.10 ug/L	WS-SB-GP-19 (12-14') WS-SB-GP-19 (18-20') GW-19 Field Blank #4 (MeOH) Duplicate #3 WS-SB-GP-20 (10-12') WS-SB-GP-20 (18-20') Equipment Blank #3 GW-20** GW-Duplicate WS-SB-GP-21 (6-8') WS-SB-GP-21 (16-18') GW-21

Samples Equipment Blank #1, Equipment Blank #2, and Equipment Blank #3 were identified as equipment blanks. No volatile contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
Equipment Blank #1	5/8/14	Acetone Chloromethane Toluene	270 ug/L 4.0 ug/L 8.5 ug/L	WS-SB-GP14 (3.3-5.0')** WS-SB-GP14 (5.0-6.6') WS-SB-GP14 (11.7-13.3') WS-SB-GP14 (18.3-20') WS-SB-GP14 (23.3-25') WS-SB-GP14 (28.3-30') WS-SB-GP14 (31.7-33.3') WS-SB-GP15 (1.7-3.3') WS-SB-GP15 (6.7-8.3') WS-SB-GP15 (11.7-13.3') WS-SB-GP15 (16.7-18.3')** Duplicate #1 WS-SB-GP15 (23.3-25') WS-SB-GP15 (26.7-28.3') WS-SB-GP16 (3.3-5.0') WS-SB-GP16 (5.0-6.7') WS-SB-GP16 (10-11.6') WS-SB-GP16 (15-16.7') WS-SB-GP16 (21.7-23.3') WS-SB-GP16 (28.3-30')
Equipment Blank #2	5/9/14	Acetone Toluene	280 ug/L 6.0 ug/L	WS-SB-GP18 (1.7-3.3') Duplicate #2 WS-SB-GP18 (6.7-8.3') WS-SB-GP18 (13.3-15') WS-SB-GP18 (16.7-18.3') WS-SB-GP18 (23.3-25')** WS-SB-GP18 (28.3-30') WS-SB-GP18 (31.7-33.3') WS-SB-GP17 (3.3-5') WS-SB-GP17 (6.7-8.3') WS-SB-GP17 (13.3-15') WS-SB-GP17 (18.3-20') WS-SB-GP17 (21.7-23')** WS-SB-GP17 (26.7-28.3') WS-SB-GP17 (31.7-33.3')
Equipment Blank #3	5/14/14	Acetone Dichlorodifluoromethane Toluene 1,3,5-Trimethylbenzene 1,2,4-Trimethylbenzene m,p-Xylenes Xylenes, total	3.4 ug/L 0.22 ug/L 0.13 ug/L 0.11 ug/L 0.38 ug/L 0.19 ug/L 0.19 ug/L	WS-SB-GP-19 (12-14') WS-SB-GP-19 (18-20') GW-19 Duplicate #3 WS-SB-GP-20 (10-12') WS-SB-GP-20 (18-20') GW-20** GW-Duplicate WS-SB-GP-21 (6-8') WS-SB-GP-21 (16-18') GW-21

Samples Field Blank #1 (MeOH), Field Blank #2 (MeOH), Field Blank #3(MeOH), and Field Blank #4 (MeOH) were identified as field blanks. No volatile contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
Field Blank #1 (MeOH)	5/8/14	1,2,4-Trimethylbenzene m,p-Xylenes o-Xylene Xylenes, total	7.0 ug/Kg 6.0 ug/Kg 5.5 ug/Kg 12 ug/Kg	WS-SB-GP14 (3.3-5.0)** WS-SB-GP14 (5.0-6.6') WS-SB-GP14 (11.7-13.3') WS-SB-GP14 (18.3-20') WS-SB-GP14 (23.3-25') WS-SB-GP14 (28.3-30') WS-SB-GP14 (31.7-33.3') WS-SB-GP15 (1.7-3.3') WS-SB-GP15 (6.7-8.3') WS-SB-GP15 (11.7-13.3') WS-SB-GP15 (16.7-18.3)** Duplicate #1 WS-SB-GP15 (23.3-25') WS-SB-GP15 (26.7-28.3') WS-SB-GP16 (3.3-5.0') WS-SB-GP16 (5.0-6.7') WS-SB-GP16 (10-11.6') WS-SB-GP16 (15-16.7') WS-SB-GP16 (21.7-23.3') WS-SB-GP16 (28.3-30')

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated field blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
Equipment Blank #3	1,2,4-Trimethylbenzene	0.38 ug/L	0.50U ug/L
WS-SB-GP15 (6.7-8.3')	Toluene 1,2,4-Trimethylbenzene m,p-Xylenes o-Xylene Xylenes, total	4.9 ug/Kg 7.3 ug/Kg 10 ug/Kg 7.3 ug/Kg 17 ug/Kg	24U ug/Kg 24U ug/Kg 48U ug/Kg 24U ug/Kg 72U ug/Kg
WS-SB-GP15 (11.7-13.3')	Toluene m,p-Xylenes o-Xylene Xylenes, total	4.9 ug/Kg 5.9 ug/Kg 5.4 ug/Kg 11 ug/Kg	27U ug/Kg 54U ug/Kg 27U ug/Kg 81U ug/Kg
WS-SB-GP15 (16.7-18.3)**	Toluene 1,2,4-Trimethylbenzene o-Xylene Xylenes, total	15 ug/Kg 23 ug/Kg 13 ug/Kg 50 ug/Kg	26U ug/Kg 26U ug/Kg 26U ug/Kg 78U ug/Kg
WS-SB-GP15 (23.3-25')	Toluene 1,2,4-Trimethylbenzene m,p-Xylenes o-Xylene Xylenes, total	10 ug/Kg 11 ug/Kg 26 ug/Kg 8.0 ug/Kg 34 ug/Kg	34U ug/Kg 34U ug/Kg 68U ug/Kg 34U ug/Kg 102U ug/Kg
WS-SB-GP15 (26.7-28.3')	Toluene o-Xylene	26 ug/Kg 11 ug/Kg	27U ug/Kg 27U ug/Kg

Sample	Compound	Reported Concentration	Modified Final Concentration
WS-SB-GP16 (21.7-23.3')	Toluene o-Xylene	3.8 ug/Kg 7.2 ug/Kg	24U ug/Kg 24U ug/Kg
WS-SB-GP18 (16.7-18.3')	Toluene	14 ug/Kg	30U ug/Kg
WS-SB-GP18 (23.3-25')**	Toluene	8.9 ug/Kg	30U ug/Kg
WS-SB-GP18 (28.3-30')	Toluene	21 ug/Kg	33U ug/Kg
WS-SB-GP17 (13.3-15')	Toluene	9.5 ug/Kg	28U ug/Kg
WS-SB-GP17 (18.3-20')	Toluene	10 ug/Kg	28U ug/Kg
WS-SB-GP17 (31.7-33.3')	Toluene	5.8 ug/Kg	26U ug/Kg
GW-19	Dichlorodifluoromethane Toluene 1,2,4-Trimethylbenzene m,p-Xylenes	0.19 ug/L 0.12 ug/L 0.17 ug/L 0.11 ug/L	0.50U ug/L 0.50U ug/L 0.50U ug/L 1.0U ug/L
GW-20**	Dichlorodifluoromethane	0.19 ug/L	0.50U ug/L
GW-Duplicate	Dichlorodifluoromethane m,p-Xylenes	0.14 ug/L 0.090 ug/L	0.50U ug/L 1.0U ug/L
GW-21	Toluene 1,2,4-Trimethylbenzene m,p-Xylenes Xylenes, total	0.17 ug/L 0.10 ug/L 0.15 ug/L 0.15 ug/L	0.50U ug/L 0.50U ug/L 1.0U ug/L 1.5U ug/L
WS-SB-GP15 (1.7-3.3')	o-Xylene	8.0 ug/Kg	24U ug/Kg
Duplicate #1	1,2,4-Trimethylbenzene m,p-Xylenes o-Xylene Xylenes, total	6.0 ug/Kg 8.0 ug/Kg 6.7 ug/Kg 15 ug/Kg	33U ug/Kg 66U ug/Kg 33U ug/Kg 99U ug/Kg
WS-SB-GP16 (10-11.6')	1,2,4-Trimethylbenzene m,p-Xylenes o-Xylene Xylenes, total	4.5 ug/Kg 5.5 ug/Kg 4.0 ug/Kg 9.5 ug/Kg	25U ug/Kg 50U ug/Kg 25U ug/Kg 75U ug/Kg
WS-SB-GP16 (15-16.7')	o-Xylene	5.8 ug/Kg	24U ug/Kg

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
WS-SB-GP15 (1.7-3.3')MS/MSD (WS-SB-GP15 (1.7-3.3'))	1,2,4-Trimethylbenzene	65.4 (79.8-124)	69.8 (79.8-124)	-	J (all detects) UJ (all non-detects)	A
WS-SB-GP16 (10-11.6')MS/MSD (WS-SB-GP16 (10-11.6'))	Bromomethane 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Methyl-tert-butyl ether Tetrahydrofuran	- - - - - -	- - - - - -	24.5 (≤20) 25.5 (≤20) 20.1 (≤20) 22.3 (≤20) 23.7 (≤20) 35.4 (≤20)	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A
WS-SB-GP18 (28.3-30')MS/MSD (WS-SB-GP18 (28.3-30'))	n-Butylbenzene 2-Chlorotoluene 1,2,4-Trimethylbenzene	140 (83.4-124) 153 (79.1-131) -	156 (83.4-124) 148 (79.1-131) -	- - 20.4 (≤20)	J (all detects) J (all detects) J (all detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
Equipment Blank #1 Equipment Blank #2	All TCL compounds	No LCS analysis associated with these samples.	LCS analysis required.	J (all detects) UJ (all non-detects)	P

Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples on which an EPA Level IV review. Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

XII. Compound Quantitation

All compound quantitations were within validation criteria for samples on which an EPA Level IV review was performed. Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable for samples on which an EPA Level IV review was performed. Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples WS-SB-GP15 (16.7-18.3')** and Duplicate #1, samples WS-SB-GP18 (1.7-3.3') and Duplicate #2, and samples GW-20** and GW-Duplicate were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)
	WS-SB-GP15 (16.7-18.3')**	Duplicate #1	
Ethylbenzene	8.2	33U	NC
Toluene	15	33U	NC
1,3,5-Trimethylbenzene	6.7	33U	NC
1,2,4-Trimethylbenzene	23	6.0	NC
m,p-Xylenes	37	8.0	NC
o-Xylene	13	6.7	NC
Xylenes, total	50	15	NC

Compound	Concentration (ug/Kg)		RPD (Limits)
	WS-SB-GP18 (1.7-3.3')	Duplicate #2	
Dichlorodifluoromethane	8.0	27U	NC
1,2,4-Trimethylbenzene	6.1	27U	NC
m,p-Xylenes	6.7	53U	NC
Methylene chloride	120U	9.1	NC

Compound	Concentration (ug/L)		RPD (Limits)
	GW-20**	GW-Duplicate	
Benzene	0.48	0.49	NC
Dichlorodifluoromethane	0.19	0.14	NC
cis-1,2-Dichloroethene	0.25	0.28	NC
2-Hexanone	2.1	20U	NC
Toluene	0.090	0.50U	NC
m,p-Xylenes	1.0U	0.090	NC

NC = Not calculated. One or both samples were either non-detect or less than 5X LOQ.

XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples on which an EPA Level IV review. Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

XII. Compound Quantitation

All compound quantitations were within validation criteria for samples on which an EPA Level IV review was performed. Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable for samples on which an EPA Level IV review was performed. Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples WS-SB-GP15 (16.7-18.3')** and Duplicate #1, samples WS-SB-GP18 (1.7-3.3') and Duplicate #2, and samples GW-20** and GW-Duplicate were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)
	WS-SB-GP15 (16.7-18.3')**	Duplicate #1	
Ethylbenzene	8.2	33U	NC
Toluene	15	33U	NC
1,3,5-Trimethylbenzene	6.7	33U	NC
1,2,4-Trimethylbenzene	23	6.0	NC
m,p-Xylenes	37	8.0	NC
o-Xylene	13	6.7	NC

Compound	Concentration (ug/Kg)		RPD (Limits)
	WS-SB-GP15 (16.7-18.3)**	Duplicate #1	
Xylenes, total	50	15	NC

Compound	Concentration (ug/Kg)		RPD (Limits)
	WS-SB-GP18 (1.7-3.3')	Duplicate #2	
Dichlorodifluoromethane	8.0	27U	NC
1,2,4-Trimethylbenzene	6.1	27U	NC
m,p-Xylenes	6.7	53U	NC
Methylene chloride	120U	9.1	NC

Compound	Concentration (ug/L)		RPD (Limits)
	GW-20**	GW-Duplicate	
Benzene	0.48	0.49	NC
Dichlorodifluoromethane	0.19	0.14	NC
cis-1,2-Dichloroethene	0.25	0.28	NC
2-Hexanone	2.1	20U	NC
Toluene	0.090	0.50U	NC
m,p-Xylenes	1.0U	0.090	NC

NC = Not calculated. One or both samples were either non-detect or less than 5X LOQ.

**Wedron Community Groundwater
Volatiles - Data Qualification Summary - SDG A14916/A142008**

SDG	Sample	Compound	Flag	A or P	Reason
A14916/ A142008	WS-SB-GP14 (3.3-5.0')** WS-SB-GP14 (5.0-6.6') WS-SB-GP14 (11.7-13.3') WS-SB-GP14 (18.3-20') WS-SB-GP14 (23.3-25') Duplicate #1 WS-SB-GP15 (23.3-25') WS-SB-GP15 (26.7-28.3') WS-SB-GP16 (3.3-5.0') WS-SB-GP16 (5.0-6.7') WS-SB-GP18 (28.3-30') WS-SB-GP17 (3.3-5') WS-SB-GP17 (6.7-8.3') WS-SB-GP17 (13.3-15') WS-SB-GP17 (26.7-28.3') WS-SB-GP17 (31.7-33.3') WS-SB-GP18 (31.7-33.3') WS-SB-GP17 (18.3-20') WS-SB-GP17 (21.7-23')** WS-SB-GP-19 (12-14') WS-SB-GP-19 (18-20') Field Blank #4 (MeOH) Duplicate #3 WS-SB-GP-20 (10-12') GW-19 GW-20** GW-21	Chloroethane	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)
A14916/ A142008	Equipment Blank #1 Equipment Blank #2	All TCL compounds	J (all detects)	P	Method blanks (sample association)
A14916/ A142008	WS-SB-GP15 (1.7-3.3')	1,2,4-Trimethylbenzene	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)
A14916/ A142008	WS-SB-GP16 (10-11.6')	Bromomethane 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Methyl-tert-butyl ether Tetrahydrofuran	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD)
A14916/ A142008	WS-SB-GP18 (28.3-30')	n-Butylbenzene 2-Chlorotoluene	J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)
A14916/ A142008	WS-SB-GP18 (28.3-30')	1,2,4-Trimethylbenzene	J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD)
A14916/ A142008	Equipment Blank #1 Equipment Blank #2	All TCL compounds	J (all detects) UJ (all non-detects)	P	Laboratory control samples (sample association)

**Wedron Community Groundwater
Volatiles - Laboratory Blank Data Qualification Summary - SDG A14916/A142008**

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
A14916/ A142008	GW-19	Naphthalene Toluene	0.50U ug/L 0.50U ug/L	A
A14916/ A142008	Equipment Blank #3	Toluene	0.50U ug/L	A
A14916/ A142008	GW-20**	Toluene	0.50U ug/L	A
A14916/ A142008	GW-21	Toluene 1,2,3-Trichlorobenzene	0.50U ug/L 0.50U ug/L	A
A14916/ A142008	WS-SB-GP-19 (12-14')	1,2,4-Trimethylbenzene	28U ug/Kg	A
A14916/ A142008	WS-SB-GP-19 (18-20')	Methylene chloride	110U ug/Kg	A
A14916/ A142008	WS-SB-GP-20 (18-20')	1,2,4-Trimethylbenzene	25U ug/Kg	A
A14916/ A142008	Field Blank #1 (MeOH)	m,p-Xylenes	50U ug/Kg	A
A14916/ A142008	WS-SB-GP15 (6.7-8.3')	m,p-Xylenes	48U ug/Kg	A
A14916/ A142008	WS-SB-GP15 (11.7-13.3')	m,p-Xylenes	54U ug/Kg	A
A14916/ A142008	Duplicate #1	m,p-Xylenes	66U ug/Kg	A
A14916/ A142008	WS-SB-GP16 (10-11.6')	m,p-Xylenes	50U ug/Kg	A
A14916/ A142008	WS-SB-GP18 (1.7-3.3')	m,p-Xylenes	62U ug/Kg	A

**Wedron Community Groundwater
Volatiles - Field Blank Data Qualification Summary - SDG A14916/A142008**

SDG	Sample	Compound	Modified Final Concentration	A or P
A14916/ A142008	Equipment Blank #3	1,2,4-Trimethylbenzene	0.50U ug/L	A
A14916/ A142008	WS-SB-GP15 (6.7-8.3')	Toluene 1,2,4-Trimethylbenzene m,p-Xylenes o-Xylene Xylenes, total	24U ug/Kg 24U ug/Kg 48U ug/Kg 24U ug/Kg 72U ug/Kg	A
A14916/ A142008	WS-SB-GP15 (11.7-13.3')	Toluene m,p-Xylenes o-Xylene Xylenes, total	27U ug/Kg 54U ug/Kg 27U ug/Kg 81U ug/Kg	A
A14916/ A142008	WS-SB-GP15 (16.7-18.3')**	Toluene 1,2,4-Trimethylbenzene o-Xylene Xylenes, total	26U ug/Kg 26U ug/Kg 26U ug/Kg 78U ug/Kg	A
A14916/ A142008	WS-SB-GP15 (23.3-25')	Toluene 1,2,4-Trimethylbenzene m,p-Xylenes o-Xylene Xylenes, total	34U ug/Kg 34U ug/Kg 68U ug/Kg 34U ug/Kg 102U ug/Kg	A
A14916/ A142008	WS-SB-GP15 (26.7-28.3')	Toluene o-Xylene	27U ug/Kg 27U ug/Kg	A
A14916/ A142008	WS-SB-GP16 (21.7-23.3')	Toluene o-Xylene	24U ug/Kg 24U ug/Kg	A
A14916/ A142008	WS-SB-GP18 (16.7-18.3')	Toluene	30U ug/Kg	A
A14916/ A142008	WS-SB-GP18 (23.3-25')**	Toluene	30U ug/Kg	A
A14916/ A142008	WS-SB-GP18 (28.3-30')	Toluene	33U ug/Kg	A
A14916/ A142008	WS-SB-GP17 (13.3-15')	Toluene	28U ug/Kg	A
A14916/ A142008	WS-SB-GP17 (18.3-20')	Toluene	28U ug/Kg	A
A14916/ A142008	WS-SB-GP17 (31.7-33.3')	Toluene	26U ug/Kg	A

SDG	Sample	Compound	Modified Final Concentration	A or P
A14916/ A142008	GW-19	Dichlorodifluoromethane Toluene 1,2,4-Trimethylbenzene m,p-Xylenes	0.50U ug/L 0.50U ug/L 0.50U ug/L 1.0U ug/L	A
A14916/ A142008	GW-20**	Dichlorodifluoromethane	0.50U ug/L	A
A14916/ A142008	GW-Duplicate	Dichlorodifluoromethane m,p-Xylenes	0.50U ug/L 1.0U ug/L	A
A14916/ A142008	GW-21	Toluene 1,2,4-Trimethylbenzene m,p-Xylenes Xylenes, total	0.50U ug/L 0.50U ug/L 1.0U ug/L 1.5U ug/L	A
A14916/ A142008	WS-SB-GP15 (1.7-3.3')	o-Xylene	24U ug/Kg	A
A14916/ A142008	Duplicate #1	1,2,4-Trimethylbenzene m,p-Xylenes o-Xylene Xylenes, total	33U ug/Kg 66U ug/Kg 33U ug/Kg 99U ug/Kg	A
A14916/ A142008	WS-SB-GP16 (10-11.6')	1,2,4-Trimethylbenzene m,p-Xylenes o-Xylene Xylenes, total	25U ug/Kg 50U ug/Kg 25U ug/Kg 75U ug/Kg	A
A14916/ A142008	WS-SB-GP16 (15-16.7')	o-Xylene	24U ug/Kg	A

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP14 (3.3-5.0')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-01 File ID: 11A.D
 Sampled: 05/08/14 10:30 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 00:41
 Solids: 90.32 Preparation: EPA 5030B Initial/Final: 10.72 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	20	21000	U
71-43-2	Benzene	20	650	D
108-86-1	Bromobenzene	20	520	U
74-97-5	Bromochloromethane	20	520	U
75-27-4	Bromodichloromethane	20	520	U
75-25-2	Bromoform	20	520	U
74-83-9	Bromomethane	20	5200	U
78-93-3	2-Butanone	20	21000	U
104-51-8	n-Butyl Benzene	20	520	U
135-98-8	sec-Butyl Benzene	20	520	U
98-06-6	tert-Butylbenzene	20	520	U
75-15-0	Carbon disulfide	20	520	U
56-23-5	Carbon tetrachloride	20	520	U
108-90-7	Chlorobenzene	20	520	U
75-00-3	Chloroethane	20	5200	U <i>UJ</i>
67-66-3	Chloroform	20	520	U
74-87-3	Chloromethane	20	1000	U
95-49-8	2-Chlorotoluene	20	520	U
106-43-4	4-Chlorotoluene	20	520	U
96-12-8	1,2-Dibromo-3-chloropropane	20	520	U
124-48-1	Dibromochloromethane	20	520	U
106-93-4	1,2-Dibromoethane (EDB)	20	520	U
74-95-3	Dibromomethane	20	520	U
95-50-1	1,2-Dichlorobenzene	20	520	U
106-46-7	1,4-Dichlorobenzene	20	520	U
541-73-1	1,3-Dichlorobenzene	20	520	U
75-71-8	Dichlorodifluoromethane	20	520	U
75-34-3	1,1-Dichloroethane	20	520	U
107-06-2	1,2-Dichloroethane	20	520	U
156-60-5	trans-1,2-Dichloroethene	20	520	U
156-59-2	cis-1,2-Dichloroethene	20	520	U
75-35-4	1,1-Dichloroethene	20	520	U
590-20-7	2,2-Dichloropropane	20	520	U
78-87-5	1,2-Dichloropropane	20	520	U
142-28-9	1,3-Dichloropropane	20	520	U
10061-01-5	cis-1,3-Dichloropropene	20	520	U
10061-02-6	trans-1,3-Dichloropropene	20	520	U
563-58-6	1,1-Dichloropropene	20	520	U
108-20-3	Diisopropyl Ether	20	520	U
100-41-4	Ethylbenzene	20	4300	D

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP14 (3.3-5.0')

Laboratory:	<u>ECCS</u>	SDG:	
Client:	<u>GZA GeoEnvironmental, Inc</u>	Project:	<u>Wedron Silica - Wedron, IL</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>A141916-01</u>
Sampled:	<u>05/08/14 10:30</u>	Prepared:	<u>05/13/14 11:21</u>
Solids:	<u>90.32</u>	Preparation:	<u>EPA 5030B</u>
Batch:	<u>A405028</u>	Sequence:	<u>A4E1801</u>
		Calibration:	<u>A140517</u>
		Instrument:	<u>3188A02979</u>
		File ID:	<u>11A.D</u>
		Analyzed:	<u>05/19/14 00:41</u>
		Initial/Final:	<u>10.72 g / 500 mL</u>

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	20	2100	U
110-54-3	n-Hexane	20	860	D
591-78-6	2-Hexanone	20	21000	U
98-82-8	Isopropylbenzene	20	600	D
99-87-6	p-Isopropyltoluene	20	480	J, D
75-09-2	Methylene chloride	20	2100	U
108-10-1	4-Methyl-2-pentanone	20	21000	U
1634-04-4	Methyl t-Butyl Ether	20	520	U
91-20-3	Naphthalene	20	15000	D
103-65-1	n-Propyl Benzene	20	2900	D
100-42-5	Styrene	20	520	U
630-20-6	1,1,1,2-Tetrachloroethane	20	520	U
79-34-5	1,1,2,2-Tetrachloroethane	20	520	U
127-18-4	Tetrachloroethene	20	520	U
109-99-9	Tetrahydrofuran	20	10000	U
108-88-3	Toluene	20	920	D
87-61-6	1,2,3-Trichlorobenzene	20	2100	U
120-82-1	1,2,4-Trichlorobenzene	20	2100	U
71-55-6	1,1,1-Trichloroethane	20	520	U
79-00-5	1,1,2-Trichloroethane	20	520	U
79-01-6	Trichloroethene	20	520	U
75-69-4	Trichlorofluoromethane	20	520	U
96-18-4	1,2,3-Trichloropropane	20	1000	U
76-13-1	1,1,2-Trichlorotrifluoroethane	20	520	U
108-67-8	1,3,5-Trimethylbenzene	20	16000	D
95-63-6	1,2,4-Trimethylbenzene	20	51000	D
75-01-4	Vinyl chloride	20	520	U
108-38-3/1	m,p-Xylene	20	50000	D
95-47-6	o-Xylene	20	11000	D
1330-20-7	Xylenes, total	20	61000	D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.3	105	86.2 - 117	
Toluene-d8	25.00	24.9	99.4	90.4 - 108	
4-Bromofluorobenzene	25.00	25.2	101	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	584962	5.41	671549	5.42	
1,4-Difluorobenzene	974774	6.21	1071800	6.22	
Chlorobenzene-d5	877598	9.07	939880	9.08	
1,4-Dichlorobenzene-d4	404885	11.17	432259	11.17	

02/6/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP14 (5.0-6.6')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-02 File ID: 06A.D
 Sampled: 05/08/14 10:50 Prepared: 05/13/14 11:21 Analyzed: 05/18/14 21:02
 Solids: 91.36 Preparation: EPA 5030B Initial/Final: 10.52 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	20	21000	U
71-43-2	Benzene	20	5800	D
108-86-1	Bromobenzene	20	520	U
74-97-5	Bromochloromethane	20	520	U
75-27-4	Bromodichloromethane	20	520	U
75-25-2	Bromoform	20	520	U
74-83-9	Bromomethane	20	5200	U
78-93-3	2-Butanone	20	21000	U
104-51-8	n-Butyl Benzene	20	520	U
135-98-8	sec-Butyl Benzene	20	520	U
98-06-6	tert-Butylbenzene	20	520	U
75-15-0	Carbon disulfide	20	520	U
56-23-5	Carbon tetrachloride	20	520	U
108-90-7	Chlorobenzene	20	520	U
75-00-3	Chloroethane	20	5200	U JS
67-66-3	Chloroform	20	520	U
74-87-3	Chloromethane	20	1000	U
95-49-8	2-Chlorotoluene	20	520	U
106-43-4	4-Chlorotoluene	20	520	U
96-12-8	1,2-Dibromo-3-chloropropane	20	520	U
124-48-1	Dibromochloromethane	20	520	U
106-93-4	1,2-Dibromoethane (EDB)	20	520	U
74-95-3	Dibromomethane	20	520	U
95-50-1	1,2-Dichlorobenzene	20	520	U
106-46-7	1,4-Dichlorobenzene	20	520	U
541-73-1	1,3-Dichlorobenzene	20	520	U
75-71-8	Dichlorodifluoromethane	20	520	U
75-34-3	1,1-Dichloroethane	20	520	U
107-06-2	1,2-Dichloroethane	20	520	U
156-60-5	trans-1,2-Dichloroethene	20	520	U
156-59-2	cis-1,2-Dichloroethene	20	520	U
75-35-4	1,1-Dichloroethene	20	520	U
590-20-7	2,2-Dichloropropane	20	520	U
78-87-5	1,2-Dichloropropane	20	520	U
142-28-9	1,3-Dichloropropane	20	520	U
10061-01-5	cis-1,3-Dichloropropene	20	520	U
10061-02-6	trans-1,3-Dichloropropene	20	520	U
563-58-6	1,1-Dichloropropene	20	520	U
108-20-3	Diisopropyl Ether	20	520	U
100-41-4	Ethylbenzene	20	15000	D

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP14 (5.0-6.6')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-02 File ID: 06A.D
 Sampled: 05/08/14 10:50 Prepared: 05/13/14 11:21 Analyzed: 05/18/14 21:02
 Solids: 91.36 Preparation: EPA 5030B Initial/Final: 10.52 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	20	2100	U
110-54-3	n-Hexane	20	2100	D
591-78-6	2-Hexanone	20	21000	U
98-82-8	Isopropylbenzene	20	980	D
99-87-6	p-Isopropyltoluene	20	220	J, D
75-09-2	Methylene chloride	20	2100	U
108-10-1	4-Methyl-2-pentanone	20	21000	U
1634-04-4	Methyl t-Butyl Ether	20	520	U
91-20-3	Naphthalene	20	14000	D
103-65-1	n-Propyl Benzene	20	5300	D
100-42-5	Styrene	20	520	U
630-20-6	1,1,1,2-Tetrachloroethane	20	520	U
79-34-5	1,1,1,2-Tetrachloroethane	20	520	U
127-18-4	Tetrachloroethene	20	520	U
109-99-9	Tetrahydrofuran	20	10000	U
108-88-3	Toluene	20	6800	D
87-61-6	1,2,3-Trichlorobenzene	20	2100	U
120-82-1	1,2,4-Trichlorobenzene	20	2100	U
71-55-6	1,1,1-Trichloroethane	20	520	U
79-00-5	1,1,2-Trichloroethane	20	520	U
79-01-6	Trichloroethene	20	520	U
75-69-4	Trichlorofluoromethane	20	520	U
96-18-4	1,2,3-Trichloropropane	20	1000	U
76-13-1	1,1,2-Trichlorotrifluoroethane	20	520	U
108-67-8	1,3,5-Trimethylbenzene	20	14000	D
95-63-6	1,2,4-Trimethylbenzene	20	45000	D
75-01-4	Vinyl chloride	20	520	U
108-38-3/1	m,p-Xylene	20	72000	D
95-47-6	o-Xylene	20	26000	D
1330-20-7	Xylenes, total	20	99000	D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	24.7	98.8	86.2 - 117	
Toluene-d8	25.00	24.8	99.0	90.4 - 108	
4-Bromofluorobenzene	25.00	25.0	99.9	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	636581	5.42	671549	5.42	
1,4-Difluorobenzene	1033636	6.22	1071800	6.22	
Chlorobenzene-d5	914010	9.08	939880	9.08	
1,4-Dichlorobenzene-d4	418911	11.17	432259	11.17	

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP14 (11.7-13.3')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-03 File ID: 07A.D
 Sampled: 05/08/14 11:10 Prepared: 05/13/14 11:21 Analyzed: 05/18/14 21:46
 Solids: 86.79 Preparation: EPA 5030B Initial/Final: 11.03 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	2	2100	U
71-43-2	Benzene	2	52	U
108-86-1	Bromobenzene	2	52	U
74-97-5	Bromochloromethane	2	52	U
75-27-4	Bromodichloromethane	2	52	U
75-25-2	Bromoform	2	52	U
74-83-9	Bromomethane	2	520	U
78-93-3	2-Butanone	2	2100	U
104-51-8	n-Butyl Benzene	2	52	U
135-98-8	sec-Butyl Benzene	2	52	U
98-06-6	tert-Butylbenzene	2	52	U
75-15-0	Carbon disulfide	2	530	D
56-23-5	Carbon tetrachloride	2	52	U
108-90-7	Chlorobenzene	2	52	U
75-00-3	Chloroethane	2	520	U 5
67-66-3	Chloroform	2	52	U
74-87-3	Chloromethane	2	100	U
95-49-8	2-Chlorotoluene	2	52	U
106-43-4	4-Chlorotoluene	2	52	U
96-12-8	1,2-Dibromo-3-chloropropane	2	52	U
124-48-1	Dibromochloromethane	2	52	U
106-93-4	1,2-Dibromoethane (EDB)	2	52	U
74-95-3	Dibromomethane	2	52	U
95-50-1	1,2-Dichlorobenzene	2	52	U
106-46-7	1,4-Dichlorobenzene	2	52	U
541-73-1	1,3-Dichlorobenzene	2	52	U
75-71-8	Dichlorodifluoromethane	2	52	U
75-34-3	1,1-Dichloroethane	2	52	U
107-06-2	1,2-Dichloroethane	2	52	U
156-60-5	trans-1,2-Dichloroethene	2	52	U
156-59-2	cis-1,2-Dichloroethene	2	52	U
75-35-4	1,1-Dichloroethene	2	52	U
590-20-7	2,2-Dichloropropane	2	52	U
78-87-5	1,2-Dichloropropane	2	52	U
142-28-9	1,3-Dichloropropane	2	52	U
10061-01-5	cis-1,3-Dichloropropene	2	52	U
10061-02-6	trans-1,3-Dichloropropene	2	52	U
563-58-6	1,1-Dichloropropene	2	52	U
108-20-3	Diisopropyl Ether	2	52	U
100-41-4	Ethylbenzene	2	150	D

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06/29/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP14 (11.7-13.3')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-03 File ID: 07A.D
 Sampled: 05/08/14 11:10 Prepared: 05/13/14 11:21 Analyzed: 05/18/14 21:46
 Solids: 86.79 Preparation: EPA 5030B Initial/Final: 11.03 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	2	210	U
110-54-3	n-Hexane	2	52	U
591-78-6	2-Hexanone	2	2100	U
98-82-8	Isopropylbenzene	2	45	J, D
99-87-6	p-Isopropyltoluene	2	2100	D
75-09-2	Methylene chloride	2	210	U
108-10-1	4-Methyl-2-pentanone	2	2100	U
1634-04-4	Methyl t-Butyl Ether	2	52	U
91-20-3	Naphthalene	2	520	U
103-65-1	n-Propyl Benzene	2	190	D
100-42-5	Styrene	2	52	U
630-20-6	1,1,1,2-Tetrachloroethane	2	52	U
79-34-5	1,1,2,2-Tetrachloroethane	2	52	U
127-18-4	Tetrachloroethene	2	52	U
109-99-9	Tetrahydrofuran	2	1000	U
108-88-3	Toluene	2	65	D
87-61-6	1,2,3-Trichlorobenzene	2	210	U
120-82-1	1,2,4-Trichlorobenzene	2	210	U
71-55-6	1,1,1-Trichloroethane	2	52	U
79-00-5	1,1,2-Trichloroethane	2	52	U
79-01-6	Trichloroethene	2	52	U
75-69-4	Trichlorofluoromethane	2	52	U
96-18-4	1,2,3-Trichloropropane	2	100	U
76-13-1	1,1,2-Trichlorotrifluoroethane	2	52	U
108-67-8	1,3,5-Trimethylbenzene	2	1300	D
95-63-6	1,2,4-Trimethylbenzene	2	3100	D
75-01-4	Vinyl chloride	2	52	U
108-38-3/1	m,p-Xylene	2	400	D
95-47-6	o-Xylene	2	62	D
1330-20-7	Xylenes, total	2	460	D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.8	103	86.2 - 117	
Toluene-d8	25.00	25.1	100	90.4 - 108	
4-Bromofluorobenzene	25.00	26.9	108	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	581478	5.42	671549	5.42	
1,4-Difluorobenzene	962121	6.21	1071800	6.22	
Chlorobenzene-d5	872916	9.07	939880	9.08	
1,4-Dichlorobenzene-d4	368318	11.17	432259	11.17	

06/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP14 (18.3-20')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-04 File ID: 09A.D
 Sampled: 05/08/14 11:20 Prepared: 05/13/14 11:21 Analyzed: 05/18/14 23:13
 Solids: 89.81 Preparation: EPA 5030B Initial/Final: 9.9 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	20	22000	U
71-43-2	Benzene	20	560	U
108-86-1	Bromobenzene	20	560	U
74-97-5	Bromochloromethane	20	560	U
75-27-4	Bromodichloromethane	20	560	U
75-25-2	Bromoform	20	560	U
74-83-9	Bromomethane	20	5600	U
78-93-3	2-Butanone	20	22000	U
104-51-8	n-Butyl Benzene	20	560	U
135-98-8	sec-Butyl Benzene	20	560	U
98-06-6	tert-Butylbenzene	20	560	U
75-15-0	Carbon disulfide	20	700	D
56-23-5	Carbon tetrachloride	20	560	U
108-90-7	Chlorobenzene	20	560	U
75-00-3	Chloroethane	20	5600	U <i>CS</i>
67-66-3	Chloroform	20	560	U
74-87-3	Chloromethane	20	1100	U
95-49-8	2-Chlorotoluene	20	560	U
106-43-4	4-Chlorotoluene	20	560	U
96-12-8	1,2-Dibromo-3-chloropropane	20	560	U
124-48-1	Dibromochloromethane	20	560	U
106-93-4	1,2-Dibromoethane (EDB)	20	560	U
74-95-3	Dibromomethane	20	560	U
95-50-1	1,2-Dichlorobenzene	20	560	U
106-46-7	1,4-Dichlorobenzene	20	560	U
541-73-1	1,3-Dichlorobenzene	20	560	U
75-71-8	Dichlorodifluoromethane	20	560	U
75-34-3	1,1-Dichloroethane	20	560	U
107-06-2	1,2-Dichloroethane	20	560	U
156-60-5	trans-1,2-Dichloroethene	20	560	U
156-59-2	cis-1,2-Dichloroethene	20	560	U
75-35-4	1,1-Dichloroethene	20	560	U
590-20-7	2,2-Dichloropropane	20	560	U
78-87-5	1,2-Dichloropropane	20	560	U
142-28-9	1,3-Dichloropropane	20	560	U
10061-01-5	cis-1,3-Dichloropropene	20	560	U
10061-02-6	trans-1,3-Dichloropropene	20	560	U
563-58-6	1,1-Dichloropropene	20	560	U
108-20-3	Diisopropyl Ether	20	560	U
100-41-4	Ethylbenzene	20	1100	D

02/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP14 (18.3-20')

Laboratory:	ECCS	SDG:	
Client:	GZA GeoEnvironmental, Inc	Project:	Wedron Silica - Wedron, IL
Matrix:	Soil	Laboratory ID:	A141916-04
		File ID:	09A.D
Sampled:	05/08/14 11:20	Prepared:	05/13/14 11:21
		Analyzed:	05/18/14 23:13
Solids:	89.81	Preparation:	EPA 5030B
		Initial/Final:	9.9 g / 500 mL
Batch:	A405028	Sequence:	A4E1801
		Calibration:	A140517
		Instrument:	3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	20	2200	U
110-54-3	n-Hexane	20	560	U
591-78-6	2-Hexanone	20	22000	U
98-82-8	Isopropylbenzene	20	520	J, D
99-87-6	p-Isopropyltoluene	20	570	D
75-09-2	Methylene chloride	20	2200	U
108-10-1	4-Methyl-2-pentanone	20	22000	U
1634-04-4	Methyl t-Butyl Ether	20	560	U
91-20-3	Naphthalene	20	5600	U
103-65-1	n-Propyl Benzene	20	2900	D
100-42-5	Styrene	20	560	U
630-20-6	1,1,1,2-Tetrachloroethane	20	560	U
79-34-5	1,1,2,2-Tetrachloroethane	20	560	U
127-18-4	Tetrachloroethene	20	560	U
109-99-9	Tetrahydrofuran	20	11000	U
108-88-3	Toluene	20	150	J, D
87-61-6	1,2,3-Trichlorobenzene	20	2200	U
120-82-1	1,2,4-Trichlorobenzene	20	2200	U
71-55-6	1,1,1-Trichloroethane	20	560	U
79-00-5	1,1,2-Trichloroethane	20	560	U
79-01-6	Trichloroethene	20	560	U
75-69-4	Trichlorofluoromethane	20	560	U
96-18-4	1,2,3-Trichloropropane	20	1100	U
76-13-1	1,1,2-Trichlorotrifluoroethane	20	560	U
108-67-8	1,3,5-Trimethylbenzene	20	10000	D
95-63-6	1,2,4-Trimethylbenzene	20	28000	D
75-01-4	Vinyl chloride	20	560	U
108-38-3/1	m,p-Xylene	20	1300	D
95-47-6	o-Xylene	20	300	J, D
1330-20-7	Xylenes, total	20	1600	J, D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	24.8	99.3	86.2 - 117	
Toluene-d8	25.00	24.9	99.6	90.4 - 108	
4-Bromofluorobenzene	25.00	24.3	97.1	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	629742	5.42	671549	5.42	
1,4-Difluorobenzene	1024229	6.22	1071800	6.22	
Chlorobenzene-d5	932593	9.07	939880	9.08	
1,4-Dichlorobenzene-d4	415160	11.17	432259	11.17	

02/6/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP14 (23.3-25')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-05 File ID: 10A.D
 Sampled: 05/08/14 11:40 Prepared: 05/13/14 11:21 Analyzed: 05/18/14 23:57
 Solids: 91.89 Preparation: EPA 5030B Initial/Final: 10.81 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	100	100000	U
71-43-2	Benzene	100	2500	U
108-86-1	Bromobenzene	100	2500	U
74-97-5	Bromochloromethane	100	2500	U
75-27-4	Bromodichloromethane	100	2500	U
75-25-2	Bromoform	100	2500	U
74-83-9	Bromomethane	100	25000	U
78-93-3	2-Butanone	100	100000	U
104-51-8	n-Butyl Benzene	100	2500	U
135-98-8	sec-Butyl Benzene	100	2500	U
98-06-6	tert-Butylbenzene	100	2500	U
75-15-0	Carbon disulfide	100	2500	U
56-23-5	Carbon tetrachloride	100	2500	U
108-90-7	Chlorobenzene	100	2500	U
75-00-3	Chloroethane	100	25000	U
67-66-3	Chloroform	100	2500	U
74-87-3	Chloromethane	100	5000	U
95-49-8	2-Chlorotoluene	100	2500	U
106-43-4	4-Chlorotoluene	100	2500	U
96-12-8	1,2-Dibromo-3-chloropropane	100	2500	U
124-48-1	Dibromochloromethane	100	2500	U
106-93-4	1,2-Dibromoethane (EDB)	100	2500	U
74-95-3	Dibromomethane	100	2500	U
95-50-1	1,2-Dichlorobenzene	100	2500	U
106-46-7	1,4-Dichlorobenzene	100	2500	U
541-73-1	1,3-Dichlorobenzene	100	2500	U
75-71-8	Dichlorodifluoromethane	100	2500	U
75-34-3	1,1-Dichloroethane	100	2500	U
107-06-2	1,2-Dichloroethane	100	2500	U
156-60-5	trans-1,2-Dichloroethene	100	2500	U
156-59-2	cis-1,2-Dichloroethene	100	2500	U
75-35-4	1,1-Dichloroethene	100	2500	U
590-20-7	2,2-Dichloropropane	100	2500	U
78-87-5	1,2-Dichloropropane	100	2500	U
142-28-9	1,3-Dichloropropane	100	2500	U
10061-01-5	cis-1,3-Dichloropropene	100	2500	U
10061-02-6	trans-1,3-Dichloropropene	100	2500	U
563-58-6	1,1-Dichloropropene	100	2500	U
108-20-3	Diisopropyl Ether	100	2500	U
100-41-4	Ethylbenzene	100	7200	D

06/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP14 (23.3-25')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-05 File ID: 10A.D
 Sampled: 05/08/14 11:40 Prepared: 05/13/14 11:21 Analyzed: 05/18/14 23:57
 Solids: 91.89 Preparation: EPA 5030B Initial/Final: 10.81 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	100	10000	U
110-54-3	n-Hexane	100	2500	U
591-78-6	2-Hexanone	100	100000	U
98-82-8	Isopropylbenzene	100	2200	J, D
99-87-6	p-Isopropyltoluene	100	1200	J, D
75-09-2	Methylene chloride	100	10000	U
108-10-1	4-Methyl-2-pentanone	100	100000	U
1634-04-4	Methyl t-Butyl Ether	100	2500	U
91-20-3	Naphthalene	100	28000	D
103-65-1	n-Propyl Benzene	100	12000	D
100-42-5	Styrene	100	2500	U
630-20-6	1,1,1,2-Tetrachloroethane	100	2500	U
79-34-5	1,1,2,2-Tetrachloroethane	100	2500	U
127-18-4	Tetrachloroethene	100	2500	U
109-99-9	Tetrahydrofuran	100	50000	U
108-88-3	Toluene	100	2000	J, D
87-61-6	1,2,3-Trichlorobenzene	100	10000	U
120-82-1	1,2,4-Trichlorobenzene	100	10000	U
71-55-6	1,1,1-Trichloroethane	100	2500	U
79-00-5	1,1,2-Trichloroethane	100	2500	U
79-01-6	Trichloroethene	100	2500	U
75-69-4	Trichlorofluoromethane	100	2500	U
96-18-4	1,2,3-Trichloropropane	100	5000	U
76-13-1	1,1,2-Trichlorotrifluoroethane	100	2500	U
108-67-8	1,3,5-Trimethylbenzene	100	54000	D
95-63-6	1,2,4-Trimethylbenzene	100	170000	D
75-01-4	Vinyl chloride	100	2500	U
108-38-3/1	m,p-Xylene	100	40000	D
95-47-6	o-Xylene	100	2100	J, D
1330-20-7	Xylenes, total	100	42000	D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.2	105	86.2 - 117	
Toluene-d8	25.00	25.2	101	90.4 - 108	
4-Bromofluorobenzene	25.00	25.0	99.9	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	573398	5.42	671549	5.42	
1,4-Difluorobenzene	952043	6.21	1071800	6.22	
Chlorobenzene-d5	871035	9.07	939880	9.08	
1,4-Dichlorobenzene-d4	398258	11.17	432259	11.17	

026/29/14

ORGANIC ANALYSIS DATA SHEET

Field Blank #1 (MeOH)

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-06 File ID: 04B.D
 Sampled: 05/08/14 11:50 Prepared: 05/13/14 11:21 Analyzed: 05/18/14 19:56
 Solids: _____ Preparation: EPA 5030B Initial/Final: 10 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
67-64-1	Acetone	1	1000	U
71-43-2	Benzene	1	25	U
108-86-1	Bromobenzene	1	25	U
74-97-5	Bromochloromethane	1	25	U
75-27-4	Bromodichloromethane	1	25	U
75-25-2	Bromoform	1	25	U
74-83-9	Bromomethane	1	250	U
78-93-3	2-Butanone	1	1000	U
104-51-8	n-Butyl Benzene	1	25	U
135-98-8	sec-Butyl Benzene	1	25	U
98-06-6	tert-Butylbenzene	1	25	U
75-15-0	Carbon disulfide	1	25	U
56-23-5	Carbon tetrachloride	1	25	U
108-90-7	Chlorobenzene	1	25	U
75-00-3	Chloroethane	1	250	U
67-66-3	Chloroform	1	25	U
74-87-3	Chloromethane	1	50	U
95-49-8	2-Chlorotoluene	1	25	U
106-43-4	4-Chlorotoluene	1	25	U
96-12-8	1,2-Dibromo-3-chloropropane	1	25	U
124-48-1	Dibromochloromethane	1	25	U
106-93-4	1,2-Dibromoethane (EDB)	1	25	U
74-95-3	Dibromomethane	1	25	U
95-50-1	1,2-Dichlorobenzene	1	25	U
106-46-7	1,4-Dichlorobenzene	1	25	U
541-73-1	1,3-Dichlorobenzene	1	25	U
75-71-8	Dichlorodifluoromethane	1	25	U
75-34-3	1,1-Dichloroethane	1	25	U
107-06-2	1,2-Dichloroethane	1	25	U
156-60-5	trans-1,2-Dichloroethene	1	25	U
156-59-2	cis-1,2-Dichloroethene	1	25	U
75-35-4	1,1-Dichloroethene	1	25	U
590-20-7	2,2-Dichloropropane	1	25	U
78-87-5	1,2-Dichloropropane	1	25	U
142-28-9	1,3-Dichloropropane	1	25	U
10061-01-5	cis-1,3-Dichloropropene	1	25	U
10061-02-6	trans-1,3-Dichloropropene	1	25	U
563-58-6	1,1-Dichloropropene	1	25	U
108-20-3	Diisopropyl Ether	1	25	U
100-41-4	Ethylbenzene	1	25	U

06/20/14

ORGANIC ANALYSIS DATA SHEET

Field Blank #1 (MeOH)

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-06 File ID: 04B.D
 Sampled: 05/08/14 11:50 Prepared: 05/13/14 11:21 Analyzed: 05/18/14 19:56
 Solids: Preparation: EPA 5030B Initial/Final: 10 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
87-68-3	Hexachlorobutadiene	1	100	U
110-54-3	n-Hexane	1	25	U
591-78-6	2-Hexanone	1	1000	U
98-82-8	Isopropylbenzene	1	25	U
99-87-6	p-Isopropyltoluene	1	25	U
75-09-2	Methylene chloride	1	100	U
108-10-1	4-Methyl-2-pentanone	1	1000	U
1634-04-4	Methyl t-Butyl Ether	1	25	U
91-20-3	Naphthalene	1	250	U
103-65-1	n-Propyl Benzene	1	25	U
100-42-5	Styrene	1	25	U
630-20-6	1,1,1,2-Tetrachloroethane	1	25	U
79-34-5	1,1,2,2-Tetrachloroethane	1	25	U
127-18-4	Tetrachloroethene	1	25	U
109-99-9	Tetrahydrofuran	1	500	U
108-88-3	Toluene	1	25	U
87-61-6	1,2,3-Trichlorobenzene	1	100	U
120-82-1	1,2,4-Trichlorobenzene	1	100	U
71-55-6	1,1,1-Trichloroethane	1	25	U
79-00-5	1,1,2-Trichloroethane	1	25	U
79-01-6	Trichloroethene	1	25	U
75-69-4	Trichlorofluoromethane	1	25	U
96-18-4	1,2,3-Trichloropropane	1	50	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	25	U
108-67-8	1,3,5-Trimethylbenzene	1	25	U
95-63-6	1,2,4-Trimethylbenzene	1	7.0	J
75-01-4	Vinyl chloride	1	25	U
108-38-3/1	m,p-Xylene	1	6.0	B, J ²⁵⁰ 500
95-47-6	o-Xylene	1	5.5	J
1330-20-7	Xylenes, total	1	12	J

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.6	102	86.2 - 117	
Toluene-d8	25.00	24.8	99.0	90.4 - 108	
4-Bromofluorobenzene	25.00	24.5	97.9	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	539777	5.42	592534	5.42	
1,4-Difluorobenzene	888455	6.22	952415	6.22	
Chlorobenzene-d5	794779	9.07	838029	9.07	
1,4-Dichlorobenzene-d4	352269	11.17	376498	11.17	

026/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP14 (28.3-30')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-07 File ID: 10B.D
 Sampled: 05/08/14 11:58 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 00:19
 Solids: 89.44 Preparation: EPA 5030B Initial/Final: 11.19 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	100	100000	U
71-43-2	Benzene	100	2500	U
108-86-1	Bromobenzene	100	2500	U
74-97-5	Bromochloromethane	100	2500	U
75-27-4	Bromodichloromethane	100	2500	U
75-25-2	Bromoform	100	2500	U
74-83-9	Bromomethane	100	25000	U
78-93-3	2-Butanone	100	100000	U
104-51-8	n-Butyl Benzene	100	2500	U
135-98-8	sec-Butyl Benzene	100	2000	J, D
98-06-6	tert-Butylbenzene	100	20000	D
75-15-0	Carbon disulfide	100	2500	U
56-23-5	Carbon tetrachloride	100	2500	U
108-90-7	Chlorobenzene	100	2500	U
75-00-3	Chloroethane	100	25000	U
67-66-3	Chloroform	100	2500	U
74-87-3	Chloromethane	100	5000	U
95-49-8	2-Chlorotoluene	100	2500	U
106-43-4	4-Chlorotoluene	100	2500	U
96-12-8	1,2-Dibromo-3-chloropropane	100	2500	U
124-48-1	Dibromochloromethane	100	2500	U
106-93-4	1,2-Dibromoethane (EDB)	100	2500	U
74-95-3	Dibromomethane	100	2500	U
95-50-1	1,2-Dichlorobenzene	100	2500	U
106-46-7	1,4-Dichlorobenzene	100	2500	U
541-73-1	1,3-Dichlorobenzene	100	2500	U
75-71-8	Dichlorodifluoromethane	100	2500	U
75-34-3	1,1-Dichloroethane	100	2500	U
107-06-2	1,2-Dichloroethane	100	2500	U
156-60-5	trans-1,2-Dichloroethene	100	2500	U
156-59-2	cis-1,2-Dichloroethene	100	2500	U
75-35-4	1,1-Dichloroethene	100	2500	U
590-20-7	2,2-Dichloropropane	100	2500	U
78-87-5	1,2-Dichloropropane	100	2500	U
142-28-9	1,3-Dichloropropane	100	2500	U
10061-01-5	cis-1,3-Dichloropropene	100	2500	U
10061-02-6	trans-1,3-Dichloropropene	100	2500	U
563-58-6	1,1-Dichloropropene	100	2500	U
108-20-3	Diisopropyl Ether	100	2500	U
100-41-4	Ethylbenzene	100	11000	D

026/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP14 (28.3-30')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-07 File ID: 10B.D
 Sampled: 05/08/14 11:58 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 00:19
 Solids: 89.44 Preparation: EPA 5030B Initial/Final: 11.19 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	100	10000	U
110-54-3	n-Hexane	100	2500	U
591-78-6	2-Hexanone	100	100000	U
98-82-8	Isopropylbenzene	100	2500	D
99-87-6	p-Isopropyltoluene	100	1000	J, D
75-09-2	Methylene chloride	100	10000	U
108-10-1	4-Methyl-2-pentanone	100	100000	U
1634-04-4	Methyl t-Butyl Ether	100	2500	U
91-20-3	Naphthalene	100	22000	J, D
103-65-1	n-Propyl Benzene	100	12000	D
100-42-5	Styrene	100	2500	U
630-20-6	1,1,1,2-Tetrachloroethane	100	2500	U
79-34-5	1,1,2,2-Tetrachloroethane	100	2500	U
127-18-4	Tetrachloroethene	100	2500	U
109-99-9	Tetrahydrofuran	100	50000	U
108-88-3	Toluene	100	2500	U
87-61-6	1,2,3-Trichlorobenzene	100	10000	U
120-82-1	1,2,4-Trichlorobenzene	100	10000	U
71-55-6	1,1,1-Trichloroethane	100	2500	U
79-00-5	1,1,2-Trichloroethane	100	2500	U
79-01-6	Trichloroethene	100	2500	U
75-69-4	Trichlorofluoromethane	100	2500	U
96-18-4	1,2,3-Trichloropropane	100	5000	U
76-13-1	1,1,2-Trichlorotrifluoroethane	100	2500	U
108-67-8	1,3,5-Trimethylbenzene	100	46000	D
95-63-6	1,2,4-Trimethylbenzene	100	140000	D
75-01-4	Vinyl chloride	100	2500	U
108-38-3/1	m,p-Xylene	100	74000	D
95-47-6	o-Xylene	100	1900	J, D
1330-20-7	Xylenes, total	100	76000	D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	24.7	98.9	86.2 - 117	
Toluene-d8	25.00	25.1	100	90.4 - 108	
4-Bromofluorobenzene	25.00	24.4	97.5	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	564276	5.41	592534	5.42	
1,4-Difluorobenzene	905454	6.21	952415	6.22	
Chlorobenzene-d5	809649	9.07	838029	9.07	
1,4-Dichlorobenzene-d4	355795	11.16	376498	11.17	

02/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP14 (31.7-33.3')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-08 File ID: 11B.D
 Sampled: 05/08/14 12:15 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 01:03
 Solids: 89.82 Preparation: EPA 5030B Initial/Final: 11.77 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	20	19000	U
71-43-2	Benzene	20	470	U
108-86-1	Bromobenzene	20	470	U
74-97-5	Bromochloromethane	20	470	U
75-27-4	Bromodichloromethane	20	470	U
75-25-2	Bromoform	20	470	U
74-83-9	Bromomethane	20	4700	U
78-93-3	2-Butanone	20	19000	U
104-51-8	n-Butyl Benzene	20	470	U
135-98-8	sec-Butyl Benzene	20	450	J, D
98-06-6	tert-Butylbenzene	20	4400	D
75-15-0	Carbon disulfide	20	470	U
56-23-5	Carbon tetrachloride	20	470	U
108-90-7	Chlorobenzene	20	470	U
75-00-3	Chloroethane	20	4700	U
67-66-3	Chloroform	20	470	U
74-87-3	Chloromethane	20	950	U
95-49-8	2-Chlorotoluene	20	470	U
106-43-4	4-Chlorotoluene	20	470	U
96-12-8	1,2-Dibromo-3-chloropropane	20	470	U
124-48-1	Dibromochloromethane	20	470	U
106-93-4	1,2-Dibromoethane (EDB)	20	470	U
74-95-3	Dibromomethane	20	470	U
95-50-1	1,2-Dichlorobenzene	20	470	U
106-46-7	1,4-Dichlorobenzene	20	470	U
541-73-1	1,3-Dichlorobenzene	20	470	U
75-71-8	Dichlorodifluoromethane	20	470	U
75-34-3	1,1-Dichloroethane	20	470	U
107-06-2	1,2-Dichloroethane	20	470	U
156-60-5	trans-1,2-Dichloroethene	20	470	U
156-59-2	cis-1,2-Dichloroethene	20	470	U
75-35-4	1,1-Dichloroethene	20	470	U
590-20-7	2,2-Dichloropropane	20	470	U
78-87-5	1,2-Dichloropropane	20	470	U
142-28-9	1,3-Dichloropropane	20	470	U
10061-01-5	cis-1,3-Dichloropropene	20	470	U
10061-02-6	trans-1,3-Dichloropropene	20	470	U
563-58-6	1,1-Dichloropropene	20	470	U
108-20-3	Diisopropyl Ether	20	470	U
100-41-4	Ethylbenzene	20	5100	D

Handwritten signature/initials: CAG/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP14 (31.7-33.3')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-08 File ID: 11B.D
 Sampled: 05/08/14 12:15 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 01:03
 Solids: 89.82 Preparation: EPA 5030B Initial/Final: 11.77 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	20	1900	U
110-54-3	n-Hexane	20	470	U
591-78-6	2-Hexanone	20	19000	U
98-82-8	Isopropylbenzene	20	560	D
99-87-6	p-Isopropyltoluene	20	240	J, D
75-09-2	Methylene chloride	20	1900	U
108-10-1	4-Methyl-2-pentanone	20	19000	U
1634-04-4	Methyl t-Butyl Ether	20	470	U
91-20-3	Naphthalene	20	5300	D
103-65-1	n-Propyl Benzene	20	2400	D
100-42-5	Styrene	20	470	U
630-20-6	1,1,1,2-Tetrachloroethane	20	470	U
79-34-5	1,1,2,2-Tetrachloroethane	20	470	U
127-18-4	Tetrachloroethene	20	470	U
109-99-9	Tetrahydrofuran	20	9500	U
108-88-3	Toluene	20	180	J, D
87-61-6	1,2,3-Trichlorobenzene	20	1900	U
120-82-1	1,2,4-Trichlorobenzene	20	1900	U
71-55-6	1,1,1-Trichloroethane	20	470	U
79-00-5	1,1,2-Trichloroethane	20	470	U
79-01-6	Trichloroethene	20	470	U
75-69-4	Trichlorofluoromethane	20	470	U
96-18-4	1,2,3-Trichloropropane	20	950	U
76-13-1	1,1,2-Trichlorotrifluoroethane	20	470	U
108-67-8	1,3,5-Trimethylbenzene	20	9800	D
95-63-6	1,2,4-Trimethylbenzene	20	29000	D
75-01-4	Vinyl chloride	20	470	U
108-38-3/1	m,p-Xylene	20	31000	D
95-47-6	o-Xylene	20	6000	D
1330-20-7	Xylenes, total	20	37000	D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	24.5	98.1	86.2 - 117	
Toluene-d8	25.00	25.0	100	90.4 - 108	
4-Bromofluorobenzene	25.00	24.6	98.5	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	570261	5.42	592534	5.42	
1,4-Difluorobenzene	906649	6.21	952415	6.22	
Chlorobenzene-d5	806407	9.07	838029	9.07	
1,4-Dichlorobenzene-d4	362285	11.17	376498	11.17	

06/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP15 (1.7-3.3')

Laboratory:	<u>ECCS</u>	SDG:	
Client:	<u>GZA GeoEnvironmental, Inc</u>	Project:	<u>Wedron Silica - Wedron, IL</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>A141916-09</u>
		File ID:	<u>05B.D</u>
Sampled:	<u>05/08/14 12:31</u>	Prepared:	<u>05/13/14 11:21</u>
		Analyzed:	<u>05/18/14 20:40</u>
Solids:	<u>91.03</u>	Preparation:	<u>EPA 5030B</u>
		Initial/Final:	<u>11.66 g / 500 mL</u>
Batch:	<u>A405028</u>	Sequence:	<u>A4E1802</u>
		Calibration:	<u>A140523</u>
		Instrument:	<u>3188A02979</u>

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	940	U
71-43-2	Benzene	1	24	U
108-86-1	Bromobenzene	1	24	U
74-97-5	Bromochloromethane	1	24	U
75-27-4	Bromodichloromethane	1	24	U
75-25-2	Bromoform	1	24	U
74-83-9	Bromomethane	1	240	U
78-93-3	2-Butanone	1	940	U
104-51-8	n-Butyl Benzene	1	24	U
135-98-8	sec-Butyl Benzene	1	24	U
98-06-6	tert-Butylbenzene	1	24	U
75-15-0	Carbon disulfide	1	24	U
56-23-5	Carbon tetrachloride	1	24	U
108-90-7	Chlorobenzene	1	24	U
75-00-3	Chloroethane	1	240	U
67-66-3	Chloroform	1	24	U
74-87-3	Chloromethane	1	47	U
95-49-8	2-Chlorotoluene	1	24	U
106-43-4	4-Chlorotoluene	1	24	U
96-12-8	1,2-Dibromo-3-chloropropane	1	24	U
124-48-1	Dibromochloromethane	1	24	U
106-93-4	1,2-Dibromoethane (EDB)	1	24	U
74-95-3	Dibromomethane	1	24	U
95-50-1	1,2-Dichlorobenzene	1	24	U
106-46-7	1,4-Dichlorobenzene	1	24	U
541-73-1	1,3-Dichlorobenzene	1	24	U
75-71-8	Dichlorodifluoromethane	1	24	U
75-34-3	1,1-Dichloroethane	1	24	U
107-06-2	1,2-Dichloroethane	1	24	U
156-60-5	trans-1,2-Dichloroethene	1	24	U
156-59-2	cis-1,2-Dichloroethene	1	24	U
75-35-4	1,1-Dichloroethene	1	24	U
590-20-7	2,2-Dichloropropane	1	24	U
78-87-5	1,2-Dichloropropane	1	24	U
142-28-9	1,3-Dichloropropane	1	24	U
10061-01-5	cis-1,3-Dichloropropene	1	24	U
10061-02-6	trans-1,3-Dichloropropene	1	24	U
563-58-6	1,1-Dichloropropene	1	24	U
108-20-3	Diisopropyl Ether	1	24	U
100-41-4	Ethylbenzene	1	9.9	J

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP15 (1.7-3.3')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-09 File ID: 05B.D
 Sampled: 05/08/14 12:31 Prepared: 05/13/14 11:21 Analyzed: 05/18/14 20:40
 Solids: 91.03 Preparation: EPA 5030B Initial/Final: 11.66 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	94	U
110-54-3	n-Hexane	1	24	U
591-78-6	2-Hexanone	1	940	U
98-82-8	Isopropylbenzene	1	24	U
99-87-6	p-Isopropyltoluene	1	24	U
75-09-2	Methylene chloride	1	94	U
108-10-1	4-Methyl-2-pentanone	1	940	U
1634-04-4	Methyl t-Butyl Ether	1	24	U
91-20-3	Naphthalene	1	18	B, J
103-65-1	n-Propyl Benzene	1	7.1	J
100-42-5	Styrene	1	24	U
630-20-6	1,1,1,2-Tetrachloroethane	1	24	U
79-34-5	1,1,2,2-Tetrachloroethane	1	24	U
127-18-4	Tetrachloroethene	1	24	U
109-99-9	Tetrahydrofuran	1	470	U
108-88-3	Toluene	1	24	U
87-61-6	1,2,3-Trichlorobenzene	1	94	U
120-82-1	1,2,4-Trichlorobenzene	1	94	U
71-55-6	1,1,1-Trichloroethane	1	24	U
79-00-5	1,1,2-Trichloroethane	1	24	U
79-01-6	Trichloroethene	1	24	U
75-69-4	Trichlorofluoromethane	1	24	U
96-18-4	1,2,3-Trichloropropane	1	47	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	24	U
108-67-8	1,3,5-Trimethylbenzene	1	26	
95-63-6	1,2,4-Trimethylbenzene	1	76	J
75-01-4	Vinyl chloride	1	24	U
108-38-3/1	m,p-Xylene	1	57	
95-47-6	o-Xylene	1	8.0	J 240
1330-20-7	Xylenes, total	1	65	J

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.5	102	86.2 - 117	
Toluene-d8	25.00	24.8	99.2	90.4 - 108	
4-Bromofluorobenzene	25.00	24.8	99.3	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	497936	5.42	592534	5.42	
1,4-Difluorobenzene	813582	6.22	952415	6.22	
Chlorobenzene-d5	724316	9.08	838029	9.07	
1,4-Dichlorobenzene-d4	325691	11.17	376498	11.17	

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP15 (6.7-8.3')

Laboratory:	<u>ECCS</u>	SDG:	
Client:	<u>GZA GeoEnvironmental, Inc</u>	Project:	<u>Wedron Silica - Wedron, IL</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>A141916-10</u>
		File ID:	<u>15B.D</u>
Sampled:	<u>05/08/14 12:41</u>	Prepared:	<u>05/13/14 11:21</u>
		Analyzed:	<u>05/19/14 03:59</u>
Solids:	<u>86.81</u>	Preparation:	<u>EPA 5030B</u>
		Initial/Final:	<u>11.87 g / 500 mL</u>
Batch:	<u>A405028</u>	Sequence:	<u>A4E1802</u>
		Calibration:	<u>A140523</u>
		Instrument:	<u>3188A02979</u>

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	970	U
71-43-2	Benzene	1	24	U
108-86-1	Bromobenzene	1	24	U
74-97-5	Bromochloromethane	1	24	U
75-27-4	Bromodichloromethane	1	24	U
75-25-2	Bromoform	1	24	U
74-83-9	Bromomethane	1	240	U
78-93-3	2-Butanone	1	970	U
104-51-8	n-Butyl Benzene	1	24	U
135-98-8	sec-Butyl Benzene	1	24	U
98-06-6	tert-Butylbenzene	1	24	U
75-15-0	Carbon disulfide	1	24	U
56-23-5	Carbon tetrachloride	1	24	U
108-90-7	Chlorobenzene	1	24	U
75-00-3	Chloroethane	1	240	U
67-66-3	Chloroform	1	24	U
74-87-3	Chloromethane	1	49	U
95-49-8	2-Chlorotoluene	1	24	U
106-43-4	4-Chlorotoluene	1	24	U
96-12-8	1,2-Dibromo-3-chloropropane	1	24	U
124-48-1	Dibromochloromethane	1	24	U
106-93-4	1,2-Dibromoethane (EDB)	1	24	U
74-95-3	Dibromomethane	1	24	U
95-50-1	1,2-Dichlorobenzene	1	24	U
106-46-7	1,4-Dichlorobenzene	1	24	U
541-73-1	1,3-Dichlorobenzene	1	24	U
75-71-8	Dichlorodifluoromethane	1	24	U
75-34-3	1,1-Dichloroethane	1	24	U
107-06-2	1,2-Dichloroethane	1	24	U
156-60-5	trans-1,2-Dichloroethene	1	24	U
156-59-2	cis-1,2-Dichloroethene	1	24	U
75-35-4	1,1-Dichloroethene	1	24	U
590-20-7	2,2-Dichloropropane	1	24	U
78-87-5	1,2-Dichloropropane	1	24	U
142-28-9	1,3-Dichloropropane	1	24	U
10061-01-5	cis-1,3-Dichloropropene	1	24	U
10061-02-6	trans-1,3-Dichloropropene	1	24	U
563-58-6	1,1-Dichloropropene	1	24	U
108-20-3	Diisopropyl Ether	1	24	U
100-41-4	Ethylbenzene	1	24	U

02/27/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP15 (6.7-8.3')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-10 File ID: 15B.D
 Sampled: 05/08/14 12:41 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 03:59
 Solids: 86.81 Preparation: EPA 5030B Initial/Final: 11.87 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	97	U
110-54-3	n-Hexane	1	24	U
591-78-6	2-Hexanone	1	970	U
98-82-8	Isopropylbenzene	1	24	U
99-87-6	p-Isopropyltoluene	1	24	U
75-09-2	Methylene chloride	1	97	U
108-10-1	4-Methyl-2-pentanone	1	970	U
1634-04-4	Methyl t-Butyl Ether	1	24	U
91-20-3	Naphthalene	1	240	U
103-65-1	n-Propyl Benzene	1	24	U
100-42-5	Styrene	1	24	U
630-20-6	1,1,1,2-Tetrachloroethane	1	24	U
79-34-5	1,1,2,2-Tetrachloroethane	1	24	U
127-18-4	Tetrachloroethene	1	24	U
109-99-9	Tetrahydrofuran	1	490	U
108-88-3	Toluene	1	4.9	B, J 240
87-61-6	1,2,3-Trichlorobenzene	1	97	U
120-82-1	1,2,4-Trichlorobenzene	1	97	U
71-55-6	1,1,1-Trichloroethane	1	24	U
79-00-5	1,1,2-Trichloroethane	1	24	U
79-01-6	Trichloroethene	1	24	U
75-69-4	Trichlorofluoromethane	1	24	U
96-18-4	1,2,3-Trichloropropane	1	49	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	24	U
108-67-8	1,3,5-Trimethylbenzene	1	4.9	J
95-63-6	1,2,4-Trimethylbenzene	1	7.3	J 240
75-01-4	Vinyl chloride	1	24	U
108-38-3/1	m,p-Xylene	1	10	B, J 480
95-47-6	o-Xylene	1	7.3	J 240
1330-20-7	Xylenes, total	1	17	J 720

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.7	103	86.2 - 117	
Toluene-d8	25.00	25.0	99.8	90.4 - 108	
4-Bromofluorobenzene	25.00	24.8	99.1	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	513946	5.41	474134	5.42	
1,4-Difluorobenzene	841022	6.22	800388	6.21	
Chlorobenzene-d5	755647	9.07	723497	9.07	
1,4-Dichlorobenzene-d4	335996	11.16	331266	11.17	

026/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP15 (11.7-13.3')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-11 File ID: 17B.D
 Sampled: 05/08/14 13:00 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 05:28
 Solids: 89.63 Preparation: EPA 5030B Initial/Final: 10.33 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	110	U
110-54-3	n-Hexane	1	27	U
591-78-6	2-Hexanone	1	1100	U
98-82-8	Isopropylbenzene	1	27	U
99-87-6	p-Isopropyltoluene	1	27	U
75-09-2	Methylene chloride	1	110	U
108-10-1	4-Methyl-2-pentanone	1	1100	U
1634-04-4	Methyl t-Butyl Ether	1	27	U
91-20-3	Naphthalene	1	270	U
103-65-1	n-Propyl Benzene	1	27	U
100-42-5	Styrene	1	27	U
630-20-6	1,1,1,2-Tetrachloroethane	1	27	U
79-34-5	1,1,2,2-Tetrachloroethane	1	27	U
127-18-4	Tetrachloroethene	1	27	U
109-99-9	Tetrahydrofuran	1	540	U
108-88-3	Toluene	1	4.9	B, J 270
87-61-6	1,2,3-Trichlorobenzene	1	110	U
120-82-1	1,2,4-Trichlorobenzene	1	110	U
71-55-6	1,1,1-Trichloroethane	1	27	U
79-00-5	1,1,2-Trichloroethane	1	27	U
79-01-6	Trichloroethene	1	27	U
75-69-4	Trichlorofluoromethane	1	27	U
96-18-4	1,2,3-Trichloropropane	1	54	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	27	U
108-67-8	1,3,5-Trimethylbenzene	1	27	U
95-63-6	1,2,4-Trimethylbenzene	1	27	U
75-01-4	Vinyl chloride	1	27	U
108-38-3/1	m,p-Xylene	1	5.9	B, J 270 or 540
95-47-6	o-Xylene	1	5.4	J 270
1330-20-7	Xylenes, total	1	11	J 810

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.8	107	86.2 - 117	
Toluene-d8	25.00	25.1	100	90.4 - 108	
4-Bromofluorobenzene	25.00	24.9	99.6	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	462617	5.41	474134	5.42	
1,4-Difluorobenzene	770721	6.22	800388	6.21	
Chlorobenzene-d5	699502	9.07	723497	9.07	
1,4-Dichlorobenzene-d4	316126	11.16	331266	11.17	

CEG/2014

ORGANIC ANALYSIS DATA SHEET

Equipment Blank #1

Laboratory:	<u>ECCS</u>	SDG:	
Client:	<u>GZA GeoEnvironmental, Inc</u>	Project:	<u>Wedron Silica - Wedron, IL</u>
Matrix:	<u>Water</u>	Laboratory ID:	<u>A141916-12</u>
		File ID:	<u>18B.D</u>
Sampled:	<u>05/08/14 14:00</u>	Prepared:	<u>05/13/14 11:21</u>
		Analyzed:	<u>05/19/14 06:12</u>
Solids:		Preparation:	<u>EPA 5030B</u>
		Initial/Final:	<u>10 mL / 500 mL</u>
Batch:	<u>A405098</u>	Sequence:	<u>A4E1802</u>
		Calibration:	<u>A140523</u>
		Instrument:	<u>3188A02979</u>

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	1	270	J
71-43-2	Benzene	1	0.50	U J
108-86-1	Bromobenzene	1	0.50	U
74-97-5	Bromochloromethane	1	0.50	U
75-27-4	Bromodichloromethane	1	0.50	U
75-25-2	Bromoform	1	0.50	U
74-83-9	Bromomethane	1	5.0	U
78-93-3	2-Butanone	1	20	U
104-51-8	n-Butyl Benzene	1	0.50	U
135-98-8	sec-Butyl Benzene	1	0.50	U
98-06-6	tert-Butylbenzene	1	0.50	U
75-15-0	Carbon disulfide	1	0.50	U
56-23-5	Carbon tetrachloride	1	0.50	U
108-90-7	Chlorobenzene	1	0.50	U
75-00-3	Chloroethane	1	5.0	U
67-66-3	Chloroform	1	0.50	U
74-87-3	Chloromethane	1	4.0	J
95-49-8	2-Chlorotoluene	1	0.50	U J
106-43-4	4-Chlorotoluene	1	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.50	U
124-48-1	Dibromochloromethane	1	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	1	0.50	U
74-95-3	Dibromomethane	1	0.50	U
95-50-1	1,2-Dichlorobenzene	1	0.50	U
106-46-7	1,4-Dichlorobenzene	1	0.50	U
541-73-1	1,3-Dichlorobenzene	1	0.50	U
75-71-8	Dichlorodifluoromethane	1	0.50	U
75-34-3	1,1-Dichloroethane	1	0.50	U
107-06-2	1,2-Dichloroethane	1	0.50	U
156-60-5	trans-1,2-Dichloroethene	1	0.50	U
156-59-2	cis-1,2-Dichloroethene	1	0.50	U
75-35-4	1,1-Dichloroethene	1	0.50	U
590-20-7	2,2-Dichloropropane	1	0.50	U
78-87-5	1,2-Dichloropropane	1	0.50	U
142-28-9	1,3-Dichloropropane	1	0.50	U
10061-01-5	cis-1,3-Dichloropropene	1	0.50	U
10061-02-6	trans-1,3-Dichloropropene	1	0.50	U
563-58-6	1,1-Dichloropropene	1	0.50	U
108-20-3	Diisopropyl Ether	1	0.50	U
100-41-4	Ethylbenzene	1	0.50	U

OLG/2014

ORGANIC ANALYSIS DATA SHEET

Equipment Blank #1

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Water Laboratory ID: A141916-12 File ID: 18B.D
 Sampled: 05/08/14 14:00 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 06:12
 Solids: _____ Preparation: EPA 5030B Initial/Final: 10 mL / 500 mL
 Batch: A405098 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	1	2.0	U JS
110-54-3	n-Hexane	1	0.50	U
591-78-6	2-Hexanone	1	20	U
98-82-8	Isopropylbenzene	1	0.50	U
99-87-6	p-Isopropyltoluene	1	0.50	U
75-09-2	Methylene chloride	1	2.0	U
108-10-1	4-Methyl-2-pentanone	1	20	U
1634-04-4	Methyl t-Butyl Ether	1	0.50	U
91-20-3	Naphthalene	1	5.0	U
103-65-1	n-Propyl Benzene	1	0.50	U
100-42-5	Styrene	1	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.50	U
127-18-4	Tetrachloroethene	1	0.50	U
109-99-9	Tetrahydrofuran	1	10	U
108-88-3	Toluene	1	8.5	U JS
87-61-6	1,2,3-Trichlorobenzene	1	2.0	U JS
120-82-1	1,2,4-Trichlorobenzene	1	2.0	U
71-55-6	1,1,1-Trichloroethane	1	0.50	U
79-00-5	1,1,2-Trichloroethane	1	0.50	U
79-01-6	Trichloroethene	1	0.50	U
75-69-4	Trichlorofluoromethane	1	0.50	U
96-18-4	1,2,3-Trichloropropane	1	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	0.50	U
108-67-8	1,3,5-Trimethylbenzene	1	0.50	U
95-63-6	1,2,4-Trimethylbenzene	1	0.50	U
75-01-4	Vinyl chloride	1	0.50	U
108-38-3/1	m,p-Xylene	1	1.0	U
95-47-6	o-Xylene	1	0.50	U
1330-20-7	Xylenes, total	1	1.5	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.4	105	82.2 - 117	
Toluene-d8	25.00	25.5	102	82.6 - 111	
4-Bromofluorobenzene	25.00	25.3	101	88.4 - 108	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	465195	5.42	474134	5.42	
1,4-Difluorobenzene	767957	6.22	800388	6.21	
Chlorobenzene-d5	708580	9.07	723497	9.07	
1,4-Dichlorobenzene-d4	335199	11.17	331266	11.17	

06/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP15 (16.7-18.3')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-13 File ID: 19B.D
 Sampled: 05/08/14 13:15 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 06:56
 Solids: 86.93 Preparation: EPA 5030B Initial/Final: 11.16 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1000	U
71-43-2	Benzene	1	26	U
108-86-1	Bromobenzene	1	26	U
74-97-5	Bromochloromethane	1	26	U
75-27-4	Bromodichloromethane	1	26	U
75-25-2	Bromoform	1	26	U
74-83-9	Bromomethane	1	260	U
78-93-3	2-Butanone	1	1000	U
104-51-8	n-Butyl Benzene	1	26	U
135-98-8	sec-Butyl Benzene	1	26	U
98-06-6	tert-Butylbenzene	1	26	U
75-15-0	Carbon disulfide	1	26	U
56-23-5	Carbon tetrachloride	1	26	U
108-90-7	Chlorobenzene	1	26	U
75-00-3	Chloroethane	1	260	U
67-66-3	Chloroform	1	26	U
74-87-3	Chloromethane	1	52	U
95-49-8	2-Chlorotoluene	1	26	U
106-43-4	4-Chlorotoluene	1	26	U
96-12-8	1,2-Dibromo-3-chloropropane	1	26	U
124-48-1	Dibromochloromethane	1	26	U
106-93-4	1,2-Dibromoethane (EDB)	1	26	U
74-95-3	Dibromomethane	1	26	U
95-50-1	1,2-Dichlorobenzene	1	26	U
106-46-7	1,4-Dichlorobenzene	1	26	U
541-73-1	1,3-Dichlorobenzene	1	26	U
75-71-8	Dichlorodifluoromethane	1	26	U
75-34-3	1,1-Dichloroethane	1	26	U
107-06-2	1,2-Dichloroethane	1	26	U
156-60-5	trans-1,2-Dichloroethene	1	26	U
156-59-2	cis-1,2-Dichloroethene	1	26	U
75-35-4	1,1-Dichloroethene	1	26	U
590-20-7	2,2-Dichloropropane	1	26	U
78-87-5	1,2-Dichloropropane	1	26	U
142-28-9	1,3-Dichloropropane	1	26	U
10061-01-5	cis-1,3-Dichloropropene	1	26	U
10061-02-6	trans-1,3-Dichloropropene	1	26	U
563-58-6	1,1-Dichloropropene	1	26	U
108-20-3	Diisopropyl Ether	1	26	U
100-41-4	Ethylbenzene	1	8.2	J

CEG/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP15 (16.7-18.3')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-13 File ID: 19B.D
 Sampled: 05/08/14 13:15 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 06:56
 Solids: 86.93 Preparation: EPA 5030B Initial/Final: 11.16 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	100	U
110-54-3	n-Hexane	1	26	U
591-78-6	2-Hexanone	1	1000	U
98-82-8	Isopropylbenzene	1	26	U
99-87-6	p-Isopropyltoluene	1	26	U
75-09-2	Methylene chloride	1	100	BU
108-10-1	4-Methyl-2-pentanone	1	1000	U
1634-04-4	Methyl t-Butyl Ether	1	26	U
91-20-3	Naphthalene	1	260	U
103-65-1	n-Propyl Benzene	1	26	U
100-42-5	Styrene	1	26	U
630-20-6	1,1,1,2-Tetrachloroethane	1	26	U
79-34-5	1,1,2,2-Tetrachloroethane	1	26	U
127-18-4	Tetrachloroethene	1	26	U
109-99-9	Tetrahydrofuran	1	520	U
108-88-3	Toluene	1	15	B, J 26
87-61-6	1,2,3-Trichlorobenzene	1	100	U
120-82-1	1,2,4-Trichlorobenzene	1	100	U
71-55-6	1,1,1-Trichloroethane	1	26	U
79-00-5	1,1,2-Trichloroethane	1	26	U
79-01-6	Trichloroethene	1	26	U
75-69-4	Trichlorofluoromethane	1	26	U
96-18-4	1,2,3-Trichloropropane	1	52	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	26	U
108-67-8	1,3,5-Trimethylbenzene	1	6.7	J
95-63-6	1,2,4-Trimethylbenzene	1	23	J 26
75-01-4	Vinyl chloride	1	26	U
108-38-3/1	m,p-Xylene	1	37	J
95-47-6	o-Xylene	1	13	J 26
1330-20-7	Xylenes, total	1	50	J 76

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	27.2	109	86.2 - 117	
Toluene-d8	25.00	25.4	102	90.4 - 108	
4-Bromofluorobenzene	25.00	24.9	99.5	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	466147	5.41	474134	5.42	
1,4-Difluorobenzene	777616	6.22	800388	6.21	
Chlorobenzene-d5	729721	9.07	723497	9.07	
1,4-Dichlorobenzene-d4	328505	11.17	331266	11.17	

CEG/20/14

ORGANIC ANALYSIS DATA SHEET

[WS-SB-GP-15 (16.7'-18.3')]
Duplicate #1

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-14 File ID: 16A.D
 Sampled: 05/08/14 00:00 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 04:21
 Solids: 89.55 Preparation: EPA 5030B Initial/Final: 8.34 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1300	U
71-43-2	Benzene	1	33	U
108-86-1	Bromobenzene	1	33	U
74-97-5	Bromochloromethane	1	33	U
75-27-4	Bromodichloromethane	1	33	U
75-25-2	Bromoform	1	33	U
74-83-9	Bromomethane	1	330	U
78-93-3	2-Butanone	1	1300	U
104-51-8	n-Butyl Benzene	1	33	U
135-98-8	sec-Butyl Benzene	1	33	U
98-06-6	tert-Butylbenzene	1	33	U
75-15-0	Carbon disulfide	1	33	U
56-23-5	Carbon tetrachloride	1	33	U
108-90-7	Chlorobenzene	1	33	U
75-00-3	Chloroethane	1	330	U JS
67-66-3	Chloroform	1	33	U
74-87-3	Chloromethane	1	67	U
95-49-8	2-Chlorotoluene	1	33	U
106-43-4	4-Chlorotoluene	1	33	U
96-12-8	1,2-Dibromo-3-chloropropane	1	33	U
124-48-1	Dibromochloromethane	1	33	U
106-93-4	1,2-Dibromoethane (EDB)	1	33	U
74-95-3	Dibromomethane	1	33	U
95-50-1	1,2-Dichlorobenzene	1	33	U
106-46-7	1,4-Dichlorobenzene	1	33	U
541-73-1	1,3-Dichlorobenzene	1	33	U
75-71-8	Dichlorodifluoromethane	1	33	U
75-34-3	1,1-Dichloroethane	1	33	U
107-06-2	1,2-Dichloroethane	1	33	U
156-60-5	trans-1,2-Dichloroethene	1	33	U
156-59-2	cis-1,2-Dichloroethene	1	33	U
75-35-4	1,1-Dichloroethene	1	33	U
590-20-7	2,2-Dichloropropane	1	33	U
78-87-5	1,2-Dichloropropane	1	33	U
142-28-9	1,3-Dichloropropane	1	33	U
10061-01-5	cis-1,3-Dichloropropene	1	33	U
10061-02-6	trans-1,3-Dichloropropene	1	33	U
563-58-6	1,1-Dichloropropene	1	33	U
108-20-3	Diisopropyl Ether	1	33	U
100-41-4	Ethylbenzene	1	33	U

026/20/14

ORGANIC ANALYSIS DATA SHEET

[WS-SB-GP-15 (16.7'-18.3')]
Duplicate #1

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-14 File ID: 16A.D
 Sampled: 05/08/14 00:00 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 04:21
 Solids: 89.55 Preparation: EPA 5030B Initial/Final: 8.34 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	130	U
110-54-3	n-Hexane	1	33	U
591-78-6	2-Hexanone	1	1300	U
98-82-8	Isopropylbenzene	1	33	U
99-87-6	p-Isopropyltoluene	1	33	U
75-09-2	Methylene chloride	1	130	U
108-10-1	4-Methyl-2-pentanone	1	1300	U
1634-04-4	Methyl t-Butyl Ether	1	33	U
91-20-3	Naphthalene	1	330	U
103-65-1	n-Propyl Benzene	1	33	U
100-42-5	Styrene	1	33	U
630-20-6	1,1,1,2-Tetrachloroethane	1	33	U
79-34-5	1,1,2,2-Tetrachloroethane	1	33	U
127-18-4	Tetrachloroethene	1	33	U
109-99-9	Tetrahydrofuran	1	670	U
108-88-3	Toluene	1	33	U
87-61-6	1,2,3-Trichlorobenzene	1	130	U
120-82-1	1,2,4-Trichlorobenzene	1	130	U
71-55-6	1,1,1-Trichloroethane	1	33	U
79-00-5	1,1,2-Trichloroethane	1	33	U
79-01-6	Trichloroethene	1	33	U
75-69-4	Trichlorofluoromethane	1	33	U
96-18-4	1,2,3-Trichloropropane	1	67	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	33	U
108-67-8	1,3,5-Trimethylbenzene	1	33	U
95-63-6	1,2,4-Trimethylbenzene	1	6.0	J 330
75-01-4	Vinyl chloride	1	33	U
108-38-3/1	m,p-Xylene	1	8.0	B, J 330 ^{or 660}
95-47-6	o-Xylene	1	6.7	J 330
1330-20-7	Xylenes, total	1	15	J 990

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.7	107	86.2 - 117	
Toluene-d8	25.00	25.0	99.9	90.4 - 108	
4-Bromofluorobenzene	25.00	24.7	98.8	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	561638	5.41	602937	5.41	
1,4-Difluorobenzene	929626	6.21	980919	6.21	
Chlorobenzene-d5	860020	9.07	873790	9.07	
1,4-Dichlorobenzene-d4	394876	11.16	401881	11.16	

026/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP15 (23.3-25')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-15 File ID: 17A.D
 Sampled: 05/08/14 13:30 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 05:06
 Solids: 95.77 Preparation: EPA 5030B Initial/Final: 7.79 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1300	U
71-43-2	Benzene	1	15	J
108-86-1	Bromobenzene	1	34	U
74-97-5	Bromochloromethane	1	34	U
75-27-4	Bromodichloromethane	1	34	U
75-25-2	Bromoform	1	34	U
74-83-9	Bromomethane	1	340	U
78-93-3	2-Butanone	1	1300	U
104-51-8	n-Butyl Benzene	1	34	U
135-98-8	sec-Butyl Benzene	1	34	U
98-06-6	tert-Butylbenzene	1	34	U
75-15-0	Carbon disulfide	1	34	U
56-23-5	Carbon tetrachloride	1	34	U
108-90-7	Chlorobenzene	1	34	U
75-00-3	Chloroethane	1	340	U <i>JS</i>
67-66-3	Chloroform	1	34	U
74-87-3	Chloromethane	1	67	U
95-49-8	2-Chlorotoluene	1	34	U
106-43-4	4-Chlorotoluene	1	34	U
96-12-8	1,2-Dibromo-3-chloropropane	1	34	U
124-48-1	Dibromochloromethane	1	34	U
106-93-4	1,2-Dibromoethane (EDB)	1	34	U
74-95-3	Dibromomethane	1	34	U
95-50-1	1,2-Dichlorobenzene	1	34	U
106-46-7	1,4-Dichlorobenzene	1	34	U
541-73-1	1,3-Dichlorobenzene	1	34	U
75-71-8	Dichlorodifluoromethane	1	34	U
75-34-3	1,1-Dichloroethane	1	34	U
107-06-2	1,2-Dichloroethane	1	34	U
156-60-5	trans-1,2-Dichloroethene	1	34	U
156-59-2	cis-1,2-Dichloroethene	1	34	U
75-35-4	1,1-Dichloroethene	1	34	U
590-20-7	2,2-Dichloropropane	1	34	U
78-87-5	1,2-Dichloropropane	1	34	U
142-28-9	1,3-Dichloropropane	1	34	U
10061-01-5	cis-1,3-Dichloropropene	1	34	U
10061-02-6	trans-1,3-Dichloropropene	1	34	U
563-58-6	1,1-Dichloropropene	1	34	U
108-20-3	Diisopropyl Ether	1	34	U
100-41-4	Ethylbenzene	1	11	J

026/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP15 (23.3-25')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-15 File ID: 17A.D
 Sampled: 05/08/14 13:30 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 05:06
 Solids: 95.77 Preparation: EPA 5030B Initial/Final: 7.79 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	130	U
110-54-3	n-Hexane	1	34	U
591-78-6	2-Hexanone	1	1300	U
98-82-8	Isopropylbenzene	1	34	U
99-87-6	p-Isopropyltoluene	1	34	U
75-09-2	Methylene chloride	1	130	U
108-10-1	4-Methyl-2-pentanone	1	1300	U
1634-04-4	Methyl t-Butyl Ether	1	34	U
91-20-3	Naphthalene	1	340	U
103-65-1	n-Propyl Benzene	1	34	U
100-42-5	Styrene	1	34	U
630-20-6	1,1,1,2-Tetrachloroethane	1	34	U
79-34-5	1,1,2,2-Tetrachloroethane	1	34	U
127-18-4	Tetrachloroethene	1	34	U
109-99-9	Tetrahydrofuran	1	670	U
108-88-3	Toluene	1	10	B, J34U
87-61-6	1,2,3-Trichlorobenzene	1	130	U
120-82-1	1,2,4-Trichlorobenzene	1	130	U
71-55-6	1,1,1-Trichloroethane	1	34	U
79-00-5	1,1,2-Trichloroethane	1	34	U
79-01-6	Trichloroethene	1	34	U
75-69-4	Trichlorofluoromethane	1	34	U
96-18-4	1,2,3-Trichloropropane	1	67	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	34	U
108-67-8	1,3,5-Trimethylbenzene	1	34	U
95-63-6	1,2,4-Trimethylbenzene	1	11	J34U
75-01-4	Vinyl chloride	1	34	U
108-38-3/1	m,p-Xylene	1	26	B, J68U
95-47-6	o-Xylene	1	8.0	J34U
1330-20-7	Xylenes, total	1	34	J102U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	27.6	111	86.2 - 117	
Toluene-d8	25.00	25.1	101	90.4 - 108	
4-Bromofluorobenzene	25.00	25.0	100	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	513745	5.41	602937	5.41	
1,4-Difluorobenzene	868811	6.21	980919	6.21	
Chlorobenzene-d5	820357	9.07	873790	9.07	
1,4-Dichlorobenzene-d4	374825	11.17	401881	11.16	

026/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP15 (26.7-28.3')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-16 File ID: 18A.D
 Sampled: 05/08/14 13:45 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 05:50
 Solids: 90.82 Preparation: EPA 5030B Initial/Final: 10.2 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1100	U
71-43-2	Benzene	1	46	
108-86-1	Bromobenzene	1	27	U
74-97-5	Bromochloromethane	1	27	U
75-27-4	Bromodichloromethane	1	27	U
75-25-2	Bromoform	1	27	U
74-83-9	Bromomethane	1	270	U
78-93-3	2-Butanone	1	1100	U
104-51-8	n-Butyl Benzene	1	27	U
135-98-8	sec-Butyl Benzene	1	27	U
98-06-6	tert-Butylbenzene	1	27	U
75-15-0	Carbon disulfide	1	7.0	J
56-23-5	Carbon tetrachloride	1	27	U
108-90-7	Chlorobenzene	1	27	U
75-00-3	Chloroethane	1	270	U J
67-66-3	Chloroform	1	27	U
74-87-3	Chloromethane	1	54	U
95-49-8	2-Chlorotoluene	1	27	U
106-43-4	4-Chlorotoluene	1	27	U
96-12-8	1,2-Dibromo-3-chloropropane	1	27	U
124-48-1	Dibromochloromethane	1	27	U
106-93-4	1,2-Dibromoethane (EDB)	1	27	U
74-95-3	Dibromomethane	1	27	U
95-50-1	1,2-Dichlorobenzene	1	27	U
106-46-7	1,4-Dichlorobenzene	1	27	U
541-73-1	1,3-Dichlorobenzene	1	27	U
75-71-8	Dichlorodifluoromethane	1	27	U
75-34-3	1,1-Dichloroethane	1	27	U
107-06-2	1,2-Dichloroethane	1	27	U
156-60-5	trans-1,2-Dichloroethene	1	27	U
156-59-2	cis-1,2-Dichloroethene	1	27	U
75-35-4	1,1-Dichloroethene	1	27	U
590-20-7	2,2-Dichloropropane	1	27	U
78-87-5	1,2-Dichloropropane	1	27	U
142-28-9	1,3-Dichloropropane	1	27	U
10061-01-5	cis-1,3-Dichloropropene	1	27	U
10061-02-6	trans-1,3-Dichloropropene	1	27	U
563-58-6	1,1-Dichloropropene	1	27	U
108-20-3	Diisopropyl Ether	1	27	U
100-41-4	Ethylbenzene	1	32	

026/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP15 (26.7-28.3')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-16 File ID: 18A.D
 Sampled: 05/08/14 13:45 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 05:50
 Solids: 90.82 Preparation: EPA 5030B Initial/Final: 10.2 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	110	U
110-54-3	n-Hexane	1	33	
591-78-6	2-Hexanone	1	1100	U
98-82-8	Isopropylbenzene	1	27	U
99-87-6	p-Isopropyltoluene	1	15	J
75-09-2	Methylene chloride	1	110	BU
108-10-1	4-Methyl-2-pentanone	1	1100	U
1634-04-4	Methyl t-Butyl Ether	1	27	U
91-20-3	Naphthalene	1	270	U
103-65-1	n-Propyl Benzene	1	10	J
100-42-5	Styrene	1	27	U
630-20-6	1,1,1,2-Tetrachloroethane	1	27	U
79-34-5	1,1,2,2-Tetrachloroethane	1	27	U
127-18-4	Tetrachloroethene	1	27	U
109-99-9	Tetrahydrofuran	1	540	U
108-88-3	Toluene	1	26	B, J 270
87-61-6	1,2,3-Trichlorobenzene	1	110	U
120-82-1	1,2,4-Trichlorobenzene	1	110	U
71-55-6	1,1,1-Trichloroethane	1	27	U
79-00-5	1,1,2-Trichloroethane	1	27	U
79-01-6	Trichloroethene	1	27	U
75-69-4	Trichlorofluoromethane	1	27	U
96-18-4	1,2,3-Trichloropropane	1	54	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	27	U
108-67-8	1,3,5-Trimethylbenzene	1	5.4	J
95-63-6	1,2,4-Trimethylbenzene	1	59	
75-01-4	Vinyl chloride	1	27	U
108-38-3/1	m,p-Xylene	1	120	
95-47-6	o-Xylene	1	11	J 270
1330-20-7	Xylenes, total	1	130	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.7	103	86.2 - 117	
Toluene-d8	25.00	25.2	101	90.4 - 108	
4-Bromofluorobenzene	25.00	25.1	100	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	557996	5.42	602937	5.41	
1,4-Difluorobenzene	909048	6.22	980919	6.21	
Chlorobenzene-d5	845315	9.08	873790	9.07	
1,4-Dichlorobenzene-d4	388827	11.17	401881	11.16	

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP16 (3.3-5.0')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-17 File ID: 19A.D
 Sampled: 05/08/14 14:20 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 06:34
 Solids: 86.36 Preparation: EPA 5030B Initial/Final: 10.86 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	10	11000	U
71-43-2	Benzene	10	3500	D
108-86-1	Bromobenzene	10	270	U
74-97-5	Bromochloromethane	10	270	U
75-27-4	Bromodichloromethane	10	270	U
75-25-2	Bromoform	10	270	U
74-83-9	Bromomethane	10	2700	U
78-93-3	2-Butanone	10	11000	U
104-51-8	n-Butyl Benzene	10	270	U
135-98-8	sec-Butyl Benzene	10	270	U
98-06-6	tert-Butylbenzene	10	270	U
75-15-0	Carbon disulfide	10	270	U
56-23-5	Carbon tetrachloride	10	270	U
108-90-7	Chlorobenzene	10	270	U
75-00-3	Chloroethane	10	2700	U <i>CS</i>
67-66-3	Chloroform	10	270	U
74-87-3	Chloromethane	10	530	U
95-49-8	2-Chlorotoluene	10	270	U
106-43-4	4-Chlorotoluene	10	270	U
96-12-8	1,2-Dibromo-3-chloropropane	10	270	U
124-48-1	Dibromochloromethane	10	270	U
106-93-4	1,2-Dibromoethane (EDB)	10	270	U
74-95-3	Dibromomethane	10	270	U
95-50-1	1,2-Dichlorobenzene	10	270	U
106-46-7	1,4-Dichlorobenzene	10	270	U
541-73-1	1,3-Dichlorobenzene	10	270	U
75-71-8	Dichlorodifluoromethane	10	270	U
75-34-3	1,1-Dichloroethane	10	270	U
107-06-2	1,2-Dichloroethane	10	270	U
156-60-5	trans-1,2-Dichloroethene	10	270	U
156-59-2	cis-1,2-Dichloroethene	10	270	U
75-35-4	1,1-Dichloroethene	10	270	U
590-20-7	2,2-Dichloropropane	10	270	U
78-87-5	1,2-Dichloropropane	10	270	U
142-28-9	1,3-Dichloropropane	10	270	U
10061-01-5	cis-1,3-Dichloropropene	10	270	U
10061-02-6	trans-1,3-Dichloropropene	10	270	U
563-58-6	1,1-Dichloropropene	10	270	U
108-20-3	Diisopropyl Ether	10	270	U
100-41-4	Ethylbenzene	10	5000	D

CS 6/2/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP16 (3.3-5.0')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-17 File ID: 19A.D
 Sampled: 05/08/14 14:20 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 06:34
 Solids: 86.36 Preparation: EPA 5030B Initial/Final: 10.86 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	10	1100	U
110-54-3	n-Hexane	10	270	D
591-78-6	2-Hexanone	10	11000	U
98-82-8	Isopropylbenzene	10	270	U
99-87-6	p-Isopropyltoluene	10	270	U
75-09-2	Methylene chloride	10	1100	U
108-10-1	4-Methyl-2-pentanone	10	11000	U
1634-04-4	Methyl t-Butyl Ether	10	270	U
91-20-3	Naphthalene	10	2700	U
103-65-1	n-Propyl Benzene	10	270	U
100-42-5	Styrene	10	270	U
630-20-6	1,1,1,2-Tetrachloroethane	10	270	U
79-34-5	1,1,2,2-Tetrachloroethane	10	270	U
127-18-4	Tetrachloroethene	10	270	U
109-99-9	Tetrahydrofuran	10	5300	U
108-88-3	Toluene	10	5100	D
87-61-6	1,2,3-Trichlorobenzene	10	1100	U
120-82-1	1,2,4-Trichlorobenzene	10	1100	U
71-55-6	1,1,1-Trichloroethane	10	270	U
79-00-5	1,1,2-Trichloroethane	10	270	U
79-01-6	Trichloroethene	10	270	U
75-69-4	Trichlorofluoromethane	10	270	U
96-18-4	1,2,3-Trichloropropane	10	530	U
76-13-1	1,1,2-Trichlorotrifluoroethane	10	270	U
108-67-8	1,3,5-Trimethylbenzene	10	96	J, D
95-63-6	1,2,4-Trimethylbenzene	10	420	D
75-01-4	Vinyl chloride	10	270	U
108-38-3/1	m,p-Xylene	10	14000	D
95-47-6	o-Xylene	10	3800	D
1330-20-7	Xylenes, total	10	18000	D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	24.8	99.4	86.2 - 117	
Toluene-d8	25.00	25.0	99.8	90.4 - 108	
4-Bromofluorobenzene	25.00	24.8	99.3	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	588450	5.41	602937	5.41	
1,4-Difluorobenzene	948703	6.21	980919	6.21	
Chlorobenzene-d5	845682	9.07	873790	9.07	
1,4-Dichlorobenzene-d4	387262	11.16	401881	11.16	

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP16 (5.0-6.7')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-18 File ID: 20A.D
 Sampled: 05/08/14 14:39 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 07:18
 Solids: 88.47 Preparation: EPA 5030B Initial/Final: 11.34 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	10	10000	U
71-43-2	Benzene	10	370	D
108-86-1	Bromobenzene	10	250	U
74-97-5	Bromochloromethane	10	250	U
75-27-4	Bromodichloromethane	10	250	U
75-25-2	Bromoform	10	250	U
74-83-9	Bromomethane	10	2500	U
78-93-3	2-Butanone	10	10000	U
104-51-8	n-Butyl Benzene	10	250	U
135-98-8	sec-Butyl Benzene	10	250	U
98-06-6	tert-Butylbenzene	10	250	U
75-15-0	Carbon disulfide	10	250	U
56-23-5	Carbon tetrachloride	10	250	U
108-90-7	Chlorobenzene	10	250	U
75-00-3	Chloroethane	10	2500	U <i>JS</i>
67-66-3	Chloroform	10	250	U
74-87-3	Chloromethane	10	500	U
95-49-8	2-Chlorotoluene	10	250	U
106-43-4	4-Chlorotoluene	10	250	U
96-12-8	1,2-Dibromo-3-chloropropane	10	250	U
124-48-1	Dibromochloromethane	10	250	U
106-93-4	1,2-Dibromoethane (EDB)	10	250	U
74-95-3	Dibromomethane	10	250	U
95-50-1	1,2-Dichlorobenzene	10	250	U
106-46-7	1,4-Dichlorobenzene	10	250	U
541-73-1	1,3-Dichlorobenzene	10	250	U
75-71-8	Dichlorodifluoromethane	10	250	U
75-34-3	1,1-Dichloroethane	10	250	U
107-06-2	1,2-Dichloroethane	10	250	U
156-60-5	trans-1,2-Dichloroethene	10	250	U
156-59-2	cis-1,2-Dichloroethene	10	250	U
75-35-4	1,1-Dichloroethene	10	250	U
590-20-7	2,2-Dichloropropane	10	250	U
78-87-5	1,2-Dichloropropane	10	250	U
142-28-9	1,3-Dichloropropane	10	250	U
10061-01-5	cis-1,3-Dichloropropene	10	250	U
10061-02-6	trans-1,3-Dichloropropene	10	250	U
563-58-6	1,1-Dichloropropene	10	250	U
108-20-3	Diisopropyl Ether	10	250	U
100-41-4	Ethylbenzene	10	15000	D

026/29/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP16 (5.0-6.7')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-18 File ID: 20A.D
 Sampled: 05/08/14 14:39 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 07:18
 Solids: 88.47 Preparation: EPA 5030B Initial/Final: 11.34 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	10	1000	U
110-54-3	n-Hexane	10	10000	D
591-78-6	2-Hexanone	10	10000	U
98-82-8	Isopropylbenzene	10	1500	D
99-87-6	p-Isopropyltoluene	10	340	D
75-09-2	Methylene chloride	10	1000	U
108-10-1	4-Methyl-2-pentanone	10	10000	U
1634-04-4	Methyl t-Butyl Ether	10	250	U
91-20-3	Naphthalene	10	12000	D
103-65-1	n-Propyl Benzene	10	7200	D
100-42-5	Styrene	10	250	U
630-20-6	1,1,1,2-Tetrachloroethane	10	250	U
79-34-5	1,1,2,2-Tetrachloroethane	10	250	U
127-18-4	Tetrachloroethene	10	250	U
109-99-9	Tetrahydrofuran	10	5000	U
108-88-3	Toluene	10	1700	D
87-61-6	1,2,3-Trichlorobenzene	10	1000	U
120-82-1	1,2,4-Trichlorobenzene	10	1000	U
71-55-6	1,1,1-Trichloroethane	10	250	U
79-00-5	1,1,2-Trichloroethane	10	250	U
79-01-6	Trichloroethene	10	250	U
75-69-4	Trichlorofluoromethane	10	250	U
96-18-4	1,2,3-Trichloropropane	10	500	U
76-13-1	1,1,2-Trichlorotrifluoroethane	10	250	U
108-67-8	1,3,5-Trimethylbenzene	10	14000	D
95-63-6	1,2,4-Trimethylbenzene	50	45000	D
75-01-4	Vinyl chloride	10	250	U
108-38-3/1	m,p-Xylene	50	44000	D
95-47-6	o-Xylene	10	2600	D
1330-20-7	Xylenes, total	10	47000	D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.0	100	86.2 - 117	
Toluene-d8	25.00	25.1	101	90.4 - 108	
4-Bromofluorobenzene	25.00	25.0	99.9	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	576579	5.41	602937	5.41	
1,4-Difluorobenzene	928799	6.21	980919	6.21	
Chlorobenzene-d5	855575	9.07	873790	9.07	
1,4-Dichlorobenzene-d4	393509	11.16	401881	11.16	

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP16 (10-11.6')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-19 File ID: 24B.D
 Sampled: 05/08/14 15:15 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 10:22
 Solids: 91.04 Preparation: EPA 5030B Initial/Final: 11.04 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	99	U
110-54-3	n-Hexane	1	33	
591-78-6	2-Hexanone	1	990	U
98-82-8	Isopropylbenzene	1	25	U
99-87-6	p-Isopropyltoluene	1	25	U
75-09-2	Methylene chloride	1	99	U
108-10-1	4-Methyl-2-pentanone	1	88	J 5
1634-04-4	Methyl t-Butyl Ether	1	25	U
91-20-3	Naphthalene	1	13	B, J
103-65-1	n-Propyl Benzene	1	25	U
100-42-5	Styrene	1	25	U
630-20-6	1,1,1,2-Tetrachloroethane	1	25	U
79-34-5	1,1,2,2-Tetrachloroethane	1	25	U
127-18-4	Tetrachloroethene	1	25	U
109-99-9	Tetrahydrofuran	1	500	U
108-88-3	Toluene	1	25	U
87-61-6	1,2,3-Trichlorobenzene	1	99	U
120-82-1	1,2,4-Trichlorobenzene	1	99	U
71-55-6	1,1,1-Trichloroethane	1	25	U
79-00-5	1,1,2-Trichloroethane	1	25	U
79-01-6	Trichloroethene	1	25	U
75-69-4	Trichlorofluoromethane	1	25	U
96-18-4	1,2,3-Trichloropropane	1	50	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	25	U
108-67-8	1,3,5-Trimethylbenzene	1	25	U
95-63-6	1,2,4-Trimethylbenzene	1	4.5	J 250
75-01-4	Vinyl chloride	1	25	U
108-38-3/1	m,p-Xylene	1	5.5	B, J 250 or 500
95-47-6	o-Xylene	1	4.0	J 250
1330-20-7	Xylenes, total	1	9.5	J 750

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.0	100	86.2 - 117	
Toluene-d8	25.00	24.8	99.2	90.4 - 108	
4-Bromofluorobenzene	25.00	24.4	97.4	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	528015	5.41	555011	5.41	
1,4-Difluorobenzene	858628	6.21	903811	6.21	
Chlorobenzene-d5	758340	9.07	799541	9.07	
1,4-Dichlorobenzene-d4	341013	11.16	359818	11.16	

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP16 (15-16.7')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-20 File ID: 27B.D
 Sampled: 05/08/14 15:36 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 12:34
 Solids: 89.63 Preparation: EPA 5030B Initial/Final: 11.49 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	97	U
110-54-3	n-Hexane	1	24	U
591-78-6	2-Hexanone	1	970	U
98-82-8	Isopropylbenzene	1	24	U
99-87-6	p-Isopropyltoluene	1	24	U
75-09-2	Methylene chloride	1	97	U
108-10-1	4-Methyl-2-pentanone	1	970	U
1634-04-4	Methyl t-Butyl Ether	1	24	U
91-20-3	Naphthalene	1	240	U
103-65-1	n-Propyl Benzene	1	24	U
100-42-5	Styrene	1	24	U
630-20-6	1,1,1,2-Tetrachloroethane	1	24	U
79-34-5	1,1,2,2-Tetrachloroethane	1	24	U
127-18-4	Tetrachloroethene	1	24	U
109-99-9	Tetrahydrofuran	1	490	U
108-88-3	Toluene	1	24	U
87-61-6	1,2,3-Trichlorobenzene	1	97	U
120-82-1	1,2,4-Trichlorobenzene	1	97	U
71-55-6	1,1,1-Trichloroethane	1	24	U
79-00-5	1,1,2-Trichloroethane	1	24	U
79-01-6	Trichloroethene	1	24	U
75-69-4	Trichlorofluoromethane	1	24	U
96-18-4	1,2,3-Trichloropropane	1	49	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	24	U
108-67-8	1,3,5-Trimethylbenzene	1	35	
95-63-6	1,2,4-Trimethylbenzene	1	91	
75-01-4	Vinyl chloride	1	24	U
108-38-3/1	m,p-Xylene	1	230	
95-47-6	o-Xylene	1	5.8	1240
1330-20-7	Xylenes, total	1	240	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.9	103	86.2 - 117	
Toluene-d8	25.00	25.2	101	90.4 - 108	
4-Bromofluorobenzene	25.00	24.6	98.6	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	502864	5.42	555011	5.41	
1,4-Difluorobenzene	824377	6.22	903811	6.21	
Chlorobenzene-d5	750778	9.08	799541	9.07	
1,4-Dichlorobenzene-d4	336042	11.17	359818	11.16	

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP16 (21.7-23.3')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-21 File ID: 28B.D
 Sampled: 05/08/14 15:50 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 13:18
 Solids: 88.64 Preparation: EPA 5030B Initial/Final: 11.8 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	960	U
71-43-2	Benzene	1	24	U
108-86-1	Bromobenzene	1	24	U
74-97-5	Bromochloromethane	1	24	U
75-27-4	Bromodichloromethane	1	24	U
75-25-2	Bromoform	1	24	U
74-83-9	Bromomethane	1	240	U
78-93-3	2-Butanone	1	960	U
104-51-8	n-Butyl Benzene	1	24	U
135-98-8	sec-Butyl Benzene	1	24	U
98-06-6	tert-Butylbenzene	1	24	U
75-15-0	Carbon disulfide	1	7.6	J
56-23-5	Carbon tetrachloride	1	24	U
108-90-7	Chlorobenzene	1	24	U
75-00-3	Chloroethane	1	240	U
67-66-3	Chloroform	1	24	U
74-87-3	Chloromethane	1	48	U
95-49-8	2-Chlorotoluene	1	24	U
106-43-4	4-Chlorotoluene	1	24	U
96-12-8	1,2-Dibromo-3-chloropropane	1	24	U
124-48-1	Dibromochloromethane	1	24	U
106-93-4	1,2-Dibromoethane (EDB)	1	24	U
74-95-3	Dibromomethane	1	24	U
95-50-1	1,2-Dichlorobenzene	1	24	U
106-46-7	1,4-Dichlorobenzene	1	24	U
541-73-1	1,3-Dichlorobenzene	1	24	U
75-71-8	Dichlorodifluoromethane	1	24	U
75-34-3	1,1-Dichloroethane	1	24	U
107-06-2	1,2-Dichloroethane	1	24	U
156-60-5	trans-1,2-Dichloroethene	1	24	U
156-59-2	cis-1,2-Dichloroethene	1	24	U
75-35-4	1,1-Dichloroethene	1	24	U
590-20-7	2,2-Dichloropropane	1	24	U
78-87-5	1,2-Dichloropropane	1	24	U
142-28-9	1,3-Dichloropropane	1	24	U
10061-01-5	cis-1,3-Dichloropropene	1	24	U
10061-02-6	trans-1,3-Dichloropropene	1	24	U
563-58-6	1,1-Dichloropropene	1	24	U
108-20-3	Diisopropyl Ether	1	24	U
100-41-4	Ethylbenzene	1	33	U

02/6/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP16 (21.7-23.3')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-21 File ID: 28B.D
 Sampled: 05/08/14 15:50 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 13:18
 Solids: 88.64 Preparation: EPA 5030B Initial/Final: 11.8 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	96	U
110-54-3	n-Hexane	1	24	U
591-78-6	2-Hexanone	1	960	U
98-82-8	Isopropylbenzene	1	8.6	J
99-87-6	p-Isopropyltoluene	1	33	
75-09-2	Methylene chloride	1	96	U
108-10-1	4-Methyl-2-pentanone	1	960	U
1634-04-4	Methyl t-Butyl Ether	1	24	U
91-20-3	Naphthalene	1	240	U
103-65-1	n-Propyl Benzene	1	31	
100-42-5	Styrene	1	24	U
630-20-6	1,1,1,2-Tetrachloroethane	1	24	U
79-34-5	1,1,2,2-Tetrachloroethane	1	24	U
127-18-4	Tetrachloroethene	1	24	U
109-99-9	Tetrahydrofuran	1	480	U
108-88-3	Toluene	1	3.8	B, J 240
87-61-6	1,2,3-Trichlorobenzene	1	96	U
120-82-1	1,2,4-Trichlorobenzene	1	96	U
71-55-6	1,1,1-Trichloroethane	1	24	U
79-00-5	1,1,2-Trichloroethane	1	24	U
79-01-6	Trichloroethene	1	24	U
75-69-4	Trichlorofluoromethane	1	24	U
96-18-4	1,2,3-Trichloropropane	1	48	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	24	U
108-67-8	1,3,5-Trimethylbenzene	1	18	J
95-63-6	1,2,4-Trimethylbenzene	1	290	
75-01-4	Vinyl chloride	1	24	U
108-38-3/1	m,p-Xylene	1	220	
95-47-6	o-Xylene	1	7.2	J 240
1330-20-7	Xylenes, total	1	220	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.9	104	86.2 - 117	
Toluene-d8	25.00	25.2	101	90.4 - 108	
4-Bromofluorobenzene	25.00	25.0	99.9	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	513319	5.43	555011	5.41	
1,4-Difluorobenzene	835705	6.23	903811	6.21	
Chlorobenzene-d5	768068	9.08	799541	9.07	
1,4-Dichlorobenzene-d4	341135	11.18	359818	11.16	

CEG/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP16 (28.3-30')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-22 File ID: 29B.D
 Sampled: 05/08/14 16:05 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 14:02
 Solids: 83.15 Preparation: EPA 5030B Initial/Final: 9.58 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1300	U
71-43-2	Benzene	1	420	
108-86-1	Bromobenzene	1	31	U
74-97-5	Bromochloromethane	1	31	U
75-27-4	Bromodichloromethane	1	31	U
75-25-2	Bromoform	1	31	U
74-83-9	Bromomethane	1	310	U
78-93-3	2-Butanone	1	1300	U
104-51-8	n-Butyl Benzene	1	31	U
135-98-8	sec-Butyl Benzene	1	31	U
98-06-6	tert-Butylbenzene	1	31	U
75-15-0	Carbon disulfide	1	31	U
56-23-5	Carbon tetrachloride	1	31	U
108-90-7	Chlorobenzene	1	31	U
75-00-3	Chloroethane	1	310	U
67-66-3	Chloroform	1	31	U
74-87-3	Chloromethane	1	63	U
95-49-8	2-Chlorotoluene	1	31	U
106-43-4	4-Chlorotoluene	1	31	U
96-12-8	1,2-Dibromo-3-chloropropane	1	31	U
124-48-1	Dibromochloromethane	1	31	U
106-93-4	1,2-Dibromoethane (EDB)	1	31	U
74-95-3	Dibromomethane	1	31	U
95-50-1	1,2-Dichlorobenzene	1	31	U
106-46-7	1,4-Dichlorobenzene	1	31	U
541-73-1	1,3-Dichlorobenzene	1	31	U
75-71-8	Dichlorodifluoromethane	1	31	U
75-34-3	1,1-Dichloroethane	1	31	U
107-06-2	1,2-Dichloroethane	1	31	U
156-60-5	trans-1,2-Dichloroethene	1	31	U
156-59-2	cis-1,2-Dichloroethene	1	31	U
75-35-4	1,1-Dichloroethene	1	31	U
590-20-7	2,2-Dichloropropane	1	31	U
78-87-5	1,2-Dichloropropane	1	31	U
142-28-9	1,3-Dichloropropane	1	31	U
10061-01-5	cis-1,3-Dichloropropene	1	31	U
10061-02-6	trans-1,3-Dichloropropene	1	31	U
563-58-6	1,1-Dichloropropene	1	31	U
108-20-3	Diisopropyl Ether	1	31	U
100-41-4	Ethylbenzene	1	670	

CHG/colu

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP16 (28.3-30')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-22 File ID: 29B.D
 Sampled: 05/08/14 16:05 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 14:02
 Solids: 83.15 Preparation: EPA 5030B Initial/Final: 9.58 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	130	U
110-54-3	n-Hexane	1	42	
591-78-6	2-Hexanone	1	1300	U
98-82-8	Isopropylbenzene	1	47	
99-87-6	p-Isopropyltoluene	1	32	
75-09-2	Methylene chloride	1	130	U
108-10-1	4-Methyl-2-pentanone	1	1300	U
1634-04-4	Methyl t-Butyl Ether	1	31	U
91-20-3	Naphthalene	1	78	J
103-65-1	n-Propyl Benzene	1	300	
100-42-5	Styrene	1	31	U
630-20-6	1,1,1,2-Tetrachloroethane	1	31	U
79-34-5	1,1,2,2-Tetrachloroethane	1	31	U
127-18-4	Tetrachloroethene	1	31	U
109-99-9	Tetrahydrofuran	1	630	U
108-88-3	Toluene	1	150	
87-61-6	1,2,3-Trichlorobenzene	1	130	U
120-82-1	1,2,4-Trichlorobenzene	1	130	U
71-55-6	1,1,1-Trichloroethane	1	31	U
79-00-5	1,1,2-Trichloroethane	1	31	U
79-01-6	Trichloroethene	1	31	U
75-69-4	Trichlorofluoromethane	1	31	U
96-18-4	1,2,3-Trichloropropane	1	63	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	31	U
108-67-8	1,3,5-Trimethylbenzene	1	460	
95-63-6	1,2,4-Trimethylbenzene	1	2100	
75-01-4	Vinyl chloride	1	31	U
108-38-3/1	m,p-Xylene	1	1900	
95-47-6	o-Xylene	1	280	
1330-20-7	Xylenes, total	1	2200	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.4	105	86.2 - 117	
Toluene-d8	25.00	25.2	101	90.4 - 108	
4-Bromofluorobenzene	25.00	24.8	99.2	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	507497	5.42	555011	5.41	
1,4-Difluorobenzene	838319	6.22	903811	6.21	
Chlorobenzene-d5	767729	9.08	799541	9.07	
1,4-Dichlorobenzene-d4	344627	11.17	359818	11.16	

JCB/zdy

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP18 (1.7-3.3')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-23 File ID: 30B.D
 Sampled: 05/09/14 09:15 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 14:47
 Solids: 88.90 Preparation: EPA 5030B Initial/Final: 9.18 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1200	U
71-43-2	Benzene	1	31	U
108-86-1	Bromobenzene	1	31	U
74-97-5	Bromochloromethane	1	31	U
75-27-4	Bromodichloromethane	1	31	U
75-25-2	Bromoform	1	31	U
74-83-9	Bromomethane	1	310	U
78-93-3	2-Butanone	1	1200	U
104-51-8	n-Butyl Benzene	1	31	U
135-98-8	sec-Butyl Benzene	1	31	U
98-06-6	tert-Butylbenzene	1	31	U
75-15-0	Carbon disulfide	1	31	U
56-23-5	Carbon tetrachloride	1	31	U
108-90-7	Chlorobenzene	1	31	U
75-00-3	Chloroethane	1	310	U
67-66-3	Chloroform	1	31	U
74-87-3	Chloromethane	1	61	U
95-49-8	2-Chlorotoluene	1	31	U
106-43-4	4-Chlorotoluene	1	31	U
96-12-8	1,2-Dibromo-3-chloropropane	1	31	U
124-48-1	Dibromochloromethane	1	31	U
106-93-4	1,2-Dibromoethane (EDB)	1	31	U
74-95-3	Dibromomethane	1	31	U
95-50-1	1,2-Dichlorobenzene	1	31	U
106-46-7	1,4-Dichlorobenzene	1	31	U
541-73-1	1,3-Dichlorobenzene	1	31	U
75-71-8	Dichlorodifluoromethane	1	8.0	J
75-34-3	1,1-Dichloroethane	1	31	U
107-06-2	1,2-Dichloroethane	1	31	U
156-60-5	trans-1,2-Dichloroethene	1	31	U
156-59-2	cis-1,2-Dichloroethene	1	31	U
75-35-4	1,1-Dichloroethene	1	31	U
590-20-7	2,2-Dichloropropane	1	31	U
78-87-5	1,2-Dichloropropane	1	31	U
142-28-9	1,3-Dichloropropane	1	31	U
10061-01-5	cis-1,3-Dichloropropene	1	31	U
10061-02-6	trans-1,3-Dichloropropene	1	31	U
563-58-6	1,1-Dichloropropene	1	31	U
108-20-3	Diisopropyl Ether	1	31	U
100-41-4	Ethylbenzene	1	31	U

CEG/zqm

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP18 (1.7-3.3')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-23 File ID: 30B.D
 Sampled: 05/09/14 09:15 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 14:47
 Solids: 88.90 Preparation: EPA 5030B Initial/Final: 9.18 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	120	U
110-54-3	n-Hexane	1	31	U
591-78-6	2-Hexanone	1	1200	U
98-82-8	Isopropylbenzene	1	31	U
99-87-6	p-Isopropyltoluene	1	31	U
75-09-2	Methylene chloride	1	120	BU
108-10-1	4-Methyl-2-pentanone	1	1200	U
1634-04-4	Methyl t-Butyl Ether	1	31	U
91-20-3	Naphthalene	1	310	U
103-65-1	n-Propyl Benzene	1	31	U
100-42-5	Styrene	1	31	U
630-20-6	1,1,1,2-Tetrachloroethane	1	31	U
79-34-5	1,1,2,2-Tetrachloroethane	1	31	U
127-18-4	Tetrachloroethene	1	31	U
109-99-9	Tetrahydrofuran	1	610	U
108-88-3	Toluene	1	31	U
87-61-6	1,2,3-Trichlorobenzene	1	120	U
120-82-1	1,2,4-Trichlorobenzene	1	120	U
71-55-6	1,1,1-Trichloroethane	1	31	U
79-00-5	1,1,2-Trichloroethane	1	31	U
79-01-6	Trichloroethene	1	31	U
75-69-4	Trichlorofluoromethane	1	31	U
96-18-4	1,2,3-Trichloropropane	1	61	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	31	U
108-67-8	1,3,5-Trimethylbenzene	1	31	U
95-63-6	1,2,4-Trimethylbenzene	1	6.1	J
75-01-4	Vinyl chloride	1	31	U
108-38-3/1	m,p-Xylene	1	6.7	B, J 31 ^{or 620}
95-47-6	o-Xylene	1	31	U
1330-20-7	Xylenes, total	1	92	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.5	102	86.2 - 117	
Toluene-d8	25.00	24.7	99.0	90.4 - 108	
4-Bromofluorobenzene	25.00	24.6	98.3	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	551099	5.43	555011	5.41	
1,4-Difluorobenzene	897601	6.23	903811	6.21	
Chlorobenzene-d5	794625	9.09	799541	9.07	
1,4-Dichlorobenzene-d4	355965	11.18	359818	11.16	

CEG/kzk/y

ORGANIC ANALYSIS DATA SHEET

[WS-SB-GP-18 (6.7'-8.3')]
Duplicate #2

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-24 File ID: 31B.D
 Sampled: 05/09/14 00:00 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 15:30
 Solids: 89.04 Preparation: EPA 5030B Initial/Final: 10.54 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1100	U
71-43-2	Benzene	1	27	U
108-86-1	Bromobenzene	1	27	U
74-97-5	Bromochloromethane	1	27	U
75-27-4	Bromodichloromethane	1	27	U
75-25-2	Bromoform	1	27	U
74-83-9	Bromomethane	1	270	U
78-93-3	2-Butanone	1	1100	U
104-51-8	n-Butyl Benzene	1	27	U
135-98-8	sec-Butyl Benzene	1	27	U
98-06-6	tert-Butylbenzene	1	27	U
75-15-0	Carbon disulfide	1	27	U
56-23-5	Carbon tetrachloride	1	27	U
108-90-7	Chlorobenzene	1	27	U
75-00-3	Chloroethane	1	270	U
67-66-3	Chloroform	1	27	U
74-87-3	Chloromethane	1	53	BU
95-49-8	2-Chlorotoluene	1	27	U
106-43-4	4-Chlorotoluene	1	27	U
96-12-8	1,2-Dibromo-3-chloropropane	1	27	U
124-48-1	Dibromochloromethane	1	27	U
106-93-4	1,2-Dibromoethane (EDB)	1	27	U
74-95-3	Dibromomethane	1	27	U
95-50-1	1,2-Dichlorobenzene	1	27	U
106-46-7	1,4-Dichlorobenzene	1	27	U
541-73-1	1,3-Dichlorobenzene	1	27	U
75-71-8	Dichlorodifluoromethane	1	27	U
75-34-3	1,1-Dichloroethane	1	27	U
107-06-2	1,2-Dichloroethane	1	27	U
156-60-5	trans-1,2-Dichloroethene	1	27	U
156-59-2	cis-1,2-Dichloroethene	1	27	U
75-35-4	1,1-Dichloroethene	1	27	U
590-20-7	2,2-Dichloropropane	1	27	U
78-87-5	1,2-Dichloropropane	1	27	U
142-28-9	1,3-Dichloropropane	1	27	U
10061-01-5	cis-1,3-Dichloropropene	1	27	U
10061-02-6	trans-1,3-Dichloropropene	1	27	U
563-58-6	1,1-Dichloropropene	1	27	U
108-20-3	Diisopropyl Ether	1	27	U
100-41-4	Ethylbenzene	1	27	U

26/2/14

ORGANIC ANALYSIS DATA SHEET

[WS-SB-GP-18 (6.7'-8.3')]
Duplicate #2

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-24 File ID: 31B.D
 Sampled: 05/09/14 00:00 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 15:30
 Solids: 89.04 Preparation: EPA 5030B Initial/Final: 10.54 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	110	U
110-54-3	n-Hexane	1	27	U
591-78-6	2-Hexanone	1	1100	U
98-82-8	Isopropylbenzene	1	27	U
99-87-6	p-Isopropyltoluene	1	27	U
75-09-2	Methylene chloride	1	9.1	B, J
108-10-1	4-Methyl-2-pentanone	1	1100	U
1634-04-4	Methyl t-Butyl Ether	1	27	U
91-20-3	Naphthalene	1	270	U
103-65-1	n-Propyl Benzene	1	27	U
100-42-5	Styrene	1	27	U
630-20-6	1,1,1,2-Tetrachloroethane	1	27	U
79-34-5	1,1,2,2-Tetrachloroethane	1	27	U
127-18-4	Tetrachloroethene	1	27	U
109-99-9	Tetrahydrofuran	1	530	U
108-88-3	Toluene	1	27	U
87-61-6	1,2,3-Trichlorobenzene	1	110	U
120-82-1	1,2,4-Trichlorobenzene	1	110	U
71-55-6	1,1,1-Trichloroethane	1	27	U
79-00-5	1,1,2-Trichloroethane	1	27	U
79-01-6	Trichloroethene	1	27	U
75-69-4	Trichlorofluoromethane	1	27	U
96-18-4	1,2,3-Trichloropropane	1	53	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	27	U
108-67-8	1,3,5-Trimethylbenzene	1	27	U
95-63-6	1,2,4-Trimethylbenzene	1	27	U
75-01-4	Vinyl chloride	1	27	U
108-38-3/1	m,p-Xylene	1	53	U
95-47-6	o-Xylene	1	27	U
1330-20-7	Xylenes, total	1	80	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.7	103	86.2 - 117	
Toluene-d8	25.00	24.9	99.7	90.4 - 108	
4-Bromofluorobenzene	25.00	24.7	98.9	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	516436	5.43	555011	5.41	
1,4-Difluorobenzene	843383	6.23	903811	6.21	
Chlorobenzene-d5	758793	9.08	799541	9.07	
1,4-Dichlorobenzene-d4	338575	11.18	359818	11.16	

02/6/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP18 (6.7-8.3')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-25 File ID: 32B.D
 Sampled: 05/09/14 09:30 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 16:14
 Solids: 89.59 Preparation: EPA 5030B Initial/Final: 10.53 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	110	U
110-54-3	n-Hexane	1	27	U
591-78-6	2-Hexanone	1	1100	U
98-82-8	Isopropylbenzene	1	27	U
99-87-6	p-Isopropyltoluene	1	27	U
75-09-2	Methylene chloride	1	11	B, J
108-10-1	4-Methyl-2-pentanone	1	1100	U
1634-04-4	Methyl t-Butyl Ether	1	27	U
91-20-3	Naphthalene	1	270	U
103-65-1	n-Propyl Benzene	1	27	U
100-42-5	Styrene	1	27	U
630-20-6	1,1,1,2-Tetrachloroethane	1	27	U
79-34-5	1,1,2,2-Tetrachloroethane	1	27	U
127-18-4	Tetrachloroethene	1	27	U
109-99-9	Tetrahydrofuran	1	530	U
108-88-3	Toluene	1	27	U
87-61-6	1,2,3-Trichlorobenzene	1	110	U
120-82-1	1,2,4-Trichlorobenzene	1	110	U
71-55-6	1,1,1-Trichloroethane	1	27	U
79-00-5	1,1,2-Trichloroethane	1	27	U
79-01-6	Trichloroethene	1	27	U
75-69-4	Trichlorofluoromethane	1	27	U
96-18-4	1,2,3-Trichloropropane	1	53	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	27	U
108-67-8	1,3,5-Trimethylbenzene	1	27	U
95-63-6	1,2,4-Trimethylbenzene	1	27	U
75-01-4	Vinyl chloride	1	27	U
108-38-3/1	m,p-Xylene	1	53	U
95-47-6	o-Xylene	1	27	U
1330-20-7	Xylenes, total	1	80	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.9	108	86.2 - 117	
Toluene-d8	25.00	24.9	99.8	90.4 - 108	
4-Bromofluorobenzene	25.00	25.1	100	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	486266	5.43	555011	5.41	
1,4-Difluorobenzene	822948	6.23	903811	6.21	
Chlorobenzene-d5	740723	9.09	799541	9.07	
1,4-Dichlorobenzene-d4	336462	11.18	359818	11.16	

026/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP18 (13.3-15')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-26 File ID: 33B.D
 Sampled: 05/09/14 09:45 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 16:58
 Solids: 87.76 Preparation: EPA 5030B Initial/Final: 11.6 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	10	980	U
110-54-3	n-Hexane	10	250	U
591-78-6	2-Hexanone	10	9800	U
98-82-8	Isopropylbenzene	10	190	J, D
99-87-6	p-Isopropyltoluene	10	59	J, D
75-09-2	Methylene chloride	10	100	B, J, D
108-10-1	4-Methyl-2-pentanone	10	9800	U
1634-04-4	Methyl t-Butyl Ether	10	250	U
91-20-3	Naphthalene	10	2500	U
103-65-1	n-Propyl Benzene	10	770	D
100-42-5	Styrene	10	250	U
630-20-6	1,1,1,2-Tetrachloroethane	10	250	U
79-34-5	1,1,2,2-Tetrachloroethane	10	250	U
127-18-4	Tetrachloroethene	10	250	U
109-99-9	Tetrahydrofuran	10	4900	U
108-88-3	Toluene	10	250	U
87-61-6	1,2,3-Trichlorobenzene	10	980	U
120-82-1	1,2,4-Trichlorobenzene	10	980	U
71-55-6	1,1,1-Trichloroethane	10	250	U
79-00-5	1,1,2-Trichloroethane	10	250	U
79-01-6	Trichloroethene	10	250	U
75-69-4	Trichlorofluoromethane	10	250	U
96-18-4	1,2,3-Trichloropropane	10	490	U
76-13-1	1,1,2-Trichlorotrifluoroethane	10	250	U
108-67-8	1,3,5-Trimethylbenzene	10	2500	D
95-63-6	1,2,4-Trimethylbenzene	10	6000	D
75-01-4	Vinyl chloride	10	250	U
108-38-3/1	m,p-Xylene	10	3800	D
95-47-6	o-Xylene	10	130	J, D
1330-20-7	Xylenes, total	10	3900	D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.9	103	86.2 - 117	
Toluene-d8	25.00	24.9	99.7	90.4 - 108	
4-Bromofluorobenzene	25.00	24.5	97.8	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	512985	5.44	555011	5.41	
1,4-Difluorobenzene	852640	6.23	903811	6.21	
Chlorobenzene-d5	768656	9.09	799541	9.07	
1,4-Dichlorobenzene-d4	344223	11.19	359818	11.16	

CEG/eq/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP18 (16.7-18.3')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-27 File ID: 34B.D
 Sampled: 05/09/14 10:05 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 17:42
 Solids: 95.42 Preparation: EPA 5030B Initial/Final: 8.82 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	120	U
110-54-3	n-Hexane	1	15	J
591-78-6	2-Hexanone	1	1200	U
98-82-8	Isopropylbenzene	1	19	J
99-87-6	p-Isopropyltoluene	1	8.9	J
75-09-2	Methylene chloride	1	17	B, J
108-10-1	4-Methyl-2-pentanone	1	1200	U
1634-04-4	Methyl t-Butyl Ether	1	30	U
91-20-3	Naphthalene	1	300	U
103-65-1	n-Propyl Benzene	1	120	
100-42-5	Styrene	1	30	U
630-20-6	1,1,1,2-Tetrachloroethane	1	30	U
79-34-5	1,1,2,2-Tetrachloroethane	1	30	U
127-18-4	Tetrachloroethene	1	30	U
109-99-9	Tetrahydrofuran	1	590	U
108-88-3	Toluene	1	14	B, J 300
87-61-6	1,2,3-Trichlorobenzene	1	120	U
120-82-1	1,2,4-Trichlorobenzene	1	120	U
71-55-6	1,1,1-Trichloroethane	1	30	U
79-00-5	1,1,2-Trichloroethane	1	30	U
79-01-6	Trichloroethene	1	30	U
75-69-4	Trichlorofluoromethane	1	30	U
96-18-4	1,2,3-Trichloropropane	1	59	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	30	U
108-67-8	1,3,5-Trimethylbenzene	1	300	
95-63-6	1,2,4-Trimethylbenzene	1	1100	
75-01-4	Vinyl chloride	1	30	U
108-38-3/1	m,p-Xylene	1	930	
95-47-6	o-Xylene	1	71	
1330-20-7	Xylenes, total	1	1000	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	27.5	110	86.2 - 117	
Toluene-d8	25.00	25.1	100	90.4 - 108	
4-Bromofluorobenzene	25.00	24.8	99.3	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	466117	5.43	555011	5.41	
1,4-Difluorobenzene	790215	6.24	903811	6.21	
Chlorobenzene-d5	730393	9.09	799541	9.07	
1,4-Dichlorobenzene-d4	326768	11.19	359818	11.16	

02/6/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP18 (23.3-25')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-28 File ID: 35B.D
 Sampled: 05/09/14 10:14 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 18:26
 Solids: 95.61 Preparation: EPA 5030B Initial/Final: 8.84 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1200	U
71-43-2	Benzene	1	25	J
108-86-1	Bromobenzene	1	30	U
74-97-5	Bromochloromethane	1	30	U
75-27-4	Bromodichloromethane	1	30	U
75-25-2	Bromofrom	1	30	U
74-83-9	Bromomethane	1	300	U
78-93-3	2-Butanone	1	1200	U
104-51-8	n-Butyl Benzene	1	30	U
135-98-8	sec-Butyl Benzene	1	30	U
98-06-6	tert-Butylbenzene	1	30	U
75-15-0	Carbon disulfide	1	30	U
56-23-5	Carbon tetrachloride	1	30	U
108-90-7	Chlorobenzene	1	30	U
75-00-3	Chloroethane	1	300	U
67-66-3	Chloroform	1	30	U
74-87-3	Chloromethane	1	59	BU
95-49-8	2-Chlorotoluene	1	30	U
106-43-4	4-Chlorotoluene	1	30	U
96-12-8	1,2-Dibromo-3-chloropropane	1	30	U
124-48-1	Dibromochloromethane	1	30	U
106-93-4	1,2-Dibromoethane (EDB)	1	30	U
74-95-3	Dibromomethane	1	30	U
95-50-1	1,2-Dichlorobenzene	1	30	U
106-46-7	1,4-Dichlorobenzene	1	30	U
541-73-1	1,3-Dichlorobenzene	1	30	U
75-71-8	Dichlorodifluoromethane	1	7.7	J
75-34-3	1,1-Dichloroethane	1	30	U
107-06-2	1,2-Dichloroethane	1	30	U
156-60-5	trans-1,2-Dichloroethene	1	30	U
156-59-2	cis-1,2-Dichloroethene	1	30	U
75-35-4	1,1-Dichloroethene	1	30	U
590-20-7	2,2-Dichloropropane	1	30	U
78-87-5	1,2-Dichloropropane	1	30	U
142-28-9	1,3-Dichloropropane	1	30	U
10061-01-5	cis-1,3-Dichloropropene	1	30	U
10061-02-6	trans-1,3-Dichloropropene	1	30	U
563-58-6	1,1-Dichloropropene	1	30	U
108-20-3	Diisopropyl Ether	1	30	U
100-41-4	Ethylbenzene	1	85	

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP18 (23.3-25')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-28 File ID: 35B.D
 Sampled: 05/09/14 10:14 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 18:26
 Solids: 95.61 Preparation: EPA 5030B Initial/Final: 8.84 g / 500 mL
 Batch: A405028 Sequence: A4E1802 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	120	U
110-54-3	n-Hexane	1	30	U
591-78-6	2-Hexanone	1	1200	U
98-82-8	Isopropylbenzene	1	7.7	J
99-87-6	p-Isopropyltoluene	1	30	U
75-09-2	Methylene chloride	1	16	B, J
108-10-1	4-Methyl-2-pentanone	1	1200	U
1634-04-4	Methyl t-Butyl Ether	1	30	U
91-20-3	Naphthalene	1	300	U
103-65-1	n-Propyl Benzene	1	44	
100-42-5	Styrene	1	30	U
630-20-6	1,1,1,2-Tetrachloroethane	1	30	U
79-34-5	1,1,2,2-Tetrachloroethane	1	30	U
127-18-4	Tetrachloroethene	1	30	U
109-99-9	Tetrahydrofuran	1	590	U
108-88-3	Toluene	1	8.9	B, J 300
87-61-6	1,2,3-Trichlorobenzene	1	120	U
120-82-1	1,2,4-Trichlorobenzene	1	120	U
71-55-6	1,1,1-Trichloroethane	1	30	U
79-00-5	1,1,2-Trichloroethane	1	30	U
79-01-6	Trichloroethene	1	30	U
75-69-4	Trichlorofluoromethane	1	30	U
96-18-4	1,2,3-Trichloropropane	1	59	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	30	U
108-67-8	1,3,5-Trimethylbenzene	1	120	
95-63-6	1,2,4-Trimethylbenzene	1	390	
75-01-4	Vinyl chloride	1	30	U
108-38-3/1	m,p-Xylene	1	380	
95-47-6	o-Xylene	1	46	
1330-20-7	Xylenes, total	1	430	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.2	101	86.2 - 117	
Toluene-d8	25.00	24.8	99.0	90.4 - 108	
4-Bromofluorobenzene	25.00	24.6	98.3	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	541926	5.45	555011	5.41	
1,4-Difluorobenzene	887341	6.25	903811	6.21	
Chlorobenzene-d5	790273	9.1	799541	9.07	
1,4-Dichlorobenzene-d4	343509	11.2	359818	11.16	

026/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP18 (28.3-30')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-29 File ID: 28A.D
 Sampled: 05/09/14 10:26 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 12:56
 Solids: 86.39 Preparation: EPA 5030B Initial/Final: 8.88 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	130	U
110-54-3	n-Hexane	1	20	J
591-78-6	2-Hexanone	1	1300	U
98-82-8	Isopropylbenzene	1	44	
99-87-6	p-Isopropyltoluene	1	20	J
75-09-2	Methylene chloride	1	25	B, J
108-10-1	4-Methyl-2-pentanone	1	1300	U
1634-04-4	Methyl t-Butyl Ether	1	33	U
91-20-3	Naphthalene	1	330	U
103-65-1	n-Propyl Benzene	1	220	
100-42-5	Styrene	1	33	U
630-20-6	1,1,1,2-Tetrachloroethane	1	33	U
79-34-5	1,1,2,2-Tetrachloroethane	1	33	U
127-18-4	Tetrachloroethene	1	33	U
109-99-9	Tetrahydrofuran	1	650	U
108-88-3	Toluene	1	21	B, J 3W
87-61-6	1,2,3-Trichlorobenzene	1	130	U
120-82-1	1,2,4-Trichlorobenzene	1	130	U
71-55-6	1,1,1-Trichloroethane	1	33	U
79-00-5	1,1,2-Trichloroethane	1	33	U
79-01-6	Trichloroethene	1	33	U
75-69-4	Trichlorofluoromethane	1	33	U
96-18-4	1,2,3-Trichloropropane	1	65	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	33	U
108-67-8	1,3,5-Trimethylbenzene	1	790	
95-63-6	1,2,4-Trimethylbenzene	1	2200	J
75-01-4	Vinyl chloride	1	33	U
108-38-3/1	m,p-Xylene	1	2000	
95-47-6	o-Xylene	1	310	
1330-20-7	Xylenes, total	1	2300	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.6	103	86.2 - 117	
Toluene-d8	25.00	25.1	100	90.4 - 108	
4-Bromofluorobenzene	25.00	24.6	98.4	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	588831	5.42	602493	5.41	
1,4-Difluorobenzene	959901	6.22	956878	6.21	
Chlorobenzene-d5	883375	9.07	854789	9.07	
1,4-Dichlorobenzene-d4	400740	11.17	397254	11.16	

026/20/14

ORGANIC ANALYSIS DATA SHEET

Field Blank #2 (MeOH)

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-31 File ID: 09B.D
 Sampled: 05/09/14 07:00 Prepared: 05/13/14 11:21 Analyzed: 05/20/14 14:31
 Solids: Preparation: EPA 5030B Initial/Final: 10 g / 500 mL
 Batch: A405028 Sequence: A4E2002 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
67-64-1	Acetone	1	1000	U
71-43-2	Benzene	1	25	U
108-86-1	Bromobenzene	1	25	U
74-97-5	Bromochloromethane	1	25	U
75-27-4	Bromodichloromethane	1	25	U
75-25-2	Bromoform	1	25	U
74-83-9	Bromomethane	1	250	U
78-93-3	2-Butanone	1	1000	U
104-51-8	n-Butyl Benzene	1	25	U
135-98-8	sec-Butyl Benzene	1	25	U
98-06-6	tert-Butylbenzene	1	25	U
75-15-0	Carbon disulfide	1	25	U
56-23-5	Carbon tetrachloride	1	25	U
108-90-7	Chlorobenzene	1	25	U
75-00-3	Chloroethane	1	250	U
67-66-3	Chloroform	1	25	U
74-87-3	Chloromethane	1	50	U
95-49-8	2-Chlorotoluene	1	25	U
106-43-4	4-Chlorotoluene	1	25	U
96-12-8	1,2-Dibromo-3-chloropropane	1	25	U
124-48-1	Dibromochloromethane	1	25	U
106-93-4	1,2-Dibromoethane (EDB)	1	25	U
74-95-3	Dibromomethane	1	25	U
95-50-1	1,2-Dichlorobenzene	1	25	U
106-46-7	1,4-Dichlorobenzene	1	25	U
541-73-1	1,3-Dichlorobenzene	1	25	U
75-71-8	Dichlorodifluoromethane	1	25	U
75-34-3	1,1-Dichloroethane	1	25	U
107-06-2	1,2-Dichloroethane	1	25	U
156-60-5	trans-1,2-Dichloroethene	1	25	U
156-59-2	cis-1,2-Dichloroethene	1	25	U
75-35-4	1,1-Dichloroethene	1	25	U
590-20-7	2,2-Dichloropropane	1	25	U
78-87-5	1,2-Dichloropropane	1	25	U
142-28-9	1,3-Dichloropropane	1	25	U
10061-01-5	cis-1,3-Dichloropropene	1	25	U
10061-02-6	trans-1,3-Dichloropropene	1	25	U
563-58-6	1,1-Dichloropropene	1	25	U
108-20-3	Diisopropyl Ether	1	25	U
100-41-4	Ethylbenzene	1	25	U

026/2014

ORGANIC ANALYSIS DATA SHEET

Field Blank #2 (MeOH)

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-31 File ID: 09B.D
 Sampled: 05/09/14 07:00 Prepared: 05/13/14 11:21 Analyzed: 05/20/14 14:31
 Solids: _____ Preparation: EPA 5030B Initial/Final: 10 g / 500 mL
 Batch: A405028 Sequence: A4E2002 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
87-68-3	Hexachlorobutadiene	1	100	U
110-54-3	n-Hexane	1	25	U
591-78-6	2-Hexanone	1	1000	U
98-82-8	Isopropylbenzene	1	25	U
99-87-6	p-Isopropyltoluene	1	25	U
75-09-2	Methylene chloride	1	100	U
108-10-1	4-Methyl-2-pentanone	1	1000	U
1634-04-4	Methyl t-Butyl Ether	1	25	U
91-20-3	Naphthalene	1	250	U
103-65-1	n-Propyl Benzene	1	25	U
100-42-5	Styrene	1	25	U
630-20-6	1,1,1,2-Tetrachloroethane	1	25	U
79-34-5	1,1,2,2-Tetrachloroethane	1	25	U
127-18-4	Tetrachloroethene	1	25	U
109-99-9	Tetrahydrofuran	1	500	U
108-88-3	Toluene	1	25	U
87-61-6	1,2,3-Trichlorobenzene	1	100	U
120-82-1	1,2,4-Trichlorobenzene	1	100	U
71-55-6	1,1,1-Trichloroethane	1	25	U
79-00-5	1,1,2-Trichloroethane	1	25	U
79-01-6	Trichloroethene	1	25	U
75-69-4	Trichlorofluoromethane	1	25	U
96-18-4	1,2,3-Trichloropropane	1	50	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	25	U
108-67-8	1,3,5-Trimethylbenzene	1	25	U
95-63-6	1,2,4-Trimethylbenzene	1	25	U
75-01-4	Vinyl chloride	1	25	U
108-38-3/1	m,p-Xylene	1	50	U
95-47-6	o-Xylene	1	25	U
1330-20-7	Xylenes, total	1	75	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	27.2	109	86.2 - 117	
Toluene-d8	25.00	25.1	100	90.4 - 108	
4-Bromofluorobenzene	25.00	25.0	100	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	438516	5.44	507341	5.44	
1,4-Difluorobenzene	726017	6.24	838542	6.24	
Chlorobenzene-d5	669849	9.1	745439	9.09	
1,4-Dichlorobenzene-d4	299455	11.19	346910	11.19	

026/20/14

ORGANIC ANALYSIS DATA SHEET

Equipment Blank #2

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Water Laboratory ID: A141916-32 File ID: 11B.D
 Sampled: 05/09/14 12:15 Prepared: 05/13/14 11:21 Analyzed: 05/20/14 16:02
 Solids: _____ Preparation: EPA 5030B Initial/Final: 10 mL / 500 mL
 Batch: A405098 Sequence: A4E2002 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	1	280	5
71-43-2	Benzene	1	0.50	U 5
108-86-1	Bromobenzene	1	0.50	U
74-97-5	Bromochloromethane	1	0.50	U
75-27-4	Bromodichloromethane	1	0.50	U
75-25-2	Bromoform	1	0.50	U
74-83-9	Bromomethane	1	5.0	U
78-93-3	2-Butanone	1	20	U
104-51-8	n-Butyl Benzene	1	0.50	U
135-98-8	sec-Butyl Benzene	1	0.50	U
98-06-6	tert-Butylbenzene	1	0.50	U
75-15-0	Carbon disulfide	1	0.50	U
56-23-5	Carbon tetrachloride	1	0.50	U
108-90-7	Chlorobenzene	1	0.50	U
75-00-3	Chloroethane	1	5.0	U
67-66-3	Chloroform	1	0.50	U
74-87-3	Chloromethane	1	2.0	U
95-49-8	2-Chlorotoluene	1	0.50	U
106-43-4	4-Chlorotoluene	1	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.50	U
124-48-1	Dibromochloromethane	1	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	1	0.50	U
74-95-3	Dibromomethane	1	0.50	U
95-50-1	1,2-Dichlorobenzene	1	0.50	U
106-46-7	1,4-Dichlorobenzene	1	0.50	U
541-73-1	1,3-Dichlorobenzene	1	0.50	U
75-71-8	Dichlorodifluoromethane	1	0.50	U
75-34-3	1,1-Dichloroethane	1	0.50	U
107-06-2	1,2-Dichloroethane	1	0.50	U
156-60-5	trans-1,2-Dichloroethene	1	0.50	U
156-59-2	cis-1,2-Dichloroethene	1	0.50	U
75-35-4	1,1-Dichloroethene	1	0.50	U
590-20-7	2,2-Dichloropropane	1	0.50	U
78-87-5	1,2-Dichloropropane	1	0.50	U
142-28-9	1,3-Dichloropropane	1	0.50	U
10061-01-5	cis-1,3-Dichloropropene	1	0.50	U
10061-02-6	trans-1,3-Dichloropropene	1	0.50	U
563-58-6	1,1-Dichloropropene	1	0.50	U
108-20-3	Diisopropyl Ether	1	0.50	U
100-41-4	Ethylbenzene	1	0.50	U

OR G/20/14

ORGANIC ANALYSIS DATA SHEET

Equipment Blank #2

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Water Laboratory ID: A141916-32 File ID: 11B.D
 Sampled: 05/09/14 12:15 Prepared: 05/13/14 11:21 Analyzed: 05/20/14 16:02
 Solids: _____ Preparation: EPA 5030B Initial/Final: 10 mL / 500 mL
 Batch: A405098 Sequence: A4E2002 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	1	2.0	U <i>US</i>
110-54-3	n-Hexane	1	0.50	U
591-78-6	2-Hexanone	1	20	U
98-82-8	Isopropylbenzene	1	0.50	U
99-87-6	p-Isopropyltoluene	1	0.50	U
75-09-2	Methylene chloride	1	2.0	U
108-10-1	4-Methyl-2-pentanone	1	20	U
1634-04-4	Methyl t-Butyl Ether	1	0.50	U
91-20-3	Naphthalene	1	5.0	U
103-65-1	n-Propyl Benzene	1	0.50	U
100-42-5	Styrene	1	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.50	U
127-18-4	Tetrachloroethene	1	0.50	U
109-99-9	Tetrahydrofuran	1	10	U <i>↓</i>
108-88-3	Toluene	1	6.0	<i>U</i>
87-61-6	1,2,3-Trichlorobenzene	1	2.0	U <i>US</i>
120-82-1	1,2,4-Trichlorobenzene	1	2.0	U
71-55-6	1,1,1-Trichloroethane	1	0.50	U
79-00-5	1,1,2-Trichloroethane	1	0.50	U
79-01-6	Trichloroethene	1	0.50	U
75-69-4	Trichlorofluoromethane	1	0.50	U
96-18-4	1,2,3-Trichloropropane	1	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	0.50	U
108-67-8	1,3,5-Trimethylbenzene	1	0.50	U
95-63-6	1,2,4-Trimethylbenzene	1	0.50	U
75-01-4	Vinyl chloride	1	0.50	U
108-38-3/1	m,p-Xylene	1	1.0	U
95-47-6	o-Xylene	1	0.50	U
1330-20-7	Xylenes, total	1	1.5	U <i>✓</i>

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.2	105	82.2 - 117	
Toluene-d8	25.00	25.0	99.9	82.6 - 111	
4-Bromofluorobenzene	25.00	24.8	99.1	88.4 - 108	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	475761	5.44	507341	5.44	
1,4-Difluorobenzene	780234	6.24	838542	6.24	
Chlorobenzene-d5	714092	9.09	745439	9.09	
1,4-Dichlorobenzene-d4	316916	11.19	346910	11.19	

026/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP17 (3.3-5')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-33 File ID: 32A.D
 Sampled: 05/09/14 10:50 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 15:52
 Solids: 90.27 Preparation: EPA 5030B Initial/Final: 11.38 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	970	U
71-43-2	Benzene	1	34	
108-86-1	Bromobenzene	1	24	U
74-97-5	Bromochloromethane	1	24	U
75-27-4	Bromodichloromethane	1	24	U
75-25-2	Bromoform	1	24	U
74-83-9	Bromomethane	1	240	U
78-93-3	2-Butanone	1	970	U
104-51-8	n-Butyl Benzene	1	24	U
135-98-8	sec-Butyl Benzene	1	160	
98-06-6	tert-Butylbenzene	1	24	U
75-15-0	Carbon disulfide	1	24	U
56-23-5	Carbon tetrachloride	1	24	U
108-90-7	Chlorobenzene	1	24	U
75-00-3	Chloroethane	1	240	U ✓
67-66-3	Chloroform	1	24	U
74-87-3	Chloromethane	1	49	U
95-49-8	2-Chlorotoluene	1	24	U
106-43-4	4-Chlorotoluene	1	24	U
96-12-8	1,2-Dibromo-3-chloropropane	1	24	U
124-48-1	Dibromochloromethane	1	24	U
106-93-4	1,2-Dibromoethane (EDB)	1	24	U
74-95-3	Dibromomethane	1	24	U
95-50-1	1,2-Dichlorobenzene	1	24	U
106-46-7	1,4-Dichlorobenzene	1	24	U
541-73-1	1,3-Dichlorobenzene	1	24	U
75-71-8	Dichlorodifluoromethane	1	24	U
75-34-3	1,1-Dichloroethane	1	24	U
107-06-2	1,2-Dichloroethane	1	24	U
156-60-5	trans-1,2-Dichloroethene	1	24	U
156-59-2	cis-1,2-Dichloroethene	1	24	U
75-35-4	1,1-Dichloroethene	1	24	U
590-20-7	2,2-Dichloropropane	1	24	U
78-87-5	1,2-Dichloropropane	1	24	U
142-28-9	1,3-Dichloropropane	1	24	U
10061-01-5	cis-1,3-Dichloropropene	1	24	U
10061-02-6	trans-1,3-Dichloropropene	1	24	U
563-58-6	1,1-Dichloropropene	1	24	U
108-20-3	Diisopropyl Ether	1	24	U
100-41-4	Ethylbenzene	1	2200	

CEG/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP17 (3.3-5')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-33 File ID: 32A.D
 Sampled: 05/09/14 10:50 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 15:52
 Solids: 90.27 Preparation: EPA 5030B Initial/Final: 11.38 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	97	U
110-54-3	n-Hexane	1	52	
591-78-6	2-Hexanone	1	970	U
98-82-8	Isopropylbenzene	1	260	
99-87-6	p-Isopropyltoluene	1	38	
75-09-2	Methylene chloride	1	23	B, J
108-10-1	4-Methyl-2-pentanone	1	970	U
1634-04-4	Methyl t-Butyl Ether	1	24	U
91-20-3	Naphthalene	1	240	
103-65-1	n-Propyl Benzene	1	1100	
100-42-5	Styrene	1	24	U
630-20-6	1,1,1,2-Tetrachloroethane	1	24	U
79-34-5	1,1,2,2-Tetrachloroethane	1	24	U
127-18-4	Tetrachloroethene	1	24	U
109-99-9	Tetrahydrofuran	1	490	U
108-88-3	Toluene	1	24	U
87-61-6	1,2,3-Trichlorobenzene	1	97	U
120-82-1	1,2,4-Trichlorobenzene	1	97	U
71-55-6	1,1,1-Trichloroethane	1	24	U
79-00-5	1,1,2-Trichloroethane	1	24	U
79-01-6	Trichloroethene	1	24	U
75-69-4	Trichlorofluoromethane	1	24	U
96-18-4	1,2,3-Trichloropropane	1	49	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	24	U
108-67-8	1,3,5-Trimethylbenzene	1	200	
95-63-6	1,2,4-Trimethylbenzene	1	1000	
75-01-4	Vinyl chloride	1	24	U
108-38-3/1	m,p-Xylene	1	320	
95-47-6	o-Xylene	1	13	J
1330-20-7	Xylenes, total	1	330	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	24.9	99.4	86.2 - 117	
Toluene-d8	25.00	25.2	101	90.4 - 108	
4-Bromofluorobenzene	25.00	25.0	99.8	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	599542	5.43	602493	5.41	
1,4-Difluorobenzene	960452	6.23	956878	6.21	
Chlorobenzene-d5	878761	9.09	854789	9.07	
1,4-Dichlorobenzene-d4	391689	11.19	397254	11.16	

06/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP17 (6.7-8.3')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-34 File ID: 33A.D
 Sampled: 05/09/14 11:05 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 16:36
 Solids: 92.64 Preparation: EPA 5030B Initial/Final: 9.85 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1100	U
71-43-2	Benzene	1	27	U
108-86-1	Bromobenzene	1	27	U
74-97-5	Bromochloromethane	1	27	U
75-27-4	Bromodichloromethane	1	27	U
75-25-2	Bromoform	1	27	U
74-83-9	Bromomethane	1	270	U
78-93-3	2-Butanone	1	1100	U
104-51-8	n-Butyl Benzene	1	27	U
135-98-8	sec-Butyl Benzene	1	27	U
98-06-6	tert-Butylbenzene	1	27	U
75-15-0	Carbon disulfide	1	27	U
56-23-5	Carbon tetrachloride	1	27	U
108-90-7	Chlorobenzene	1	27	U
75-00-3	Chloroethane	1	270	U (S)
67-66-3	Chloroform	1	27	U
74-87-3	Chloromethane	1	55	U
95-49-8	2-Chlorotoluene	1	27	U
106-43-4	4-Chlorotoluene	1	27	U
96-12-8	1,2-Dibromo-3-chloropropane	1	27	U
124-48-1	Dibromochloromethane	1	27	U
106-93-4	1,2-Dibromoethane (EDB)	1	27	U
74-95-3	Dibromomethane	1	27	U
95-50-1	1,2-Dichlorobenzene	1	27	U
106-46-7	1,4-Dichlorobenzene	1	27	U
541-73-1	1,3-Dichlorobenzene	1	27	U
75-71-8	Dichlorodifluoromethane	1	27	U
75-34-3	1,1-Dichloroethane	1	27	U
107-06-2	1,2-Dichloroethane	1	27	U
156-60-5	trans-1,2-Dichloroethene	1	27	U
156-59-2	cis-1,2-Dichloroethene	1	27	U
75-35-4	1,1-Dichloroethene	1	27	U
590-20-7	2,2-Dichloropropane	1	27	U
78-87-5	1,2-Dichloropropane	1	27	U
142-28-9	1,3-Dichloropropane	1	27	U
10061-01-5	cis-1,3-Dichloropropene	1	27	U
10061-02-6	trans-1,3-Dichloropropene	1	27	U
563-58-6	1,1-Dichloropropene	1	27	U
108-20-3	Diisopropyl Ether	1	27	U
100-41-4	Ethylbenzene	1	6.6	J

06/29/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP17 (6.7-8.3')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-34 File ID: 33A.D
 Sampled: 05/09/14 11:05 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 16:36
 Solids: 92.64 Preparation: EPA 5030B Initial/Final: 9.85 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	110	U
110-54-3	n-Hexane	1	27	U
591-78-6	2-Hexanone	1	1100	U
98-82-8	Isopropylbenzene	1	27	U
99-87-6	p-Isopropyltoluene	1	27	U
75-09-2	Methylene chloride	1	24	B, J
108-10-1	4-Methyl-2-pentanone	1	1100	U
1634-04-4	Methyl t-Butyl Ether	1	27	U
91-20-3	Naphthalene	1	16	B, J
103-65-1	n-Propyl Benzene	1	4.9	J
100-42-5	Styrene	1	27	U
630-20-6	1,1,1,2-Tetrachloroethane	1	27	U
79-34-5	1,1,2,2-Tetrachloroethane	1	27	U
127-18-4	Tetrachloroethene	1	27	U
109-99-9	Tetrahydrofuran	1	550	U
108-88-3	Toluene	1	27	U
87-61-6	1,2,3-Trichlorobenzene	1	110	U
120-82-1	1,2,4-Trichlorobenzene	1	110	U
71-55-6	1,1,1-Trichloroethane	1	27	U
79-00-5	1,1,2-Trichloroethane	1	27	U
79-01-6	Trichloroethene	1	27	U
75-69-4	Trichlorofluoromethane	1	27	U
96-18-4	1,2,3-Trichloropropane	1	55	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	27	U
108-67-8	1,3,5-Trimethylbenzene	1	27	U
95-63-6	1,2,4-Trimethylbenzene	1	8.8	J
75-01-4	Vinyl chloride	1	27	U
108-38-3/1	m,p-Xylene	1	7.1	J
95-47-6	o-Xylene	1	4.4	J
1330-20-7	Xylenes, total	1	12	J

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.9	104	86.2 - 117	
Toluene-d8	25.00	25.0	99.8	90.4 - 108	
4-Bromofluorobenzene	25.00	25.2	101	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	587375	5.44	602493	5.41	
1,4-Difluorobenzene	967410	6.24	956878	6.21	
Chlorobenzene-d5	870927	9.09	854789	9.07	
1,4-Dichlorobenzene-d4	398691	11.19	397254	11.16	

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP17 (13.3-15')

Laboratory: ECCS SDG:
Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
Matrix: Soil Laboratory ID: A141916-35 File ID: 34A.D
Sampled: 05/09/14 11:12 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 17:20
Solids: 91.02 Preparation: EPA 5030B Initial/Final: 9.81 g / 500 mL
Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

Table with 5 columns: CAS NO., COMPOUND, DILUTION, CONC. (ug/kg dry), and Q. It lists various chemical compounds such as Acetone, Benzene, and Chlorobenzene along with their respective dilution and concentration values.

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP17 (13.3-15')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-35 File ID: 34A.D
 Sampled: 05/09/14 11:12 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 17:20
 Solids: 91.02 Preparation: EPA 5030B Initial/Final: 9.81 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	110	U
110-54-3	n-Hexane	1	34	
591-78-6	2-Hexanone	1	1100	U
98-82-8	Isopropylbenzene	1	28	U
99-87-6	p-Isopropyltoluene	1	28	U
75-09-2	Methylene chloride	1	24	B, J
108-10-1	4-Methyl-2-pentanone	1	1100	U
1634-04-4	Methyl t-Butyl Ether	1	28	U
91-20-3	Naphthalene	1	280	U
103-65-1	n-Propyl Benzene	1	28	U
100-42-5	Styrene	1	28	U
630-20-6	1,1,1,2-Tetrachloroethane	1	28	U
79-34-5	1,1,2,2-Tetrachloroethane	1	28	U
127-18-4	Tetrachloroethene	1	28	U
109-99-9	Tetrahydrofuran	1	560	U
108-88-3	Toluene	1	9.5	B, J 28U
87-61-6	1,2,3-Trichlorobenzene	1	110	U
120-82-1	1,2,4-Trichlorobenzene	1	110	U
71-55-6	1,1,1-Trichloroethane	1	28	U
79-00-5	1,1,2-Trichloroethane	1	28	U
79-01-6	Trichloroethene	1	28	U
75-69-4	Trichlorofluoromethane	1	28	U
96-18-4	1,2,3-Trichloropropane	1	56	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	28	U
108-67-8	1,3,5-Trimethylbenzene	1	51	
95-63-6	1,2,4-Trimethylbenzene	1	60	
75-01-4	Vinyl chloride	1	28	U
108-38-3/1	m,p-Xylene	1	1700	
95-47-6	o-Xylene	1	10	J
1330-20-7	Xylenes, total	1	1700	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.1	101	86.2 - 117	
Toluene-d8	25.00	25.3	101	90.4 - 108	
4-Bromofluorobenzene	25.00	25.2	101	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	597700	5.43	602493	5.41	
1,4-Difluorobenzene	961695	6.23	956878	6.21	
Chlorobenzene-d5	878937	9.08	854789	9.07	
1,4-Dichlorobenzene-d4	396957	11.18	397254	11.16	

JRG/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP17 (18.3-20')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-36 File ID: 12A.D
 Sampled: 05/09/14 11:28 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 18:48
 Solids: 83.41 Preparation: EPA 5030B Initial/Final: 10.89 g / 500 mL
 Batch: A405028 Sequence: A4E2001 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1100	U
71-43-2	Benzene	1	12	J
108-86-1	Bromobenzene	1	28	U
74-97-5	Bromochloromethane	1	28	U
75-27-4	Bromodichloromethane	1	28	U
75-25-2	Bromoform	1	28	U
74-83-9	Bromomethane	1	280	U
78-93-3	2-Butanone	1	1100	U
104-51-8	n-Butyl Benzene	1	28	U
135-98-8	sec-Butyl Benzene	1	28	U
98-06-6	tert-Butylbenzene	1	28	U
75-15-0	Carbon disulfide	1	66	
56-23-5	Carbon tetrachloride	1	28	U
108-90-7	Chlorobenzene	1	28	U
75-00-3	Chloroethane	1	280	LCU <i>5</i>
67-66-3	Chloroform	1	28	U
74-87-3	Chloromethane	1	55	U
95-49-8	2-Chlorotoluene	1	28	U
106-43-4	4-Chlorotoluene	1	28	U
96-12-8	1,2-Dibromo-3-chloropropane	1	28	U
124-48-1	Dibromochloromethane	1	28	U
106-93-4	1,2-Dibromoethane (EDB)	1	28	U
74-95-3	Dibromomethane	1	28	U
95-50-1	1,2-Dichlorobenzene	1	28	U
106-46-7	1,4-Dichlorobenzene	1	28	U
541-73-1	1,3-Dichlorobenzene	1	28	U
75-71-8	Dichlorodifluoromethane	1	28	U
75-34-3	1,1-Dichloroethane	1	28	U
107-06-2	1,2-Dichloroethane	1	28	U
156-60-5	trans-1,2-Dichloroethene	1	28	U
156-59-2	cis-1,2-Dichloroethene	1	28	U
75-35-4	1,1-Dichloroethene	1	28	U
590-20-7	2,2-Dichloropropane	1	28	U
78-87-5	1,2-Dichloropropane	1	28	U
142-28-9	1,3-Dichloropropane	1	28	U
10061-01-5	cis-1,3-Dichloropropene	1	28	U
10061-02-6	trans-1,3-Dichloropropene	1	28	U
563-58-6	1,1-Dichloropropene	1	28	U
108-20-3	Diisopropyl Ether	1	28	U
100-41-4	Ethylbenzene	1	310	

026/02/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP17 (18.3-20')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-36 File ID: 12A.D
 Sampled: 05/09/14 11:28 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 18:48
 Solids: 83.41 Preparation: EPA 5030B Initial/Final: 10.89 g / 500 mL
 Batch: A405028 Sequence: A4E2001 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	110	U
110-54-3	n-Hexane	1	28	U
591-78-6	2-Hexanone	1	1100	U
98-82-8	Isopropylbenzene	1	94	
99-87-6	p-Isopropyltoluene	1	69	
75-09-2	Methylene chloride	1	110	U
108-10-1	4-Methyl-2-pentanone	1	1100	U
1634-04-4	Methyl t-Butyl Ether	1	28	U
91-20-3	Naphthalene	1	1100	
103-65-1	n-Propyl Benzene	1	440	
100-42-5	Styrene	1	28	U
630-20-6	1,1,1,2-Tetrachloroethane	1	28	U
79-34-5	1,1,2,2-Tetrachloroethane	1	28	U
127-18-4	Tetrachloroethene	1	28	U
109-99-9	Tetrahydrofuran	1	550	U
108-88-3	Toluene	1	10	B, J <i>28</i>
87-61-6	1,2,3-Trichlorobenzene	1	110	U
120-82-1	1,2,4-Trichlorobenzene	1	110	U
71-55-6	1,1,1-Trichloroethane	1	28	U
79-00-5	1,1,2-Trichloroethane	1	28	U
79-01-6	Trichloroethene	1	28	U
75-69-4	Trichlorofluoromethane	1	28	U
96-18-4	1,2,3-Trichloropropane	1	55	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	28	U
108-67-8	1,3,5-Trimethylbenzene	1	2100	
95-63-6	1,2,4-Trimethylbenzene	10	7800	D
75-01-4	Vinyl chloride	1	28	U
108-38-3/1	m,p-Xylene	1	1500	
95-47-6	o-Xylene	1	93	
1330-20-7	Xylenes, total	1	1600	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.9	104	86.2 - 117	
Toluene-d8	25.00	25.4	102	90.4 - 108	
4-Bromofluorobenzene	25.00	25.7	103	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	532911	5.43	552628	5.44	
1,4-Difluorobenzene	869425	6.24	899061	6.24	
Chlorobenzene-d5	810951	9.09	811295	9.1	
1,4-Dichlorobenzene-d4	387899	11.19	382935	11.19	

C26/20/14

ORGANIC ANALYSIS DATA SHEET

Field Blank #3 (MeOH)

Laboratory:	ECCS	SDG:	
Client:	GZA GeoEnvironmental, Inc	Project:	Wedron Silica - Wedron, IL
Matrix:	Soil	Laboratory ID:	A141916-37
		File ID:	10B.D
Sampled:	05/09/14 11:36	Prepared:	05/13/14 11:21
		Analyzed:	05/20/14 15:17
Solids:		Preparation:	EPA 5030B
		Initial/Final:	10 g / 500 mL
Batch:	A405028	Sequence:	A4E2002
		Calibration:	A140523
		Instrument:	3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
67-64-1	Acetone	1	1000	U
71-43-2	Benzene	1	25	U
108-86-1	Bromobenzene	1	25	U
74-97-5	Bromochloromethane	1	25	U
75-27-4	Bromodichloromethane	1	25	U
75-25-2	Bromoform	1	25	U
74-83-9	Bromomethane	1	250	U
78-93-3	2-Butanone	1	1000	U
104-51-8	n-Butyl Benzene	1	25	U
135-98-8	sec-Butyl Benzene	1	25	U
98-06-6	tert-Butylbenzene	1	25	U
75-15-0	Carbon disulfide	1	25	U
56-23-5	Carbon tetrachloride	1	25	U
108-90-7	Chlorobenzene	1	25	U
75-00-3	Chloroethane	1	250	U
67-66-3	Chloroform	1	25	U
74-87-3	Chloromethane	1	50	U
95-49-8	2-Chlorotoluene	1	25	U
106-43-4	4-Chlorotoluene	1	25	U
96-12-8	1,2-Dibromo-3-chloropropane	1	25	U
124-48-1	Dibromochloromethane	1	25	U
106-93-4	1,2-Dibromoethane (EDB)	1	25	U
74-95-3	Dibromomethane	1	25	U
95-50-1	1,2-Dichlorobenzene	1	25	U
106-46-7	1,4-Dichlorobenzene	1	25	U
541-73-1	1,3-Dichlorobenzene	1	25	U
75-71-8	Dichlorodifluoromethane	1	25	U
75-34-3	1,1-Dichloroethane	1	25	U
107-06-2	1,2-Dichloroethane	1	25	U
156-60-5	trans-1,2-Dichloroethene	1	25	U
156-59-2	cis-1,2-Dichloroethene	1	25	U
75-35-4	1,1-Dichloroethene	1	25	U
590-20-7	2,2-Dichloropropane	1	25	U
78-87-5	1,2-Dichloropropane	1	25	U
142-28-9	1,3-Dichloropropane	1	25	U
10061-01-5	cis-1,3-Dichloropropene	1	25	U
10061-02-6	trans-1,3-Dichloropropene	1	25	U
563-58-6	1,1-Dichloropropene	1	25	U
108-20-3	Diisopropyl Ether	1	25	U
100-41-4	Ethylbenzene	1	25	U

CEG/20/14

ORGANIC ANALYSIS DATA SHEET

Field Blank #3 (MeOH)

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-37 File ID: 10B.D
 Sampled: 05/09/14 11:36 Prepared: 05/13/14 11:21 Analyzed: 05/20/14 15:17
 Solids: Preparation: EPA 5030B Initial/Final: 10 g / 500 mL
 Batch: A405028 Sequence: A4E2002 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
87-68-3	Hexachlorobutadiene	1	100	U
110-54-3	n-Hexane	1	25	U
591-78-6	2-Hexanone	1	1000	U
98-82-8	Isopropylbenzene	1	25	U
99-87-6	p-Isopropyltoluene	1	25	U
75-09-2	Methylene chloride	1	100	U
108-10-1	4-Methyl-2-pentanone	1	1000	U
1634-04-4	Methyl t-Butyl Ether	1	25	U
91-20-3	Naphthalene	1	250	U
103-65-1	n-Propyl Benzene	1	25	U
100-42-5	Styrene	1	25	U
630-20-6	1,1,1,2-Tetrachloroethane	1	25	U
79-34-5	1,1,2,2-Tetrachloroethane	1	25	U
127-18-4	Tetrachloroethene	1	25	U
109-99-9	Tetrahydrofuran	1	500	U
108-88-3	Toluene	1	25	U
87-61-6	1,2,3-Trichlorobenzene	1	100	U
120-82-1	1,2,4-Trichlorobenzene	1	100	U
71-55-6	1,1,1-Trichloroethane	1	25	U
79-00-5	1,1,2-Trichloroethane	1	25	U
79-01-6	Trichloroethene	1	25	U
75-69-4	Trichlorofluoromethane	1	25	U
96-18-4	1,2,3-Trichloropropane	1	50	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	25	U
108-67-8	1,3,5-Trimethylbenzene	1	25	U
95-63-6	1,2,4-Trimethylbenzene	1	25	U
75-01-4	Vinyl chloride	1	25	U
108-38-3/1	m,p-Xylene	1	50	U
95-47-6	o-Xylene	1	25	U
1330-20-7	Xylenes, total	1	75	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.9	108	86.2 - 117	
Toluene-d8	25.00	25.2	101	90.4 - 108	
4-Bromofluorobenzene	25.00	24.9	99.5	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	445551	5.44	507341	5.44	
1,4-Difluorobenzene	732013	6.24	838542	6.24	
Chlorobenzene-d5	677965	9.1	745439	9.09	
1,4-Dichlorobenzene-d4	300809	11.19	346910	11.19	

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP17 (21.7-23')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-38 File ID: 13A.D
 Sampled: 05/09/14 11:41 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 19:32
 Solids: 95.11 Preparation: EPA 5030B Initial/Final: 9.55 g / 500 mL
 Batch: A405028 Sequence: A4E2001 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1100	U
71-43-2	Benzene	1	33	
108-86-1	Bromobenzene	1	28	U
74-97-5	Bromochloromethane	1	28	U
75-27-4	Bromodichloromethane	1	28	U
75-25-2	Bromoform	1	28	U
74-83-9	Bromomethane	1	280	U
78-93-3	2-Butanone	1	1100	U
104-51-8	n-Butyl Benzene	1	28	U
135-98-8	sec-Butyl Benzene	1	28	U
98-06-6	tert-Butylbenzene	1	28	U
75-15-0	Carbon disulfide	1	10	J
56-23-5	Carbon tetrachloride	1	28	U
108-90-7	Chlorobenzene	1	28	U
75-00-3	Chloroethane	1	280	LCU 5
67-66-3	Chloroform	1	28	U
74-87-3	Chloromethane	1	55	U
95-49-8	2-Chlorotoluene	1	28	U
106-43-4	4-Chlorotoluene	1	28	U
96-12-8	1,2-Dibromo-3-chloropropane	1	28	U
124-48-1	Dibromochloromethane	1	28	U
106-93-4	1,2-Dibromoethane (EDB)	1	28	U
74-95-3	Dibromomethane	1	28	U
95-50-1	1,2-Dichlorobenzene	1	28	U
106-46-7	1,4-Dichlorobenzene	1	28	U
541-73-1	1,3-Dichlorobenzene	1	28	U
75-71-8	Dichlorodifluoromethane	1	28	U
75-34-3	1,1-Dichloroethane	1	28	U
107-06-2	1,2-Dichloroethane	1	28	U
156-60-5	trans-1,2-Dichloroethene	1	28	U
156-59-2	cis-1,2-Dichloroethene	1	28	U
75-35-4	1,1-Dichloroethene	1	28	U
590-20-7	2,2-Dichloropropane	1	28	U
78-87-5	1,2-Dichloropropane	1	28	U
142-28-9	1,3-Dichloropropane	1	28	U
10061-01-5	cis-1,3-Dichloropropene	1	28	U
10061-02-6	trans-1,3-Dichloropropene	1	28	U
563-58-6	1,1-Dichloropropene	1	28	U
108-20-3	Diisopropyl Ether	1	28	U
100-41-4	Ethylbenzene	1	260	

05/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP17 (21.7-23')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-38 File ID: 13A.D
 Sampled: 05/09/14 11:41 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 19:32
 Solids: 95.11 Preparation: EPA 5030B Initial/Final: 9.55 g / 500 mL
 Batch: A405028 Sequence: A4E2001 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	110	U
110-54-3	n-Hexane	1	28	U
591-78-6	2-Hexanone	1	1100	U
98-82-8	Isopropylbenzene	1	43	
99-87-6	p-Isopropyltoluene	1	28	
75-09-2	Methylene chloride	1	110	BU
108-10-1	4-Methyl-2-pentanone	1	1100	U
1634-04-4	Methyl t-Butyl Ether	1	28	U
91-20-3	Naphthalene	1	1100	
103-65-1	n-Propyl Benzene	1	260	
100-42-5	Styrene	1	28	U
630-20-6	1,1,1,2-Tetrachloroethane	1	28	U
79-34-5	1,1,2,2-Tetrachloroethane	1	28	U
127-18-4	Tetrachloroethene	1	28	U
109-99-9	Tetrahydrofuran	1	550	U
108-88-3	Toluene	1	59	
87-61-6	1,2,3-Trichlorobenzene	1	110	U
120-82-1	1,2,4-Trichlorobenzene	1	110	U
71-55-6	1,1,1-Trichloroethane	1	28	U
79-00-5	1,1,2-Trichloroethane	1	28	U
79-01-6	Trichloroethene	1	28	U
75-69-4	Trichlorofluoromethane	1	28	U
96-18-4	1,2,3-Trichloropropane	1	55	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	28	U
108-67-8	1,3,5-Trimethylbenzene	1	1100	
95-63-6	1,2,4-Trimethylbenzene	10	4000	D
75-01-4	Vinyl chloride	1	28	U
108-38-3/1	m,p-Xylene	1	1200	
95-47-6	o-Xylene	1	120	
1330-20-7	Xylenes, total	1	1400	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.3	101	86.2 - 117	
Toluene-d8	25.00	25.2	101	90.4 - 108	
4-Bromofluorobenzene	25.00	25.5	102	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	568197	5.44	552628	5.44	
1,4-Difluorobenzene	919753	6.24	899061	6.24	
Chlorobenzene-d5	843038	9.1	811295	9.1	
1,4-Dichlorobenzene-d4	396639	11.19	382935	11.19	

026/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP17 (26.7-28.3')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-39 File ID: 39A.D
 Sampled: 05/09/14 11:46 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 21:00
 Solids: 95.99 Preparation: EPA 5030B Initial/Final: 10.79 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	10	9700	U
71-43-2	Benzene	10	310	D
108-86-1	Bromobenzene	10	240	U
74-97-5	Bromochloromethane	10	240	U
75-27-4	Bromodichloromethane	10	240	U
75-25-2	Bromoform	10	240	U
74-83-9	Bromomethane	10	2400	U
78-93-3	2-Butanone	10	9700	U
104-51-8	n-Butyl Benzene	10	240	U
135-98-8	sec-Butyl Benzene	10	240	U
98-06-6	tert-Butylbenzene	10	240	U
75-15-0	Carbon disulfide	10	240	U
56-23-5	Carbon tetrachloride	10	240	U
108-90-7	Chlorobenzene	10	240	U
75-00-3	Chloroethane	10	2400	U <i>UJ</i>
67-66-3	Chloroform	10	240	U
74-87-3	Chloromethane	10	480	U
95-49-8	2-Chlorotoluene	10	240	U
106-43-4	4-Chlorotoluene	10	240	U
96-12-8	1,2-Dibromo-3-chloropropane	10	240	U
124-48-1	Dibromochloromethane	10	240	U
106-93-4	1,2-Dibromoethane (EDB)	10	240	U
74-95-3	Dibromomethane	10	240	U
95-50-1	1,2-Dichlorobenzene	10	240	U
106-46-7	1,4-Dichlorobenzene	10	240	U
541-73-1	1,3-Dichlorobenzene	10	240	U
75-71-8	Dichlorodifluoromethane	10	240	U
75-34-3	1,1-Dichloroethane	10	240	U
107-06-2	1,2-Dichloroethane	10	240	U
156-60-5	trans-1,2-Dichloroethene	10	240	U
156-59-2	cis-1,2-Dichloroethene	10	240	U
75-35-4	1,1-Dichloroethene	10	240	U
590-20-7	2,2-Dichloropropane	10	240	U
78-87-5	1,2-Dichloropropane	10	240	U
142-28-9	1,3-Dichloropropane	10	240	U
10061-01-5	cis-1,3-Dichloropropene	10	240	U
10061-02-6	trans-1,3-Dichloropropene	10	240	U
563-58-6	1,1-Dichloropropene	10	240	U
108-20-3	Diisopropyl Ether	10	240	U
100-41-4	Ethylbenzene	10	2200	D

CEG/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP17 (26.7-28.3')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-39 File ID: 39A.D
 Sampled: 05/09/14 11:46 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 21:00
 Solids: 95.99 Preparation: EPA 5030B Initial/Final: 10.79 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	10	970	U
110-54-3	n-Hexane	10	110	J, D
591-78-6	2-Hexanone	10	9700	U
98-82-8	Isopropylbenzene	10	260	D
99-87-6	p-Isopropyltoluene	10	160	J, D
75-09-2	Methylene chloride	10	970	U
108-10-1	4-Methyl-2-pentanone	10	9700	U
1634-04-4	Methyl t-Butyl Ether	10	240	U
91-20-3	Naphthalene	10	2300	J, D
103-65-1	n-Propyl Benzene	10	1600	D
100-42-5	Styrene	10	240	U
630-20-6	1,1,1,2-Tetrachloroethane	10	240	U
79-34-5	1,1,2,2-Tetrachloroethane	10	240	U
127-18-4	Tetrachloroethene	10	240	U
109-99-9	Tetrahydrofuran	10	4800	U
108-88-3	Toluene	10	570	D
87-61-6	1,2,3-Trichlorobenzene	10	970	U
120-82-1	1,2,4-Trichlorobenzene	10	970	U
71-55-6	1,1,1-Trichloroethane	10	240	U
79-00-5	1,1,2-Trichloroethane	10	240	U
79-01-6	Trichloroethene	10	240	U
75-69-4	Trichlorofluoromethane	10	240	U
96-18-4	1,2,3-Trichloropropane	10	480	U
76-13-1	1,1,2-Trichlorotrifluoroethane	10	240	U
108-67-8	1,3,5-Trimethylbenzene	10	5600	D
95-63-6	1,2,4-Trimethylbenzene	10	21000	D
75-01-4	Vinyl chloride	10	240	U
108-38-3/1	m,p-Xylene	10	11000	D
95-47-6	o-Xylene	10	1300	D
1330-20-7	Xylenes, total	10	12000	D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.1	105	86.2 - 117	
Toluene-d8	25.00	25.1	100	90.4 - 108	
4-Bromofluorobenzene	25.00	24.9	99.5	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	566967	5.43	602493	5.41	
1,4-Difluorobenzene	938206	6.23	956878	6.21	
Chlorobenzene-d5	865721	9.09	854789	9.07	
1,4-Dichlorobenzene-d4	397149	11.18	397254	11.16	

C. G. Zedler

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP17 (31.7-33.3')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-40 File ID: 35A.D
 Sampled: 05/09/14 12:00 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 18:04
 Solids: 92.62 Preparation: EPA 5030B Initial/Final: 10.27 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1100	U
71-43-2	Benzene	1	11	J
108-86-1	Bromobenzene	1	26	U
74-97-5	Bromochloromethane	1	26	U
75-27-4	Bromodichloromethane	1	26	U
75-25-2	Bromoform	1	26	U
74-83-9	Bromomethane	1	260	U
78-93-3	2-Butanone	1	1100	U
104-51-8	n-Butyl Benzene	1	26	U
135-98-8	sec-Butyl Benzene	1	26	U
98-06-6	tert-Butylbenzene	1	26	U
75-15-0	Carbon disulfide	1	9.5	J
56-23-5	Carbon tetrachloride	1	26	U
108-90-7	Chlorobenzene	1	26	U
75-00-3	Chloroethane	1	260	U <i>55</i>
67-66-3	Chloroform	1	26	U
74-87-3	Chloromethane	1	53	U
95-49-8	2-Chlorotoluene	1	26	U
106-43-4	4-Chlorotoluene	1	26	U
96-12-8	1,2-Dibromo-3-chloropropane	1	26	U
124-48-1	Dibromochloromethane	1	26	U
106-93-4	1,2-Dibromoethane (EDB)	1	26	U
74-95-3	Dibromomethane	1	26	U
95-50-1	1,2-Dichlorobenzene	1	26	U
106-46-7	1,4-Dichlorobenzene	1	26	U
541-73-1	1,3-Dichlorobenzene	1	26	U
75-71-8	Dichlorodifluoromethane	1	26	U
75-34-3	1,1-Dichloroethane	1	26	U
107-06-2	1,2-Dichloroethane	1	26	U
156-60-5	trans-1,2-Dichloroethene	1	26	U
156-59-2	cis-1,2-Dichloroethene	1	26	U
75-35-4	1,1-Dichloroethene	1	26	U
590-20-7	2,2-Dichloropropane	1	26	U
78-87-5	1,2-Dichloropropane	1	26	U
142-28-9	1,3-Dichloropropane	1	26	U
10061-01-5	cis-1,3-Dichloropropene	1	26	U
10061-02-6	trans-1,3-Dichloropropene	1	26	U
563-58-6	1,1-Dichloropropene	1	26	U
108-20-3	Diisopropyl Ether	1	26	U
100-41-4	Ethylbenzene	1	97	

02/06/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP17 (31.7-33.3')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A141916-40 File ID: 35A.D
 Sampled: 05/09/14 12:00 Prepared: 05/13/14 11:21 Analyzed: 05/19/14 18:04
 Solids: 92.62 Preparation: EPA 5030B Initial/Final: 10.27 g / 500 mL
 Batch: A405028 Sequence: A4E1801 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	110	U
110-54-3	n-Hexane	1	26	U
591-78-6	2-Hexanone	1	1100	U
98-82-8	Isopropylbenzene	1	5.8	J
99-87-6	p-Isopropyltoluene	1	6.8	J
75-09-2	Methylene chloride	1	25	B, J
108-10-1	4-Methyl-2-pentanone	1	1100	U
1634-04-4	Methyl t-Butyl Ether	1	26	U
91-20-3	Naphthalene	1	190	J
103-65-1	n-Propyl Benzene	1	43	
100-42-5	Styrène	1	26	U
630-20-6	1,1,1,2-Tetrachloroethane	1	26	U
79-34-5	1,1,2,2-Tetrachloroethane	1	26	U
127-18-4	Tetrachloroethene	1	26	U
109-99-9	Tetrahydrofuran	1	530	U
108-88-3	Toluene	1	5.8	B, J 26
87-61-6	1,2,3-Trichlorobenzene	1	110	U
120-82-1	1,2,4-Trichlorobenzene	1	110	U
71-55-6	1,1,1-Trichloroethane	1	26	U
79-00-5	1,1,2-Trichloroethane	1	26	U
79-01-6	Trichloroethene	1	26	U
75-69-4	Trichlorofluoromethane	1	26	U
96-18-4	1,2,3-Trichloropropane	1	53	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	26	U
108-67-8	1,3,5-Trimethylbenzene	1	66	
95-63-6	1,2,4-Trimethylbenzene	1	220	
75-01-4	Vinyl chloride	1	26	U
108-38-3/1	m,p-Xylene	1	260	
95-47-6	o-Xylene	1	23	J
1330-20-7	Xylenes, total	1	280	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.6	102	86.2 - 117	
Toluene-d8	25.00	25.3	101	90.4 - 108	
4-Bromofluorobenzene	25.00	25.3	101	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	597932	5.44	602493	5.41	
1,4-Difluorobenzene	975782	6.24	956878	6.21	
Chlorobenzene-d5	882022	9.09	854789	9.07	
1,4-Dichlorobenzene-d4	404788	11.19	397254	11.16	

CEG/2014

ORGANIC ANALYSIS DATA SHEET

Trip Blank

Laboratory: ECCS SDG:
Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
Matrix: Water Laboratory ID: A142008-01 File ID: 03B.D
Sampled: 05/14/14 05:30 Prepared: 05/23/14 11:01 Analyzed: 05/23/14 13:18
Solids: Preparation: EPA 5030B Initial/Final: 10 mL / 10 mL
Batch: A405065 Sequence: A4E2304 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	1	20	U
71-43-2	Benzene	1	0.50	U
108-86-1	Bromobenzene	1	0.50	U
74-97-5	Bromochloromethane	1	0.50	U
75-27-4	Bromodichloromethane	1	0.50	U
75-25-2	Bromoform	1	0.50	U
74-83-9	Bromomethane	1	5.0	U
78-93-3	2-Butanone	1	20	U
104-51-8	n-Butyl Benzene	1	0.50	U
135-98-8	sec-Butyl Benzene	1	0.50	U
98-06-6	tert-Butylbenzene	1	0.50	U
75-15-0	Carbon disulfide	1	0.50	U
56-23-5	Carbon tetrachloride	1	0.50	U
108-90-7	Chlorobenzene	1	0.50	U
75-00-3	Chloroethane	1	5.0	U
67-66-3	Chloroform	1	0.50	U
74-87-3	Chloromethane	1	2.0	BU
95-49-8	2-Chlorotoluene	1	0.50	U
106-43-4	4-Chlorotoluene	1	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.50	U
124-48-1	Dibromochloromethane	1	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	1	0.50	U
74-95-3	Dibromomethane	1	0.50	U
95-50-1	1,2-Dichlorobenzene	1	0.50	U
106-46-7	1,4-Dichlorobenzene	1	0.50	U
541-73-1	1,3-Dichlorobenzene	1	0.50	U
75-71-8	Dichlorodifluoromethane	1	0.50	U
75-34-3	1,1-Dichloroethane	1	0.50	U
107-06-2	1,2-Dichloroethane	1	0.50	U
156-60-5	trans-1,2-Dichloroethene	1	0.50	U
156-59-2	cis-1,2-Dichloroethene	1	0.50	U
75-35-4	1,1-Dichloroethene	1	0.50	U
590-20-7	2,2-Dichloropropane	1	0.50	U
78-87-5	1,2-Dichloropropane	1	0.50	U
142-28-9	1,3-Dichloropropane	1	0.50	U
10061-01-5	cis-1,3-Dichloropropene	1	0.50	U
10061-02-6	trans-1,3-Dichloropropene	1	0.50	U
563-58-6	1,1-Dichloropropene	1	0.50	U
108-20-3	Diisopropyl Ether	1	0.50	U
100-41-4	Ethylbenzene	1	0.50	U

CEG/2014

ORGANIC ANALYSIS DATA SHEET

Trip Blank

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Water Laboratory ID: A142008-01 File ID: 03B.D
 Sampled: 05/14/14 05:30 Prepared: 05/23/14 11:01 Analyzed: 05/23/14 13:18
 Solids: _____ Preparation: EPA 5030B Initial/Final: 10 mL / 10 mL
 Batch: A405065 Sequence: A4E2304 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	1	2.0	U
110-54-3	n-Hexane	1	0.50	U
591-78-6	2-Hexanone	1	20	U
98-82-8	Isopropylbenzene	1	0.50	U
99-87-6	p-Isopropyltoluene	1	0.50	U
75-09-2	Methylene chloride	1	0.14	J
108-10-1	4-Methyl-2-pentanone	1	20	U
1634-04-4	Methyl t-Butyl Ether	1	0.50	U
91-20-3	Naphthalene	1	5.0	U
103-65-1	n-Propyl Benzene	1	0.50	U
100-42-5	Styrene	1	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.50	U
127-18-4	Tetrachloroethene	1	0.50	U
109-99-9	Tetrahydrofuran	1	10	U
108-88-3	Toluene	1	0.50	U
87-61-6	1,2,3-Trichlorobenzene	1	2.0	U
120-82-1	1,2,4-Trichlorobenzene	1	2.0	U
71-55-6	1,1,1-Trichloroethane	1	0.50	U
79-00-5	1,1,2-Trichloroethane	1	0.50	U
79-01-6	Trichloroethene	1	0.50	U
75-69-4	Trichlorofluoromethane	1	0.50	U
96-18-4	1,2,3-Trichloropropane	1	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	0.50	U
108-67-8	1,3,5-Trimethylbenzene	1	0.50	U
95-63-6	1,2,4-Trimethylbenzene	1	0.10	J
75-01-4	Vinyl chloride	1	0.50	U
108-38-3/1	m,p-Xylene	1	1.0	U
95-47-6	o-Xylene	1	0.50	U
1330-20-7	Xylenes, total	1	1.5	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.3	101	82.2 - 117	
Toluene-d8	25.00	24.9	99.8	82.6 - 111	
4-Bromofluorobenzene	25.00	24.5	98.1	88.4 - 108	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	571847	5.41	585657	5.41	
1,4-Difluorobenzene	921951	6.21	945611	6.21	
Chlorobenzene-d5	822211	9.06	830183	9.07	
1,4-Dichlorobenzene-d4	365357	11.16	374823	11.16	

026/05/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP-19 (12-14')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A142008-02 File ID: 05A.D
 Sampled: 05/14/14 08:55 Prepared: 05/19/14 14:33 Analyzed: 05/20/14 11:11
 Solids: 84.24 Preparation: EPA 5030B Initial/Final: 10.73 g / 500 mL
 Batch: A405049 Sequence: A4E2001 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1100	U
71-43-2	Benzene	1	28	U
108-86-1	Bromobenzene	1	28	U
74-97-5	Bromochloromethane	1	28	U
75-27-4	Bromodichloromethane	1	28	U
75-25-2	Bromoform	1	28	U
74-83-9	Bromomethane	1	280	U
78-93-3	2-Butanone	1	1100	U
104-51-8	n-Butyl Benzene	1	28	U
135-98-8	sec-Butyl Benzene	1	28	U
98-06-6	tert-Butylbenzene	1	28	U
75-15-0	Carbon disulfide	1	28	U
56-23-5	Carbon tetrachloride	1	28	U
108-90-7	Chlorobenzene	1	28	U
75-00-3	Chloroethane	1	280	LCU JS
67-66-3	Chloroform	1	28	U
74-87-3	Chloromethane	1	55	BU
95-49-8	2-Chlorotoluene	1	28	U
106-43-4	4-Chlorotoluene	1	28	U
96-12-8	1,2-Dibromo-3-chloropropane	1	28	U
124-48-1	Dibromochloromethane	1	28	U
106-93-4	1,2-Dibromoethane (EDB)	1	28	U
74-95-3	Dibromomethane	1	28	U
95-50-1	1,2-Dichlorobenzene	1	28	U
106-46-7	1,4-Dichlorobenzene	1	28	U
541-73-1	1,3-Dichlorobenzene	1	28	U
75-71-8	Dichlorodifluoromethane	1	28	U
75-34-3	1,1-Dichloroethane	1	28	U
107-06-2	1,2-Dichloroethane	1	28	U
156-60-5	trans-1,2-Dichloroethene	1	28	U
156-59-2	cis-1,2-Dichloroethene	1	28	U
75-35-4	1,1-Dichloroethene	1	28	U
590-20-7	2,2-Dichloropropane	1	28	U
78-87-5	1,2-Dichloropropane	1	28	U
142-28-9	1,3-Dichloropropane	1	28	U
10061-01-5	cis-1,3-Dichloropropene	1	28	U
10061-02-6	trans-1,3-Dichloropropene	1	28	U
563-58-6	1,1-Dichloropropene	1	28	U
108-20-3	Diisopropyl Ether	1	28	U
100-41-4	Ethylbenzene	1	28	U

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02/26/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP-19 (12-14')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A142008-02 File ID: 05A.D
 Sampled: 05/14/14 08:55 Prepared: 05/19/14 14:33 Analyzed: 05/20/14 11:11
 Solids: 84.24 Preparation: EPA 5030B Initial/Final: 10.73 g / 500 mL
 Batch: A405049 Sequence: A4E2001 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	110	U
110-54-3	n-Hexane	1	28	U
591-78-6	2-Hexanone	1	1100	U
98-82-8	Isopropylbenzene	1	28	U
99-87-6	p-Isopropyltoluene	1	28	U
75-09-2	Methylene chloride	1	110	BU
108-10-1	4-Methyl-2-pentanone	1	1100	U
1634-04-4	Methyl t-Butyl Ether	1	28	U
91-20-3	Naphthalene	1	280	U
103-65-1	n-Propyl Benzene	1	28	U
100-42-5	Styrene	1	28	U
630-20-6	1,1,1,2-Tetrachloroethane	1	28	U
79-34-5	1,1,2,2-Tetrachloroethane	1	28	U
127-18-4	Tetrachloroethene	1	28	U
109-99-9	Tetrahydrofuran	1	550	U
108-88-3	Toluene	1	28	U
87-61-6	1,2,3-Trichlorobenzene	1	110	U
120-82-1	1,2,4-Trichlorobenzene	1	110	U
71-55-6	1,1,1-Trichloroethane	1	28	U
79-00-5	1,1,2-Trichloroethane	1	28	U
79-01-6	Trichloroethene	1	28	U
75-69-4	Trichlorofluoromethane	1	28	U
96-18-4	1,2,3-Trichloropropane	1	55	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	28	U
108-67-8	1,3,5-Trimethylbenzene	1	28	U
95-63-6	1,2,4-Trimethylbenzene	1	5.0	B, J 280
75-01-4	Vinyl chloride	1	28	U
108-38-3/1	m,p-Xylene	1	55	U
95-47-6	o-Xylene	1	28	U
1330-20-7	Xylenes, total	1	83	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.2	105	86.2 - 117	
Toluene-d8	25.00	25.0	100	90.4 - 108	
4-Bromofluorobenzene	25.00	24.5	97.9	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	535872	5.44	552628	5.44	
1,4-Difluorobenzene	885832	6.24	899061	6.24	
Chlorobenzene-d5	812046	9.09	811295	9.1	
1,4-Dichlorobenzene-d4	366055	11.19	382935	11.19	

CEG/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP-19 (18-20')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A142008-03 File ID: 06A.D
 Sampled: 05/14/14 09:15 Prepared: 05/19/14 14:33 Analyzed: 05/20/14 11:55
 Solids: 84.20 Preparation: EPA 5030B Initial/Final: 11.03 g / 500 mL
 Batch: A405049 Sequence: A4E2001 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1100	U
71-43-2	Benzene	1	27	U
108-86-1	Bromobenzene	1	27	U
74-97-5	Bromochloromethane	1	27	U
75-27-4	Bromodichloromethane	1	27	U
75-25-2	Bromoform	1	27	U
74-83-9	Bromomethane	1	270	U
78-93-3	2-Butanone	1	1100	U
104-51-8	n-Butyl Benzene	1	27	U
135-98-8	sec-Butyl Benzene	1	27	U
98-06-6	tert-Butylbenzene	1	27	U
75-15-0	Carbon disulfide	1	27	U
56-23-5	Carbon tetrachloride	1	27	U
108-90-7	Chlorobenzene	1	27	U
75-00-3	Chloroethane	1	270	LCU <i>JS</i>
67-66-3	Chloroform	1	27	U
74-87-3	Chloromethane	1	54	U
95-49-8	2-Chlorotoluene	1	27	U
106-43-4	4-Chlorotoluene	1	27	U
96-12-8	1,2-Dibromo-3-chloropropane	1	27	U
124-48-1	Dibromochloromethane	1	27	U
106-93-4	1,2-Dibromoethane (EDB)	1	27	U
74-95-3	Dibromomethane	1	27	U
95-50-1	1,2-Dichlorobenzene	1	27	U
106-46-7	1,4-Dichlorobenzene	1	27	U
541-73-1	1,3-Dichlorobenzene	1	27	U
75-71-8	Dichlorodifluoromethane	1	27	U
75-34-3	1,1-Dichloroethane	1	27	U
107-06-2	1,2-Dichloroethane	1	27	U
156-60-5	trans-1,2-Dichloroethene	1	27	U
156-59-2	cis-1,2-Dichloroethene	1	27	U
75-35-4	1,1-Dichloroethene	1	27	U
590-20-7	2,2-Dichloropropane	1	27	U
78-87-5	1,2-Dichloropropane	1	27	U
142-28-9	1,3-Dichloropropane	1	27	U
10061-01-5	cis-1,3-Dichloropropene	1	27	U
10061-02-6	trans-1,3-Dichloropropene	1	27	U
563-58-6	1,1-Dichloropropene	1	27	U
108-20-3	Diisopropyl Ether	1	27	U
100-41-4	Ethylbenzene	1	27	U

CE 6/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP-19 (18-20')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A142008-03 File ID: 06A.D
 Sampled: 05/14/14 09:15 Prepared: 05/19/14 14:33 Analyzed: 05/20/14 11:55
 Solids: 84.20 Preparation: EPA 5030B Initial/Final: 11.03 g / 500 mL
 Batch: A405049 Sequence: A4E2001 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	110	U
110-54-3	n-Hexane	1	27	U
591-78-6	2-Hexanone	1	1100	U
98-82-8	Isopropylbenzene	1	27	U
99-87-6	p-Isopropyltoluene	1	27	U
75-09-2	Methylene chloride	1	8.1	B, J (100)
108-10-1	4-Methyl-2-pentanone	1	1100	U
1634-04-4	Methyl t-Butyl Ether	1	27	U
91-20-3	Naphthalene	1	270	U
103-65-1	n-Propyl Benzene	1	27	U
100-42-5	Styrene	1	27	U
630-20-6	1,1,1,2-Tetrachloroethane	1	27	U
79-34-5	1,1,2,2-Tetrachloroethane	1	27	U
127-18-4	Tetrachloroethene	1	27	U
109-99-9	Tetrahydrofuran	1	540	U
108-88-3	Toluene	1	27	U
87-61-6	1,2,3-Trichlorobenzene	1	110	U
120-82-1	1,2,4-Trichlorobenzene	1	110	U
71-55-6	1,1,1-Trichloroethane	1	27	U
79-00-5	1,1,2-Trichloroethane	1	27	U
79-01-6	Trichloroethene	1	27	U
75-69-4	Trichlorofluoromethane	1	27	U
96-18-4	1,2,3-Trichloropropane	1	54	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	27	U
108-67-8	1,3,5-Trimethylbenzene	1	27	U
95-63-6	1,2,4-Trimethylbenzene	1	27	U
75-01-4	Vinyl chloride	1	27	U
108-38-3/1	m,p-Xylene	1	54	U
95-47-6	o-Xylene	1	27	U
1330-20-7	Xylenes, total	1	81	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.7	107	86.2 - 117	
Toluene-d8	25.00	25.1	100	90.4 - 108	
4-Bromofluorobenzene	25.00	25.1	100	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	443378	5.45	552628	5.44	
1,4-Difluorobenzene	732394	6.25	899061	6.24	
Chlorobenzene-d5	674894	9.1	811295	9.1	
1,4-Dichlorobenzene-d4	312660	11.2	382935	11.19	

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ORGANIC ANALYSIS DATA SHEET

GW-19

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Water Laboratory ID: A142008-04 File ID: 04A.D
 Sampled: 05/14/14 10:40 Prepared: 05/23/14 11:01 Analyzed: 05/23/14 13:40
 Solids: _____ Preparation: EPA 5030B Initial/Final: 10 mL / 10 mL
 Batch: A405065 Sequence: A4E2303 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	1	20	U
71-43-2	Benzene	1	0.50	U
108-86-1	Bromobenzene	1	0.50	U
74-97-5	Bromochloromethane	1	0.50	U
75-27-4	Bromodichloromethane	1	0.50	U
75-25-2	Bromoform	1	0.50	U
74-83-9	Bromomethane	1	5.0	U
78-93-3	2-Butanone	1	20	U
104-51-8	n-Butyl Benzene	1	0.50	U
135-98-8	sec-Butyl Benzene	1	0.50	U
98-06-6	tert-Butylbenzene	1	0.50	U
75-15-0	Carbon disulfide	1	0.50	U
56-23-5	Carbon tetrachloride	1	0.50	U
108-90-7	Chlorobenzene	1	0.50	U
75-00-3	Chloroethane	1	5.0	U ✓
67-66-3	Chloroform	1	0.50	U
74-87-3	Chloromethane	1	2.0	BU
95-49-8	2-Chlorotoluene	1	0.50	U
106-43-4	4-Chlorotoluene	1	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.50	U
124-48-1	Dibromochloromethane	1	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	1	0.50	U
74-95-3	Dibromomethane	1	0.50	U
95-50-1	1,2-Dichlorobenzene	1	0.50	U
106-46-7	1,4-Dichlorobenzene	1	0.50	U
541-73-1	1,3-Dichlorobenzene	1	0.50	U
75-71-8	Dichlorodifluoromethane	1	0.19	U 0.50
75-34-3	1,1-Dichloroethane	1	0.50	U
107-06-2	1,2-Dichloroethane	1	0.50	U
156-60-5	trans-1,2-Dichloroethene	1	0.50	U
156-59-2	cis-1,2-Dichloroethene	1	0.50	U
75-35-4	1,1-Dichloroethene	1	0.50	U
590-20-7	2,2-Dichloropropane	1	0.50	U
78-87-5	1,2-Dichloropropane	1	0.50	U
142-28-9	1,3-Dichloropropane	1	0.50	U
10061-01-5	cis-1,3-Dichloropropene	1	0.50	U
10061-02-6	trans-1,3-Dichloropropene	1	0.50	U
563-58-6	1,1-Dichloropropene	1	0.50	U
108-20-3	Diisopropyl Ether	1	0.50	U
100-41-4	Ethylbenzene	1	0.50	U

05/23/14

ORGANIC ANALYSIS DATA SHEET

GW-19

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Water Laboratory ID: A142008-04 File ID: 04A.D
 Sampled: 05/14/14 10:40 Prepared: 05/23/14 11:01 Analyzed: 05/23/14 13:40
 Solids: Preparation: EPA 5030B Initial/Final: 10 mL / 10 mL
 Batch: A405065 Sequence: A4E2303 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	1	2.0	U
110-54-3	n-Hexane	1	0.50	U
591-78-6	2-Hexanone	1	2.2	J
98-82-8	Isopropylbenzene	1	0.50	U
99-87-6	p-Isopropyltoluene	1	0.50	U
75-09-2	Methylene chloride	1	2.0	U
108-10-1	4-Methyl-2-pentanone	1	20	U
1634-04-4	Methyl t-Butyl Ether	1	0.50	U
91-20-3	Naphthalene	1	0.33	B, J 0.50 U
103-65-1	n-Propyl Benzene	1	0.50	U
100-42-5	Styrene	1	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.50	U
127-18-4	Tetrachloroethene	1	0.50	U
109-99-9	Tetrahydrofuran	1	10	U
108-88-3	Toluene	1	0.12	B, J 0.50 U
87-61-6	1,2,3-Trichlorobenzene	1	2.0	U
120-82-1	1,2,4-Trichlorobenzene	1	2.0	U
71-55-6	1,1,1-Trichloroethane	1	0.50	U
79-00-5	1,1,2-Trichloroethane	1	0.50	U
79-01-6	Trichloroethene	1	0.50	U
75-69-4	Trichlorofluoromethane	1	0.50	U
96-18-4	1,2,3-Trichloropropane	1	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	0.50	U
108-67-8	1,3,5-Trimethylbenzene	1	0.50	U
95-63-6	1,2,4-Trimethylbenzene	1	0.17	10.50 U
75-01-4	Vinyl chloride	1	0.50	U
108-38-3/1	m,p-Xylene	1	0.11	11.00 U
95-47-6	o-Xylene	1	0.50	U
1330-20-7	Xylenes, total	1	1.5	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	24.8	99.0	82.2 - 117	
Toluene-d8	25.00	25.1	100	82.6 - 111	
4-Bromofluorobenzene	25.00	24.9	99.5	88.4 - 108	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	642176	5.41	653526	5.4	
1,4-Difluorobenzene	1025648	6.21	1037396	6.21	
Chlorobenzene-d5	922081	9.07	932186	9.06	
1,4-Dichlorobenzene-d4	423964	11.16	427688	11.16	

CCG/2014

ORGANIC ANALYSIS DATA SHEET

Field Blank #4 (MeOH)

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A142008-05 File ID: 10A.D
 Sampled: 05/14/14 10:20 Prepared: 05/19/14 14:33 Analyzed: 05/20/14 14:54
 Solids: Preparation: EPA 5030B Initial/Final: 10 g / 500 mL
 Batch: A405049 Sequence: A4E2001 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
87-68-3	Hexachlorobutadiene	1	100	U
110-54-3	n-Hexane	1	25	U
591-78-6	2-Hexanone	1	1000	U
98-82-8	Isopropylbenzene	1	25	U
99-87-6	p-Isopropyltoluene	1	25	U
75-09-2	Methylene chloride	1	100	BU
108-10-1	4-Methyl-2-pentanone	1	1000	U
1634-04-4	Methyl t-Butyl Ether	1	25	U
91-20-3	Naphthalene	1	250	U
103-65-1	n-Propyl Benzene	1	25	U
100-42-5	Styrene	1	25	U
630-20-6	1,1,1,2-Tetrachloroethane	1	25	U
79-34-5	1,1,2,2-Tetrachloroethane	1	25	U
127-18-4	Tetrachloroethene	1	25	U
109-99-9	Tetrahydrofuran	1	500	U
108-88-3	Toluene	1	25	U
87-61-6	1,2,3-Trichlorobenzene	1	100	U
120-82-1	1,2,4-Trichlorobenzene	1	100	U
71-55-6	1,1,1-Trichloroethane	1	25	U
79-00-5	1,1,2-Trichloroethane	1	25	U
79-01-6	Trichloroethene	1	25	U
75-69-4	Trichlorofluoromethane	1	25	U
96-18-4	1,2,3-Trichloropropane	1	50	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	25	U
108-67-8	1,3,5-Trimethylbenzene	1	25	U
95-63-6	1,2,4-Trimethylbenzene	1	25	U
75-01-4	Vinyl chloride	1	25	U
108-38-3/1	m,p-Xylene	1	50	U
95-47-6	o-Xylene	1	25	U
1330-20-7	Xylenes, total	1	75	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	27.8	111	86.2 - 117	
Toluene-d8	25.00	25.3	101	90.4 - 108	
4-Bromofluorobenzene	25.00	25.4	102	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	461573	5.43	552628	5.44	
1,4-Difluorobenzene	780742	6.24	899061	6.24	
Chlorobenzene-d5	723265	9.09	811295	9.1	
1,4-Dichlorobenzene-d4	348178	11.19	382935	11.19	

02/6/20/14

ORGANIC ANALYSIS DATA SHEET

[WS-SB-GP-20 (18'-20')
Duplicate #3

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A142008-06 File ID: 07A.D
 Sampled: 05/14/14 00:00 Prepared: 05/19/14 14:33 Analyzed: 05/20/14 12:39
 Solids: 85.92 Preparation: EPA 5030B Initial/Final: 11.51 g / 500 mL
 Batch: A405049 Sequence: A4E2001 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1000	U
71-43-2	Benzene	1	25	U
108-86-1	Bromobenzene	1	25	U
74-97-5	Bromochloromethane	1	25	U
75-27-4	Bromodichloromethane	1	25	U
75-25-2	Bromoform	1	25	U
74-83-9	Bromomethane	1	250	U
78-93-3	2-Butanone	1	1000	U
104-51-8	n-Butyl Benzene	1	25	U
135-98-8	sec-Butyl Benzene	1	25	U
98-06-6	tert-Butylbenzene	1	25	U
75-15-0	Carbon disulfide	1	25	U
56-23-5	Carbon tetrachloride	1	25	U
108-90-7	Chlorobenzene	1	25	U
75-00-3	Chloroethane	1	250	LCU ⁰³
67-66-3	Chloroform	1	25	U
74-87-3	Chloromethane	1	51	U
95-49-8	2-Chlorotoluene	1	25	U
106-43-4	4-Chlorotoluene	1	25	U
96-12-8	1,2-Dibromo-3-chloropropane	1	25	U
124-48-1	Dibromochloromethane	1	25	U
106-93-4	1,2-Dibromoethane (EDB)	1	25	U
74-95-3	Dibromomethane	1	25	U
95-50-1	1,2-Dichlorobenzene	1	25	U
106-46-7	1,4-Dichlorobenzene	1	25	U
541-73-1	1,3-Dichlorobenzene	1	25	U
75-71-8	Dichlorodifluoromethane	1	25	U
75-34-3	1,1-Dichloroethane	1	25	U
107-06-2	1,2-Dichloroethane	1	25	U
156-60-5	trans-1,2-Dichloroethene	1	25	U
156-59-2	cis-1,2-Dichloroethene	1	25	U
75-35-4	1,1-Dichloroethene	1	25	U
590-20-7	2,2-Dichloropropane	1	25	U
78-87-5	1,2-Dichloropropane	1	25	U
142-28-9	1,3-Dichloropropane	1	25	U
10061-01-5	cis-1,3-Dichloropropene	1	25	U
10061-02-6	trans-1,3-Dichloropropene	1	25	U
563-58-6	1,1-Dichloropropene	1	25	U
108-20-3	Diisopropyl Ether	1	25	U
100-41-4	Ethylbenzene	1	25	U

02/6/20/14

ORGANIC ANALYSIS DATA SHEET

[WS-SB-GP-20 (18'-20')
Duplicate #3]

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A142008-06 File ID: 07A.D
 Sampled: 05/14/14 00:00 Prepared: 05/19/14 14:33 Analyzed: 05/20/14 12:39
 Solids: 85.92 Preparation: EPA 5030B Initial/Final: 11.51 g / 500 mL
 Batch: A405049 Sequence: A4E2001 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	100	U
110-54-3	n-Hexane	1	25	U
591-78-6	2-Hexanone	1	1000	U
98-82-8	Isopropylbenzene	1	25	U
99-87-6	p-Isopropyltoluene	1	25	U
75-09-2	Methylene chloride	1	100	U
108-10-1	4-Methyl-2-pentanone	1	1000	U
1634-04-4	Methyl t-Butyl Ether	1	25	U
91-20-3	Naphthalene	1	250	U
103-65-1	n-Propyl Benzene	1	25	U
100-42-5	Styrene	1	25	U
630-20-6	1,1,1,2-Tetrachloroethane	1	25	U
79-34-5	1,1,2,2-Tetrachloroethane	1	25	U
127-18-4	Tetrachloroethene	1	25	U
109-99-9	Tetrahydrofuran	1	510	U
108-88-3	Toluene	1	25	U
87-61-6	1,2,3-Trichlorobenzene	1	100	U
120-82-1	1,2,4-Trichlorobenzene	1	100	U
71-55-6	1,1,1-Trichloroethane	1	25	U
79-00-5	1,1,2-Trichloroethane	1	25	U
79-01-6	Trichloroethene	1	25	U
75-69-4	Trichlorofluoromethane	1	25	U
96-18-4	1,2,3-Trichloropropane	1	51	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	25	U
108-67-8	1,3,5-Trimethylbenzene	1	25	U
95-63-6	1,2,4-Trimethylbenzene	1	25	U
75-01-4	Vinyl chloride	1	25	U
108-38-3/1	m,p-Xylene	1	51	U
95-47-6	o-Xylene	1	25	U
1330-20-7	Xylenes, total	1	76	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	28.7	115	86.2 - 117	
Toluene-d8	25.00	25.0	100	90.4 - 108	
4-Bromofluorobenzene	25.00	24.8	99.3	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	463261	5.44	552628	5.44	
1,4-Difluorobenzene	804715	6.24	899061	6.24	
Chlorobenzene-d5	754926	9.1	811295	9.1	
1,4-Dichlorobenzene-d4	350681	11.19	382935	11.19	

CEG/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP-20 (10-12')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A142008-07 File ID: 08A.D
 Sampled: 05/14/14 11:15 Prepared: 05/19/14 14:33 Analyzed: 05/20/14 13:24
 Solids: 93.91 Preparation: EPA 5030B Initial/Final: 9.79 g / 500 mL
 Batch: A405049 Sequence: A4E2001 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1100	U
71-43-2	Benzene	1	27	U
108-86-1	Bromobenzene	1	27	U
74-97-5	Bromochloromethane	1	27	U
75-27-4	Bromodichloromethane	1	27	U
75-25-2	Bromoform	1	27	U
74-83-9	Bromomethane	1	270	U
78-93-3	2-Butanone	1	1100	U
104-51-8	n-Butyl Benzene	1	27	U
135-98-8	sec-Butyl Benzene	1	27	U
98-06-6	tert-Butylbenzene	1	27	U
75-15-0	Carbon disulfide	1	27	U
56-23-5	Carbon tetrachloride	1	27	U
108-90-7	Chlorobenzene	1	27	U
75-00-3	Chloroethane	1	270	LCU U
67-66-3	Chloroform	1	27	U
74-87-3	Chloromethane	1	54	U
95-49-8	2-Chlorotoluene	1	27	U
106-43-4	4-Chlorotoluene	1	27	U
96-12-8	1,2-Dibromo-3-chloropropane	1	27	U
124-48-1	Dibromochloromethane	1	27	U
106-93-4	1,2-Dibromoethane (EDB)	1	27	U
74-95-3	Dibromomethane	1	27	U
95-50-1	1,2-Dichlorobenzene	1	27	U
106-46-7	1,4-Dichlorobenzene	1	27	U
541-73-1	1,3-Dichlorobenzene	1	27	U
75-71-8	Dichlorodifluoromethane	1	27	U
75-34-3	1,1-Dichloroethane	1	27	U
107-06-2	1,2-Dichloroethane	1	27	U
156-60-5	trans-1,2-Dichloroethene	1	27	U
156-59-2	cis-1,2-Dichloroethene	1	27	U
75-35-4	1,1-Dichloroethene	1	27	U
590-20-7	2,2-Dichloropropane	1	27	U
78-87-5	1,2-Dichloropropane	1	27	U
142-28-9	1,3-Dichloropropane	1	27	U
10061-01-5	cis-1,3-Dichloropropene	1	27	U
10061-02-6	trans-1,3-Dichloropropene	1	27	U
563-58-6	1,1-Dichloropropene	1	27	U
108-20-3	Diisopropyl Ether	1	27	U
100-41-4	Ethylbenzene	1	27	U

CEG/20/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP-20 (10-12')

Laboratory: <u>ECCS</u>	SDG:
Client: <u>GZA GeoEnvironmental, Inc</u>	Project: <u>Wedron Silica - Wedron, IL</u>
Matrix: <u>Soil</u>	Laboratory ID: <u>A142008-07</u> File ID: <u>08A.D</u>
Sampled: <u>05/14/14 11:15</u>	Prepared: <u>05/19/14 14:33</u> Analyzed: <u>05/20/14 13:24</u>
Solids: <u>93.91</u>	Preparation: <u>EPA 5030B</u> Initial/Final: <u>9.79 g / 500 mL</u>
Batch: <u>A405049</u>	Sequence: <u>A4E2001</u> Calibration: <u>A140517</u> Instrument: <u>3188A02979</u>

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	110	U
110-54-3	n-Hexane	1	27	U
591-78-6	2-Hexanone	1	1100	U
98-82-8	Isopropylbenzene	1	27	U
99-87-6	p-Isopropyltoluene	1	27	U
75-09-2	Methylene chloride	1	110	U
108-10-1	4-Methyl-2-pentanone	1	1100	U
1634-04-4	Methyl t-Butyl Ether	1	27	U
91-20-3	Naphthalene	1	270	U
103-65-1	n-Propyl Benzene	1	27	U
100-42-5	Styrene	1	27	U
630-20-6	1,1,1,2-Tetrachloroethane	1	27	U
79-34-5	1,1,2,2-Tetrachloroethane	1	27	U
127-18-4	Tetrachloroethene	1	27	U
109-99-9	Tetrahydrofuran	1	540	U
108-88-3	Toluene	1	27	U
87-61-6	1,2,3-Trichlorobenzene	1	110	U
120-82-1	1,2,4-Trichlorobenzene	1	110	U
71-55-6	1,1,1-Trichloroethane	1	27	U
79-00-5	1,1,2-Trichloroethane	1	27	U
79-01-6	Trichloroethene	1	27	U
75-69-4	Trichlorofluoromethane	1	27	U
96-18-4	1,2,3-Trichloropropane	1	54	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	27	U
108-67-8	1,3,5-Trimethylbenzene	1	27	U
95-63-6	1,2,4-Trimethylbenzene	1	27	U
75-01-4	Vinyl chloride	1	27	U
108-38-3/1	m,p-Xylene	1	54	U
95-47-6	o-Xylene	1	27	U
1330-20-7	Xylenes, total	1	82	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	28.3	113	86.2 - 117	
Toluene-d8	25.00	25.2	101	90.4 - 108	
4-Bromofluorobenzene	25.00	25.0	100	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	464932	5.44	552628	5.44	
1,4-Difluorobenzene	798671	6.23	899061	6.24	
Chlorobenzene-d5	748532	9.09	811295	9.1	
1,4-Dichlorobenzene-d4	353347	11.19	382935	11.19	

CEL/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP-20 (18-20')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A142008-08 File ID: 05B.D
 Sampled: 05/14/14 11:30 Prepared: 05/19/14 14:33 Analyzed: 05/20/14 11:33
 Solids: 86.40 Preparation: EPA 5030B Initial/Final: 11.46 g / 500 mL
 Batch: A405049 Sequence: A4E2002 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1000	U
71-43-2	Benzene	1	25	U
108-86-1	Bromobenzene	1	25	U
74-97-5	Bromochloromethane	1	25	U
75-27-4	Bromodichloromethane	1	25	U
75-25-2	Bromoform	1	25	U
74-83-9	Bromomethane	1	250	U
78-93-3	2-Butanone	1	1000	U
104-51-8	n-Butyl Benzene	1	25	U
135-98-8	sec-Butyl Benzene	1	25	U
98-06-6	tert-Butylbenzene	1	25	U
75-15-0	Carbon disulfide	1	25	U
56-23-5	Carbon tetrachloride	1	25	U
108-90-7	Chlorobenzene	1	25	U
75-00-3	Chloroethane	1	250	U
67-66-3	Chloroform	1	25	U
74-87-3	Chloromethane	1	50	U
95-49-8	2-Chlorotoluene	1	25	U
106-43-4	4-Chlorotoluene	1	25	U
96-12-8	1,2-Dibromo-3-chloropropane	1	25	U
124-48-1	Dibromochloromethane	1	25	U
106-93-4	1,2-Dibromoethane (EDB)	1	25	U
74-95-3	Dibromomethane	1	25	U
95-50-1	1,2-Dichlorobenzene	1	25	U
106-46-7	1,4-Dichlorobenzene	1	25	U
541-73-1	1,3-Dichlorobenzene	1	25	U
75-71-8	Dichlorodifluoromethane	1	25	U
75-34-3	1,1-Dichloroethane	1	25	U
107-06-2	1,2-Dichloroethane	1	25	U
156-60-5	trans-1,2-Dichloroethene	1	25	U
156-59-2	cis-1,2-Dichloroethene	1	25	U
75-35-4	1,1-Dichloroethene	1	25	U
590-20-7	2,2-Dichloropropane	1	25	U
78-87-5	1,2-Dichloropropane	1	25	U
142-28-9	1,3-Dichloropropane	1	25	U
10061-01-5	cis-1,3-Dichloropropene	1	25	U
10061-02-6	trans-1,3-Dichloropropene	1	25	U
563-58-6	1,1-Dichloropropene	1	25	U
108-20-3	Diisopropyl Ether	1	25	U
100-41-4	Ethylbenzene	1	25	U

02/6/2014

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP-20 (18-20')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A142008-08 File ID: 05B.D
 Sampled: 05/14/14 11:30 Prepared: 05/19/14 14:33 Analyzed: 05/20/14 11:33
 Solids: 86.40 Preparation: EPA 5030B Initial/Final: 11.46 g / 500 mL
 Batch: A405049 Sequence: A4E2002 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	100	U
110-54-3	n-Hexane	1	25	U
591-78-6	2-Hexanone	1	1000	U
98-82-8	Isopropylbenzene	1	25	U
99-87-6	p-Isopropyltoluene	1	25	U
75-09-2	Methylene chloride	1	100	U
108-10-1	4-Methyl-2-pentanone	1	1000	U
1634-04-4	Methyl t-Butyl Ether	1	25	U
91-20-3	Naphthalene	1	250	U
103-65-1	n-Propyl Benzene	1	25	U
100-42-5	Styrene	1	25	U
630-20-6	1,1,1,2-Tetrachloroethane	1	25	U
79-34-5	1,1,2,2-Tetrachloroethane	1	25	U
127-18-4	Tetrachloroethene	1	25	U
109-99-9	Tetrahydrofuran	1	500	U
108-88-3	Toluene	1	25	U
87-61-6	1,2,3-Trichlorobenzene	1	100	U
120-82-1	1,2,4-Trichlorobenzene	1	100	U
71-55-6	1,1,1-Trichloroethane	1	25	U
79-00-5	1,1,2-Trichloroethane	1	25	U
79-01-6	Trichloroethene	1	25	U
75-69-4	Trichlorofluoromethane	1	25	U
96-18-4	1,2,3-Trichloropropane	1	50	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	25	U
108-67-8	1,3,5-Trimethylbenzene	1	25	U
95-63-6	1,2,4-Trimethylbenzene	1	5.0	B, JZSU
75-01-4	Vinyl chloride	1	25	U
108-38-3/1	m,p-Xylene	1	4.5	J
95-47-6	o-Xylene	1	25	U
1330-20-7	Xylenes, total	1	76	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	27.8	111	86.2 - 117	
Toluene-d8	25.00	24.8	99.1	90.4 - 108	
4-Bromofluorobenzene	25.00	24.9	99.6	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	463916	5.45	507341	5.44	
1,4-Difluorobenzene	804246	6.25	838542	6.24	
Chlorobenzene-d5	731612	9.1	745439	9.09	
1,4-Dichlorobenzene-d4	325184	11.2	346910	11.19	

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ORGANIC ANALYSIS DATA SHEET

Equipment Blank #3

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Water Laboratory ID: A142008-09 File ID: 04B.D
 Sampled: 05/14/14 11:45 Prepared: 05/23/14 11:01 Analyzed: 05/23/14 14:02
 Solids: Preparation: EPA 5030B Initial/Final: 10 mL / 10 mL
 Batch: A405065 Sequence: A4E2304 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	1	3.4	J
71-43-2	Benzene	1	0.50	U
108-86-1	Bromobenzene	1	0.50	U
74-97-5	Bromochloromethane	1	0.50	U
75-27-4	Bromodichloromethane	1	0.50	U
75-25-2	Bromoform	1	0.50	U
74-83-9	Bromomethane	1	5.0	U
78-93-3	2-Butanone	1	20	U
104-51-8	n-Butyl Benzene	1	0.50	U
135-98-8	sec-Butyl Benzene	1	0.50	U
98-06-6	tert-Butylbenzene	1	0.50	U
75-15-0	Carbon disulfide	1	0.50	U
56-23-5	Carbon tetrachloride	1	0.50	U
108-90-7	Chlorobenzene	1	0.50	U
75-00-3	Chloroethane	1	5.0	U
67-66-3	Chloroform	1	0.50	U
74-87-3	Chloromethane	1	2.0	U
95-49-8	2-Chlorotoluene	1	0.50	U
106-43-4	4-Chlorotoluene	1	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.50	U
124-48-1	Dibromochloromethane	1	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	1	0.50	U
74-95-3	Dibromomethane	1	0.50	U
95-50-1	1,2-Dichlorobenzene	1	0.50	U
106-46-7	1,4-Dichlorobenzene	1	0.50	U
541-73-1	1,3-Dichlorobenzene	1	0.50	U
75-71-8	Dichlorodifluoromethane	1	0.22	J
75-34-3	1,1-Dichloroethane	1	0.50	U
107-06-2	1,2-Dichloroethane	1	0.50	U
156-60-5	trans-1,2-Dichloroethene	1	0.50	U
156-59-2	cis-1,2-Dichloroethene	1	0.50	U
75-35-4	1,1-Dichloroethene	1	0.50	U
590-20-7	2,2-Dichloropropane	1	0.50	U
78-87-5	1,2-Dichloropropane	1	0.50	U
142-28-9	1,3-Dichloropropane	1	0.50	U
10061-01-5	cis-1,3-Dichloropropene	1	0.50	U
10061-02-6	trans-1,3-Dichloropropene	1	0.50	U
563-58-6	1,1-Dichloropropene	1	0.50	U
108-20-3	Diisopropyl Ether	1	0.50	U
100-41-4	Ethylbenzene	1	0.50	U

05/23/14

ORGANIC ANALYSIS DATA SHEET

Equipment Blank #3

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Water Laboratory ID: A142008-09 File ID: 04B.D
 Sampled: 05/14/14 11:45 Prepared: 05/23/14 11:01 Analyzed: 05/23/14 14:02
 Solids: Preparation: EPA 5030B Initial/Final: 10 mL / 10 mL
 Batch: A405065 Sequence: A4E2304 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	1	2.0	U
110-54-3	n-Hexane	1	0.50	U
591-78-6	2-Hexanone	1	20	U
98-82-8	Isopropylbenzene	1	0.50	U
99-87-6	p-Isopropyltoluene	1	0.50	U
75-09-2	Methylene chloride	1	2.0	U
108-10-1	4-Methyl-2-pentanone	1	20	U
1634-04-4	Methyl t-Butyl Ether	1	0.50	U
91-20-3	Naphthalene	1	5.0	U
103-65-1	n-Propyl Benzene	1	0.50	U
100-42-5	Styrene	1	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.50	U
127-18-4	Tetrachloroethene	1	0.50	U
109-99-9	Tetrahydrofuran	1	10	U
108-88-3	Toluene	1	0.13	B, J 0.50 U
87-61-6	1,2,3-Trichlorobenzene	1	2.0	U
120-82-1	1,2,4-Trichlorobenzene	1	2.0	U
71-55-6	1,1,1-Trichloroethane	1	0.50	U
79-00-5	1,1,2-Trichloroethane	1	0.50	U
79-01-6	Trichloroethene	1	0.50	U
75-69-4	Trichlorofluoromethane	1	0.50	U
96-18-4	1,2,3-Trichloropropane	1	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	0.50	U
108-67-8	1,3,5-Trimethylbenzene	1	0.11	J
95-63-6	1,2,4-Trimethylbenzene	1	0.38	J 0.50 U
75-01-4	Vinyl chloride	1	0.50	U
108-38-3/1	m,p-Xylene	1	0.19	J
95-47-6	o-Xylene	1	0.50	U
1330-20-7	Xylenes, total	1	0.19	J

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	24.9	99.5	82.2 - 117	
Toluene-d8	25.00	24.8	99.3	82.6 - 111	
4-Bromofluorobenzene	25.00	24.7	98.9	88.4 - 108	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	557311	5.41	585657	5.41	
1,4-Difluorobenzene	893774	6.21	945611	6.21	
Chlorobenzene-d5	792331	9.07	830183	9.07	
1,4-Dichlorobenzene-d4	354379	11.16	374823	11.16	

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ORGANIC ANALYSIS DATA SHEET

GW-20

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Water Laboratory ID: A142008-10 File ID: 05A.D
 Sampled: 05/14/14 11:50 Prepared: 05/23/14 11:01 Analyzed: 05/23/14 14:24
 Solids: Preparation: EPA 5030B Initial/Final: 10 mL / 10 mL
 Batch: A405065 Sequence: A4E2303 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	1	20	U
71-43-2	Benzene	1	0.48	J
108-86-1	Bromobenzene	1	0.50	U
74-97-5	Bromochloromethane	1	0.50	U
75-27-4	Bromodichloromethane	1	0.50	U
75-25-2	Bromoform	1	0.50	U
74-83-9	Bromomethane	1	5.0	U
78-93-3	2-Butanone	1	20	U
104-51-8	n-Butyl Benzene	1	0.50	U
135-98-8	sec-Butyl Benzene	1	0.50	U
98-06-6	tert-Butylbenzene	1	0.50	U
75-15-0	Carbon disulfide	1	0.50	U
56-23-5	Carbon tetrachloride	1	0.50	U
108-90-7	Chlorobenzene	1	0.50	U
75-00-3	Chloroethane	1	5.0	U JS
67-66-3	Chloroform	1	0.50	U
74-87-3	Chloromethane	1	2.0	U
95-49-8	2-Chlorotoluene	1	0.50	U
106-43-4	4-Chlorotoluene	1	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.50	U
124-48-1	Dibromochloromethane	1	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	1	0.50	U
74-95-3	Dibromomethane	1	0.50	U
95-50-1	1,2-Dichlorobenzene	1	0.50	U
106-46-7	1,4-Dichlorobenzene	1	0.50	U
541-73-1	1,3-Dichlorobenzene	1	0.50	U
75-71-8	Dichlorodifluoromethane	1	0.19	10,500
75-34-3	1,1-Dichloroethane	1	0.50	U
107-06-2	1,2-Dichloroethane	1	0.50	U
156-60-5	trans-1,2-Dichloroethene	1	0.50	U
156-59-2	cis-1,2-Dichloroethene	1	0.25	J
75-35-4	1,1-Dichloroethene	1	0.50	U
590-20-7	2,2-Dichloropropane	1	0.50	U
78-87-5	1,2-Dichloropropane	1	0.50	U
142-28-9	1,3-Dichloropropane	1	0.50	U
10061-01-5	cis-1,3-Dichloropropene	1	0.50	U
10061-02-6	trans-1,3-Dichloropropene	1	0.50	U
563-58-6	1,1-Dichloropropene	1	0.50	U
108-20-3	Diisopropyl Ether	1	0.50	U
100-41-4	Ethylbenzene	1	0.50	U

02/20/14

ORGANIC ANALYSIS DATA SHEET

GW-20

Laboratory:	ECCS	SDG:			
Client:	GZA GeoEnvironmental, Inc	Project:	Wedron Silica - Wedron, IL		
Matrix:	Water	Laboratory ID:	A142008-10	File ID:	05A.D
Sampled:	05/14/14 11:50	Prepared:	05/23/14 11:01	Analyzed:	05/23/14 14:24
Solids:		Preparation:	EPA 5030B	Initial/Final:	10 mL / 10 mL
Batch:	A405065	Sequence:	A4E2303	Calibration:	A140517
				Instrument:	3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	1	2.0	U
110-54-3	n-Hexane	1	0.50	U
591-78-6	2-Hexanone	1	2.1	J
98-82-8	Isopropylbenzene	1	0.50	U
99-87-6	p-Isopropyltoluene	1	0.50	U
75-09-2	Methylene chloride	1	2.0	U
108-10-1	4-Methyl-2-pentanone	1	20	U
1634-04-4	Methyl t-Butyl Ether	1	0.50	U
91-20-3	Naphthalene	1	5.0	U
103-65-1	n-Propyl Benzene	1	0.50	U
100-42-5	Styrene	1	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.50	U
127-18-4	Tetrachloroethene	1	0.50	U
109-99-9	Tetrahydrofuran	1	10	U
108-88-3	Toluene	1	0.090	B, J O.50
87-61-6	1,2,3-Trichlorobenzene	1	2.0	U
120-82-1	1,2,4-Trichlorobenzene	1	2.0	U
71-55-6	1,1,1-Trichloroethane	1	0.50	U
79-00-5	1,1,2-Trichloroethane	1	0.50	U
79-01-6	Trichloroethene	1	0.50	U
75-69-4	Trichlorofluoromethane	1	0.50	U
96-18-4	1,2,3-Trichloropropane	1	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	0.50	U
108-67-8	1,3,5-Trimethylbenzene	1	0.50	U
95-63-6	1,2,4-Trimethylbenzene	1	0.50	U
75-01-4	Vinyl chloride	1	0.50	U
108-38-3/1	m,p-Xylene	1	1.0	U
95-47-6	o-Xylene	1	0.50	U
1330-20-7	Xylenes, total	1	1.5	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.2	101	82.2 - 117	
Toluene-d8	25.00	25.0	99.8	82.6 - 111	
4-Bromofluorobenzene	25.00	24.7	98.9	88.4 - 108	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	619691	5.41	653526	5.4	
1,4-Difluorobenzene	995198	6.21	1037396	6.21	
Chlorobenzene-d5	894439	9.07	932186	9.06	
1,4-Dichlorobenzene-d4	413402	11.16	427688	11.16	

06/20/14

ORGANIC ANALYSIS DATA SHEET

GW-Duplicate

Laboratory:	ECCS	SDG:	
Client:	GZA GeoEnvironmental, Inc	Project:	Wedron Silica - Wedron, IL
Matrix:	Water	Laboratory ID:	A142008-11
Sampled:	05/14/14 00:00	Prepared:	05/23/14 11:01
Solids:		Preparation:	EPA 5030B
Batch:	A405065	Sequence:	A4E2304
		Calibration:	A140523
		Instrument:	3188A02979
		File ID:	05B.D
		Analyzed:	05/23/14 14:46
		Initial/Final:	10 mL / 10 mL

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	1	2.0	U
110-54-3	n-Hexane	1	0.50	U
591-78-6	2-Hexanone	1	20	U
98-82-8	Isopropylbenzene	1	0.50	U
99-87-6	p-Isopropyltoluene	1	0.50	U
75-09-2	Methylene chloride	1	2.0	U
108-10-1	4-Methyl-2-pentanone	1	20	U
1634-04-4	Methyl t-Butyl Ether	1	0.50	U
91-20-3	Naphthalene	1	5.0	U
103-65-1	n-Propyl Benzene	1	0.50	U
100-42-5	Styrene	1	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.50	U
127-18-4	Tetrachloroethene	1	0.50	U
109-99-9	Tetrahydrofuran	1	10	U
108-88-3	Toluene	1	0.50	U
87-61-6	1,2,3-Trichlorobenzene	1	2.0	U
120-82-1	1,2,4-Trichlorobenzene	1	2.0	U
71-55-6	1,1,1-Trichloroethane	1	0.50	U
79-00-5	1,1,2-Trichloroethane	1	0.50	U
79-01-6	Trichloroethene	1	0.50	U
75-69-4	Trichlorofluoromethane	1	0.50	U
96-18-4	1,2,3-Trichloropropane	1	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	0.50	U
108-67-8	1,3,5-Trimethylbenzene	1	0.50	U
95-63-6	1,2,4-Trimethylbenzene	1	0.50	U
75-01-4	Vinyl chloride	1	0.50	U
108-38-3/1	m,p-Xylene	1	0.090	J 1.00
95-47-6	o-Xylene	1	0.50	U
1330-20-7	Xylenes, total	1	1.5	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.2	105	82.2 - 117	
Toluene-d8	25.00	24.9	99.6	82.6 - 111	
4-Bromofluorobenzene	25.00	25.2	101	88.4 - 108	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	509916	5.41	585657	5.41	
1,4-Difluorobenzene	840737	6.21	945611	6.21	
Chlorobenzene-d5	764192	9.07	830183	9.07	
1,4-Dichlorobenzene-d4	344467	11.16	374823	11.16	

msk

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP-21 (6-8')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A142008-12 File ID: 06B.D
 Sampled: 05/14/14 13:00 Prepared: 05/19/14 14:33 Analyzed: 05/20/14 12:17
 Solids: 91.52 Preparation: EPA 5030B Initial/Final: 9.55 g / 500 mL
 Batch: A405049 Sequence: A4E2002 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1100	U
71-43-2	Benzene	1	29	U
108-86-1	Bromobenzene	1	29	U
74-97-5	Bromochloromethane	1	29	U
75-27-4	Bromodichloromethane	1	29	U
75-25-2	Bromoform	1	29	U
74-83-9	Bromomethane	1	290	U
78-93-3	2-Butanone	1	1100	U
104-51-8	n-Butyl Benzene	1	29	U
135-98-8	sec-Butyl Benzene	1	29	U
98-06-6	tert-Butylbenzene	1	29	U
75-15-0	Carbon disulfide	1	29	U
56-23-5	Carbon tetrachloride	1	29	U
108-90-7	Chlorobenzene	1	29	U
75-00-3	Chloroethane	1	290	U
67-66-3	Chloroform	1	29	U
74-87-3	Chloromethane	1	57	U
95-49-8	2-Chlorotoluene	1	29	U
106-43-4	4-Chlorotoluene	1	29	U
96-12-8	1,2-Dibromo-3-chloropropane	1	29	U
124-48-1	Dibromochloromethane	1	29	U
106-93-4	1,2-Dibromoethane (EDB)	1	29	U
74-95-3	Dibromomethane	1	29	U
95-50-1	1,2-Dichlorobenzene	1	29	U
106-46-7	1,4-Dichlorobenzene	1	29	U
541-73-1	1,3-Dichlorobenzene	1	29	U
75-71-8	Dichlorodifluoromethane	1	29	U
75-34-3	1,1-Dichloroethane	1	29	U
107-06-2	1,2-Dichloroethane	1	29	U
156-60-5	trans-1,2-Dichloroethene	1	29	U
156-59-2	cis-1,2-Dichloroethene	1	29	U
75-35-4	1,1-Dichloroethene	1	29	U
590-20-7	2,2-Dichloropropane	1	29	U
78-87-5	1,2-Dichloropropane	1	29	U
142-28-9	1,3-Dichloropropane	1	29	U
10061-01-5	cis-1,3-Dichloropropene	1	29	U
10061-02-6	trans-1,3-Dichloropropene	1	29	U
563-58-6	1,1-Dichloropropene	1	29	U
108-20-3	Diisopropyl Ether	1	29	U
100-41-4	Ethylbenzene	1	29	U

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP-21 (6-8')

Laboratory:	<u>ECCS</u>	SDG:	
Client:	<u>GZA GeoEnvironmental, Inc</u>	Project:	<u>Wedron Silica - Wedron, IL</u>
Matrix:	<u>Soil</u>	Laboratory ID:	<u>A142008-12</u>
		File ID:	<u>06B.D</u>
Sampled:	<u>05/14/14 13:00</u>	Prepared:	<u>05/19/14 14:33</u>
		Analyzed:	<u>05/20/14 12:17</u>
Solids:	<u>91.52</u>	Preparation:	<u>EPA 5030B</u>
		Initial/Final:	<u>9.55 g / 500 mL</u>
Batch:	<u>A405049</u>	Sequence:	<u>A4E2002</u>
		Calibration:	<u>A140523</u>
		Instrument:	<u>3188A02979</u>

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	110	U
110-54-3	n-Hexane	1	29	U
591-78-6	2-Hexanone	1	1100	U
98-82-8	Isopropylbenzene	1	29	U
99-87-6	p-Isopropyltoluene	1	29	U
75-09-2	Methylene chloride	1	110	U
108-10-1	4-Methyl-2-pentanone	1	1100	U
1634-04-4	Methyl t-Butyl Ether	1	29	U
91-20-3	Naphthalene	1	290	U
103-65-1	n-Propyl Benzene	1	29	U
100-42-5	Styrene	1	29	U
630-20-6	1,1,1,2-Tetrachloroethane	1	29	U
79-34-5	1,1,2,2-Tetrachloroethane	1	29	U
127-18-4	Tetrachloroethene	1	29	U
109-99-9	Tetrahydrofuran	1	570	U
108-88-3	Toluene	1	29	U
87-61-6	1,2,3-Trichlorobenzene	1	110	U
120-82-1	1,2,4-Trichlorobenzene	1	110	U
71-55-6	1,1,1-Trichloroethane	1	29	U
79-00-5	1,1,2-Trichloroethane	1	29	U
79-01-6	Trichloroethene	1	29	U
75-69-4	Trichlorofluoromethane	1	29	U
96-18-4	1,2,3-Trichloropropane	1	57	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	29	U
108-67-8	1,3,5-Trimethylbenzene	1	29	U
95-63-6	1,2,4-Trimethylbenzene	1	29	U
75-01-4	Vinyl chloride	1	29	U
108-38-3/1	m,p-Xylene	1	57	U
95-47-6	o-Xylene	1	29	U
1330-20-7	Xylenes, total	1	86	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.7	107	86.2 - 117	
Toluene-d8	25.00	24.9	99.7	90.4 - 108	
4-Bromofluorobenzene	25.00	24.2	96.8	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	496372	5.45	507341	5.44	
1,4-Difluorobenzene	831414	6.25	838542	6.24	
Chlorobenzene-d5	747758	9.1	745439	9.09	
1,4-Dichlorobenzene-d4	329608	11.2	346910	11.19	

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ORGANIC ANALYSIS DATA SHEET

WS-SB-GP-21 (16-18')

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A142008-13 File ID: 07B.D
 Sampled: 05/14/14 13:05 Prepared: 05/19/14 14:33 Analyzed: 05/20/14 13:02
 Solids: 85.84 Preparation: EPA 5030B Initial/Final: 10.89 g / 500 mL
 Batch: A405049 Sequence: A4E2002 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
67-64-1	Acetone	1	1100	U
71-43-2	Benzene	1	27	U
108-86-1	Bromobenzene	1	27	U
74-97-5	Bromochloromethane	1	27	U
75-27-4	Bromodichloromethane	1	27	U
75-25-2	Bromoform	1	27	U
74-83-9	Bromomethane	1	270	U
78-93-3	2-Butanone	1	1100	U
104-51-8	n-Butyl Benzene	1	27	U
135-98-8	sec-Butyl Benzene	1	27	U
98-06-6	tert-Butylbenzene	1	27	U
75-15-0	Carbon disulfide	1	27	U
56-23-5	Carbon tetrachloride	1	27	U
108-90-7	Chlorobenzene	1	27	U
75-00-3	Chloroethane	1	270	U
67-66-3	Chloroform	1	27	U
74-87-3	Chloromethane	1	53	U
95-49-8	2-Chlorotoluene	1	27	U
106-43-4	4-Chlorotoluene	1	27	U
96-12-8	1,2-Dibromo-3-chloropropane	1	27	U
124-48-1	Dibromochloromethane	1	27	U
106-93-4	1,2-Dibromoethane (EDB)	1	27	U
74-95-3	Dibromomethane	1	27	U
95-50-1	1,2-Dichlorobenzene	1	27	U
106-46-7	1,4-Dichlorobenzene	1	27	U
541-73-1	1,3-Dichlorobenzene	1	27	U
75-71-8	Dichlorodifluoromethane	1	27	U
75-34-3	1,1-Dichloroethane	1	27	U
107-06-2	1,2-Dichloroethane	1	27	U
156-60-5	trans-1,2-Dichloroethene	1	27	U
156-59-2	cis-1,2-Dichloroethene	1	27	U
75-35-4	1,1-Dichloroethene	1	27	U
590-20-7	2,2-Dichloropropane	1	27	U
78-87-5	1,2-Dichloropropane	1	27	U
142-28-9	1,3-Dichloropropane	1	27	U
10061-01-5	cis-1,3-Dichloropropene	1	27	U
10061-02-6	trans-1,3-Dichloropropene	1	27	U
563-58-6	1,1-Dichloropropene	1	27	U
108-20-3	Diisopropyl Ether	1	27	U
100-41-4	Ethylbenzene	1	27	U

CEG/zed/14

ORGANIC ANALYSIS DATA SHEET

WS-SB-GP-21 (16-18')

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Soil Laboratory ID: A142008-13 File ID: 07B.D
 Sampled: 05/14/14 13:05 Prepared: 05/19/14 14:33 Analyzed: 05/20/14 13:02
 Solids: 85.84 Preparation: EPA 5030B Initial/Final: 10.89 g / 500 mL
 Batch: A405049 Sequence: A4E2002 Calibration: A140523 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
87-68-3	Hexachlorobutadiene	1	110	U
110-54-3	n-Hexane	1	27	U
591-78-6	2-Hexanone	1	1100	U
98-82-8	Isopropylbenzene	1	27	U
99-87-6	p-Isopropyltoluene	1	27	U
75-09-2	Methylene chloride	1	110	U
108-10-1	4-Methyl-2-pentanone	1	1100	U
1634-04-4	Methyl t-Butyl Ether	1	27	U
91-20-3	Naphthalene	1	270	U
103-65-1	n-Propyl Benzene	1	27	U
100-42-5	Styrene	1	27	U
630-20-6	1,1,1,2-Tetrachloroethane	1	27	U
79-34-5	1,1,2,2-Tetrachloroethane	1	27	U
127-18-4	Tetrachloroethene	1	27	U
109-99-9	Tetrahydrofuran	1	530	U
108-88-3	Toluene	1	27	U
87-61-6	1,2,3-Trichlorobenzene	1	110	U
120-82-1	1,2,4-Trichlorobenzene	1	110	U
71-55-6	1,1,1-Trichloroethane	1	27	U
79-00-5	1,1,2-Trichloroethane	1	27	U
79-01-6	Trichloroethene	1	27	U
75-69-4	Trichlorofluoromethane	1	27	U
96-18-4	1,2,3-Trichloropropane	1	53	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	27	U
108-67-8	1,3,5-Trimethylbenzene	1	27	U
95-63-6	1,2,4-Trimethylbenzene	1	27	U
75-01-4	Vinyl chloride	1	27	U
108-38-3/1	m,p-Xylene	1	53	U
95-47-6	o-Xylene	1	27	U
1330-20-7	Xylenes, total	1	80	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	26.1	104	86.2 - 117	
Toluene-d8	25.00	24.8	99.3	90.4 - 108	
4-Bromofluorobenzene	25.00	24.4	97.8	88.8 - 112	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	490701	5.45	507341	5.44	
1,4-Difluorobenzene	808237	6.25	838542	6.24	
Chlorobenzene-d5	728466	9.1	745439	9.09	
1,4-Dichlorobenzene-d4	320821	11.19	346910	11.19	

26/29/14

ORGANIC ANALYSIS DATA SHEET

GW-21

Laboratory: ECCS SDG:
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Water Laboratory ID: A142008-16 File ID: 06A.D
 Sampled: 05/14/14 13:30 Prepared: 05/23/14 11:01 Analyzed: 05/23/14 15:08
 Solids: Preparation: EPA 5030B Initial/Final: 10 mL / 10 mL
 Batch: A405065 Sequence: A4E2303 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	1	20	U
71-43-2	Benzene	1	0.10	J
108-86-1	Bromobenzene	1	0.50	U
74-97-5	Bromochloromethane	1	0.50	U
75-27-4	Bromodichloromethane	1	0.50	U
75-25-2	Bromoform	1	0.50	U
74-83-9	Bromomethane	1	5.0	U
78-93-3	2-Butanone	1	20	U
104-51-8	n-Butyl Benzene	1	0.50	U
135-98-8	sec-Butyl Benzene	1	0.50	U
98-06-6	tert-Butylbenzene	1	0.50	U
75-15-0	Carbon disulfide	1	0.11	J
56-23-5	Carbon tetrachloride	1	0.50	U
108-90-7	Chlorobenzene	1	0.50	U
75-00-3	Chloroethane	1	5.0	U UD
67-66-3	Chloroform	1	0.50	U
74-87-3	Chloromethane	1	2.0	U
95-49-8	2-Chlorotoluene	1	0.50	U
106-43-4	4-Chlorotoluene	1	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.50	U
124-48-1	Dibromochloromethane	1	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	1	0.50	U
74-95-3	Dibromomethane	1	0.50	U
95-50-1	1,2-Dichlorobenzene	1	0.50	U
106-46-7	1,4-Dichlorobenzene	1	0.50	U
541-73-1	1,3-Dichlorobenzene	1	0.50	U
75-71-8	Dichlorodifluoromethane	1	0.50	U
75-34-3	1,1-Dichloroethane	1	0.50	U
107-06-2	1,2-Dichloroethane	1	0.50	U
156-60-5	trans-1,2-Dichloroethene	1	0.50	U
156-59-2	cis-1,2-Dichloroethene	1	0.50	U
75-35-4	1,1-Dichloroethene	1	0.50	U
590-20-7	2,2-Dichloropropane	1	0.50	U
78-87-5	1,2-Dichloropropane	1	0.50	U
142-28-9	1,3-Dichloropropane	1	0.50	U
10061-01-5	cis-1,3-Dichloropropene	1	0.50	U
10061-02-6	trans-1,3-Dichloropropene	1	0.50	U
563-58-6	1,1-Dichloropropene	1	0.50	U
108-20-3	Diisopropyl Ether	1	0.50	U
100-41-4	Ethylbenzene	1	0.50	U

026/2014

ORGANIC ANALYSIS DATA SHEET

GW-21

Laboratory: ECCS SDG: _____
 Client: GZA GeoEnvironmental, Inc Project: Wedron Silica - Wedron, IL
 Matrix: Water Laboratory ID: A142008-16 File ID: 06A.D
 Sampled: 05/14/14 13:30 Prepared: 05/23/14 11:01 Analyzed: 05/23/14 15:08
 Solids: _____ Preparation: EPA 5030B Initial/Final: 10 mL / 10 mL
 Batch: A405065 Sequence: A4E2303 Calibration: A140517 Instrument: 3188A02979

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	1	0.14	J
110-54-3	n-Hexane	1	0.50	U
591-78-6	2-Hexanone	1	20	U
98-82-8	Isopropylbenzene	1	0.50	U
99-87-6	p-Isopropyltoluene	1	0.50	U
75-09-2	Methylene chloride	1	2.0	U
108-10-1	4-Methyl-2-pentanone	1	20	U
1634-04-4	Methyl t-Butyl Ether	1	0.50	U
91-20-3	Naphthalene	1	5.0	U
103-65-1	n-Propyl Benzene	1	0.50	U
100-42-5	Styrene	1	0.50	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.50	U
127-18-4	Tetrachloroethene	1	0.50	U
109-99-9	Tetrahydrofuran	1	10	U
108-88-3	Toluene	1	0.17	B, J 0.50 U
87-61-6	1,2,3-Trichlorobenzene	1	0.14	B, J 0.50 U
120-82-1	1,2,4-Trichlorobenzene	1	0.15	J
71-55-6	1,1,1-Trichloroethane	1	0.50	U
79-00-5	1,1,2-Trichloroethane	1	0.50	U
79-01-6	Trichloroethene	1	0.50	U
75-69-4	Trichlorofluoromethane	1	0.50	U
96-18-4	1,2,3-Trichloropropane	1	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	0.50	U
108-67-8	1,3,5-Trimethylbenzene	1	0.50	U
95-63-6	1,2,4-Trimethylbenzene	1	0.10	J 0.50 U
75-01-4	Vinyl chloride	1	0.50	U
108-38-3/1	m,p-Xylene	1	0.15	J 1.00 U
95-47-6	o-Xylene	1	0.50	U
1330-20-7	Xylenes, total	1	0.15	J 1.50 U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	25.00	25.6	102	82.2 - 117	
Toluene-d8	25.00	25.0	100	82.6 - 111	
4-Bromofluorobenzene	25.00	24.8	99.3	88.4 - 108	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene	598237	5.4	653526	5.4	
1,4-Difluorobenzene	972796	6.21	1037396	6.21	
Chlorobenzene-d5	877045	9.07	932186	9.06	
1,4-Dichlorobenzene-d4	407108	11.16	427688	11.16	

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LDC #: 31923A1

VALIDATION COMPLETENESS WORKSHEET

SDG #: A14916/A142008

Level III/IV

Laboratory: Environmental Chemistry Consulting Services, Inc.

Date: 6/16/14

Page: 1 of 1

Reviewer: [Signature]

2nd Reviewer: [Signature]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 5/8 - 5/14/14
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% PSD ≤ 15/30
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 20
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	WCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	Not reviewed for Level III validation.
XII.	Compound quantitation/RL/LOQ/LODs	A	Not reviewed for Level III validation.
XIII.	Tentatively identified compounds (TICs)	N	Not reviewed for Level III validation.
XIV.	System performance	A	Not reviewed for Level III validation.
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 13, 14, 23, 24, 50, 51
XVII.	Field blanks	SW	FB = 6, 31, 37, 45, EB = 12, 32, 49

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

TB = 41

Validated Samples: ** Indicates sample underwent Level IV validation

soil & water

1	WS-SB-GP14 (3.3-5.0)**	11	WS-SB-GP15 (11.7-13.3')	21	WS-SB-GP16 (21.7-23.3')	31	Field Blank #2 (MeOH)
2	WS-SB-GP14 (5.0-6.6')	12	Equipment Blank #1	22	WS-SB-GP16 (28.3-30')	32	Equipment Blank #2
3	WS-SB-GP14 (11.7-13.3')	13	WS-SB-GP15 (16.7-18.3)**	23	WS-SB-GP18 (1.7-3.3')	33	WS-SB-GP17 (3.3-5')
4	WS-SB-GP14 (18.3-20')	14	Duplicate #1	24	Duplicate #2	34	WS-SB-GP17 (6.7-8.3')
5	WS-SB-GP14 (23.3-25')	15	WS-SB-GP15 (23.3-25')	25	WS-SB-GP18 (6.7-8.3')	35	WS-SB-GP17 (13.3-15')
6	Field Blank #1 (MeOH)	16	WS-SB-GP15 (26.7-28.3')	26	WS-SB-GP18 (13.3-15')	36	WS-SB-GP17 (18.3-20')
7	WS-SB-GP14 (28.3-30')	17	WS-SB-GP16 (3.3-5.0')	27	WS-SB-GP18 (16.7-18.3')	37	Field Blank #3 (MeOH)
8	WS-SB-GP14 (31.7-33.3')	18	WS-SB-GP16 (5.0-6.7')	28	WS-SB-GP18 (23.3-25)**	38	WS-SB-GP17 (21.7-23)**
9	WS-SB-GP15 (1.7-3.3')	19	WS-SB-GP16 (10-11.6')	29	WS-SB-GP18 (28.3-30')	39	WS-SB-GP17 (26.7-28.3')
10	WS-SB-GP15 (6.7-8.3')	20	WS-SB-GP16 (15-16.7')	30	WS-SB-GP18 (31.7-33.3')	40	WS-SB-GP17 (31.7-33.3')

LDC #: 31923A1

VALIDATION COMPLETENESS WORKSHEET

Date: 6/16/14

SDG #: A14916/A142008

Level III/IV

Page: 1 of 1

Laboratory: Environmental Chemistry Consulting Services, Inc.

Reviewer: [Signature]

2nd Reviewer: [Signature]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times		Sampling dates:
II.	GC/MS Instrument performance check		
III.	Initial calibration		
IV.	Continuing calibration/ICV		
V.	Blanks		
VI.	Surrogate spikes		
VII.	Matrix spike/Matrix spike duplicates		
VIII.	Laboratory control samples		
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards		
XI.	Target compound identification		Not reviewed for Level III validation.
XII.	Compound quantitation/RL/LOQ/LODs		Not reviewed for Level III validation.
XIII.	Tentitatively identified compounds (TICs)		Not reviewed for Level III validation.
XIV.	System performance		Not reviewed for Level III validation.
XV.	Overall assessment of data		
XVI.	Field duplicates		
XVII.	Field blanks		

Note: A = Acceptable ND = No compounds detected D = Duplicate
 N = Not provided/applicable R = Rinsate TB = Trip blank
 SW = See worksheet FB = Field blank EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

41	3	Trip Blank	W	51	3	GW-Duplicate	W	61	WS-SB-GP-20 (18-20')MS	71	1	A 405028-MB	
42	4	WS-SB-GP-19 (12-14')		52	4	WS-SB-GP-21 (6-8')		62	WS-SB-GP-20 (18-20')MSD	72	2	A 405098-MB F1	
43	4	WS-SB-GP-19 (18-20')		53	4	WS-SB-GP-21 (16-18')		63	GW-20MS	W	73	3	A 405065-MB
44	3	GW-19	W	54	3	GW-21	W	64	GW-20MSD	W	74	2	A 405049-MB
45	4	Field Blank #4 (MeOH)		55		WS-SB-GP15 (1.7-3.3')MS	9	65			75		
46	4	Duplicate #3		56		WS-SB-GP15 (1.7-3.3')MSD		66			76		
47	4	WS-SB-GP-20 (10-12')		57		WS-SB-GP16 (10-11.6')MS	19	67			77		
48	4	WS-SB-GP-20 (18-20')		58		WS-SB-GP16 (10-11.6')MSD		68			78		
49	3	Equipment Blank #3	W	59		WS-SB-GP18 (28.3-30')MS	29	69			79		
50	3	GW-20**	W	60		WS-SB-GP18 (28.3-30')MSD		70			80		

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	/			
Cooler temperature criteria was met.	/			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	/			
Were all samples analyzed within the 12 hour clock criteria?	/			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	/			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	/			
Was a curve fit used for evaluation?		/		
Did the initial calibration meet the curve fit acceptance criteria of > 0.990 ?			/	
Were all percent relative standard deviations (%RSD) $\leq 30\%/15\%$ and relative response factors (RRF) ≥ 0.05 ?	/			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	/			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	/			
Were all percent differences (%D) $\leq 20\%$ and relative response factors (RRF) ≥ 0.05 ?		/		
V. Blanks				
Was a method blank associated with every sample in this SDG?	/			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	/			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	/			
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	/			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			/	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	/			
Was a MS/MSD analyzed every 20 samples of each matrix?	/			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		/		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	/			

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Were the performance evaluation (PE) samples within the acceptance limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were retention times within + 30 seconds of the associated calibration standard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
XI. Target compound identification				
Were relative retention times (RRT's) within + 0.06 RRT units of the standard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were chromatogram peaks verified and accounted for?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
XII. Compound quantitation/RLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
XIV. System performance				
System performance was found to be acceptable.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Target compounds were detected in the field duplicates.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
XVII. Field blanks				
Field blanks were identified in this SDG.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Target compounds were detected in the field blanks.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC. 1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl chloride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO. 1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 31923A)

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer: CC

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
- Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's?
- Y N N/A Were all %D and RRFs within the validation criteria of <20 %D and >0.05 RRF?

#	Date	Standard ID	Compound	Finding %D (Limit: <20.0%)	Finding RRF (Limit: >0.05)	Associated Samples	Qualifications
	5/16/14	A140517-1CVA	D	21.8		1-5, 14-18 29, 33-35, 39, 40 30, 36, 38, 42, 43, 45, 46, 47 44, 50, 51 A405028-BLK1 A405065-BLK1 59, 60, 63	J/J/A

LDC #: 31923A)

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1

Reviewer: FT

2nd Reviewer: OR

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?

Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?

Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: _____

Conc. units: ug/l

Associated Samples: 12, 32

Compound	Blank ID	Sample Identification							
#	12 &	32	were	analyzed	without	a	method	Blank	
							det		
							J/4/11	# 12, 32	
							professional		

Blank analysis date: _____

Conc. units: _____

Associated Samples: 1 → 11, 13 → 20, 21 → 31, 33 → 40

Compound	Blank ID	Sample Identification							
		The method blank for this analytical batch (A 405028)							
		skewed has more than 20 samples.							

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 31923A/

VALIDATION FINDINGS WORKSHEET

Page: 1 of 1

Blanks

Reviewer: FT

2nd Reviewer: Q

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

N N/A Was a method blank associated with every sample in this SDG?

N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?

N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 5/23/14

Conc. units: ng/l

Associated Samples: 41, 44, 49, 50, 51, 54

Compound	Blank ID	Sample Identification							
	A405065-Blank 1	44	49	50	54				
MMM	0.16	0.33/0.50u							
CC	0.15	0.12/0.50u	0.13/0.50u	0.090/0.50u	0.17/0.50u				
NNN	0.10				0.14/0.50u				

Blank analysis date: _____

Conc. units: _____

Associated Samples: _____

Compound	Blank ID	Sample Identification							

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 31923A/

VALIDATION FINDINGS WORKSHEET Blanks

Page: 1 of 1
Reviewer: FT
2nd Reviewer: OR

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?

Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?

Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 5/20/14

Conc. units: ug/kg

Associated Samples: 42, 43, 45-048, 52, 53

Compound	Blank ID	Sample Identification							
	A409049-BLK1		42	43	48				
E	11		48	8.1/110U					
DDD	4.0		5.0/28U		5.0/25U				

Blank analysis date: _____

Conc. units: _____

Associated Samples: _____

Compound	Blank ID	Sample Identification							

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 31923A

VALIDATION FINDINGS WORKSHEET Blanks

Page: 1 of 1

Reviewer: FT

2nd Reviewer: OL

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?

Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?

Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 5/19/14

Conc. units: ug/kg

Associated Samples: 1 → 31, 33 → 34

Compound	Blank ID	Sample Identification							
		6	10	11	14	19	23		
RRR	5.0	6.0/25U 50	10/24U 48	5.9/27U 54	8.0/33U 66	5.5/25U 50	6.7/31U 62		

Blank analysis date: _____

Conc. units: _____

Associated Samples: _____

Compound	Blank ID	Sample Identification							
		6	10	11	14	19	23		

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 31923 A /

VALIDATION FINDINGS WORKSHEET

Page: 1 of 1

Field Blanks

Reviewer: FT
2nd Reviewer: CR

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target compounds detected in the field blanks?

Blank units: ug/L Associated sample units: ug/L + ug/kg

Sampling date: 5/14/14

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: TB Associated Samples: 42 → 54

Compound	Blank ID	Sample Identification							
	<u>41</u>	<u>42</u>	<u>49</u>	<u>54</u>					
<u>E</u>	<u>0.14</u>	-	-	-					
<u>DDD</u>	<u>0.10</u>	<u>0.17</u>	<u>0.30</u>	<u>0.10</u>					
		<u>0.50u</u>	<u>0.50u</u>	<u>0.50u</u>					

Blank units: _____ Associated sample units: _____

Sampling date: _____

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: _____ Associated Samples: _____

Compound	Blank ID	Sample Identification							

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as Methylene chloride, Acetone, 2-Butanone and Carbon disulfide that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

LDC #: 31923A

VALIDATION FINDINGS WORKSHEET

Field Blanks

Reviewer: FT

2nd Reviewer: CE

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target compounds detected in the field blanks?

Blank units: ug/l Associated sample units: ug/kg

Sampling date: 5/8/14

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: EB Associated Samples: 1 → 5, 7 → 11, 13 → 22

Compound	Blank ID	Sample Identification									
		12	5x/10x	10	11	13	14	15	16	21	
F	270	2700	-								
A	4.0	20.0	-								
CC	8.5	42.5	4.9/24U	4.9/27U	15/26U	6.0/33U	10/34U	2.6/27U	3.8/24U		

Blank units: _____ Associated sample units: _____

Sampling date: _____

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: _____ Associated Samples: _____

Compound	Blank ID	Sample Identification									

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as Methylene chloride, Acetone, 2-Butanone and Carbon disulfide that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

LDC #: 31923A1

VALIDATION FINDINGS WORKSHEET

Page: 1 of 1

Field Blanks

Reviewer: FT
2nd Reviewer: OT

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target compounds detected in the field blanks?

Blank units: ug/L Associated sample units: ug/kg

Sampling date: 5/9/14

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: EB Associated Samples: 23 → 30, 33 → ~~40~~ 36

Compound	Blank ID	Sample Identification							
		27	28	29	35	36	40	38 → 40	
	32								
F	280	-	-	-					
CC	6.0	14/30U	8.9/30U	21/33U	9.5/28U	10/28U	5.8/26U		

Blank units: _____ Associated sample units: _____

Sampling date: _____

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: _____ Associated Samples: _____

Compound	Blank ID	Sample Identification							

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as Methylene chloride, Acetone, 2-Butanone and Carbon disulfide that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

LDC #: 31923 A 1

VALIDATION FINDINGS WORKSHEET

Page: 1 of 1

Field Blanks

Reviewer: FT

2nd Reviewer: OR

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target compounds detected in the field blanks?

Blank units: ug/L Associated sample units: ug/L, ug/kg

Sampling date: 5/14/14

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: EB Associated Samples: 42 -> 44, 46 -> 48, 50 -> 54

Compound	Blank ID	Sample Identification							
		44	50	51	54				
	EB=49								
F	3.4								
JJ	0.22	0.19/0.50U	0.19/0.50U	0.14/0.50U					
CC	0.13	0.12/0.50U			0.17/0.50U				
AAA	0.11								
DDD	0.38	0.17/0.50U			0.10/0.50U				
RRR	0.19	0.11/1.0U		0.090/1.0U	0.15/1.0U				
GG	0.19				0.15/1.5U				

Blank units: Associated sample units:

Sampling date:

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: Associated Samples:

Compound	Blank ID	Sample Identification							

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT: Common contaminants such as Methylene chloride, Acetone, 2-Butanone and Carbon disulfide that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

LDC #: 31923A |

VALIDATION FINDINGS WORKSHEET

Page: 1 of 1

Field Blanks

Reviewer: FT
2nd Reviewer: CR

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?

Blank units: ng/kg Associated sample units: ng/kg

Sampling date: 5/8/14

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: FB Associated Samples: 1 → 5, 7 → 11, 13 → 22

Compound	Blank ID	Sample Identification								
		6	5x	9	10	11	13	14	15	16
DDD	7.0	35		7.3/24U	54	23/26U	6.0/33U	11/34U	-	4.5/25U
RRR	6.0	30		10/48U	5.9/27U	-	8.0/66U	26/68U	-	5.5/50U
SSS	5.5	27.5	8.0/24U	7.3/24U	5.4/27U	13/26U	6.7/33U	8.0/34U	11/27U	4.0/25U
GG	12	60		17/72U	11/81U	50/78U	15/99U	34/102U		9.5/75U

Blank units: ↓ Associated sample units: ↓

Sampling date: ↓

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: FB Associated Samples: ↓

Compound	Blank ID	Sample Identification								
		6	20	21						
DDD	7.0	-	-							
RRR	6.0	-	-							
SSS	5.5	5.8/24U	7.2/24U							
GG	12	-								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as Methylene chloride, Acetone, 2-Butanone and Carbon disulfide that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

METHOD : GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- Y* N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.
- Y* N N/A Was a MS/MSD analyzed every 20 samples of each matrix?
- Y* N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	55 + 56	DDD	65.4 (79.8-124)	69.8 (79.8-124)	()	9	J/W/A
			()	()	()		
			()	()	()		
	57 + 58	B	()	()	24.5 (20)	19	J/Adt
		M	()	()	75.5 ()	↓	↓
		Z	()	()	20.1 ()	↓	↓
		Y	()	()	22.3 ()	↓	↓
		LL	()	()	23.7 ()	↓	↓
		Tetrahydrofuran	()	()	35.4 (↓)	↓	↓
			()	()	()		
			()	()	()		
	59 + 60	III	140 (83.4-124)	156 (83.4-124)	()	29	J/Adt
		ZZ	153 (79.1-131)	148 (79.1-131)	()	↓	↓
		DDD	()	()	20.4 (20)	↓	↓
			()	()	()		
			()	()	()		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
H.	1,1-Dichloroethene	59-172%	< 22%	61-145%	< 14%
S.	Trichloroethene	62-137%	< 24%	71-120%	< 14%
V.	Benzene	66-142%	< 21%	76-127%	< 11%
CC.	Toluene	59-139%	< 21%	76-125%	< 13%
DD.	Chlorobenzene	60-133%	< 21%	75-130%	< 13%

LDC #: 31923A/

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: FT

2nd Reviewer: *[Signature]*

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y ~~N~~ N/A Was a LCS required?

Y ~~N~~ N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
			()	()	()		
			()	()	()		
	No associated	(ies) / D				12, 32	J / u / P
			()	()	()		
			()	()	()		
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			()	()	()		

LDC#: 31923A1

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
 Reviewer: _____
 2nd Reviewer: [Signature]

METHOD: VOA (EPA SW 846 Method 8260B)

Analyte	Concentration (ug/Kg)		RPD ≤ 50%
	13	14	
EE	8.2	33U	NC
CC	15	33U	NC
AAA	6.7	33U	NC
DDD	23	6.0	NC
RRR	37	8.0	NC
SSS	13	6.7	NC
GG	50	15	NC

Analyte	Concentration (ug/Kg)		RPD ≤ 50%
	23	24	
JJ	8.0	27U	NC
DDD	6.1	27U	NC
RRR	6.7	53U	NC
E	120U	9.1	NC

Analyte	Concentration (ug/L)		RPD ≤ 35%
	50	51	
V	0.48	0.49	NC
JJ	0.19	0.14	NC
QQQ	0.25	0.28	NC
Z	2.1	20U	NC
CC	0.090	0.50U	NC
RRR	1.0U	0.090	NC

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is}) / (A_{is})(C_x)$

average RRF = sum of the RRFs/number of standards

$\%RSD = 100 * (S/X)$

A_x = Area of compound,

C_x = Concentration of compound,

S = Standard deviation of the RRFs

X = Mean of the RRFs

A_{is} = Area of associated internal standard

C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported	Recalculated	Reported	Recalculated	Reported	Recalculated
				RRF (5 std)	RRF (5 std)	Average RRF (initial)	Average RRF (initial)	%RSD	%RSD
1	ICAL A140523	5/21/14	V (1st internal standard)	2.345712	2.345712	2.277031	2.277031	3.893166	3.893
			CC (2nd internal standard)	0.8942198	0.8942198	0.8800294	0.8800294	4.827114	4.828
			EE (3rd internal standard)	1.824807	1.824807	1.78505	1.78505	9.228454	9.228
			BB (4th internal standard)	0.7183858	0.7183858	0.7046118	0.7046118	10.3	10.30
2	ICAL A140517	5/15/14	V (1st internal standard)	2.084251	2.084251	2.249227	2.249227	4.153643	4.153643
			CC (2nd internal standard)	0.8370637	0.8370637	0.8824947	0.8824947	5.996988	5.996988
			EE (3rd internal standard)	1.722485	1.722485	1.746678	1.746678	7.777411	7.777411
			BB (4th internal standard)	0.7312651	0.7312651	0.7416472	0.7416472	3.551299	3.551299
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

VALIDATION FINDINGS WORKSHEET

Continuing Calibration Results Verification

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

$$\% \text{ Difference} = 100 * (\text{ave. RRF} - \text{RRF}) / \text{ave. RRF}$$

$$\text{RRF} = (A_x)(C_{is}) / (A_{is})(C_x)$$

Where: ave. RRF = initial calibration average RRF

RRF = continuing calibration RRF

A_x = Area of compound,A_{is} = Area of associated internal standardC_x = Concentration of compound,C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	A4E1801-CCV 18:50	5/18/14	Y (1st internal standard)	2.249227	2.251109	2.251109	0.8	0.8
			CC (2nd internal standard)	0.8824947	0.881699	0.881699	0.09	0.09
			EE (3rd internal standard)	1.746678	1.837219	1.837219	5.2	5.2
			BB (4th internal standard)	0.7416472	0.7499902	0.7499902	1.1	1.1
2	A4E1802-CC2 0315	5/21/14	Y (1st internal standard)	2.77031	2.369604	2.369604	4.1	4.1
			CC (2nd internal standard)	0.8800294	0.8765749	0.8765749	0.4	0.4
			EE (3rd internal standard)	1.78505	1.711279	1.711279	4.1	4.1
			BB (4th internal standard)	0.7046118	0.7109543	0.7109543	0.9	0.9
3	A4E1802-CC3 7:44 7:40 P1	5/21/14	(1st internal standard)		2.302306	2.302306	1.1	1.1
			(2nd internal standard)		0.9389037	0.9389037	6.6	6.6
			(3rd internal standard)		1.7434	1.7434	2.3	2.3
			↓ (4th internal standard)	↓	0.691419	0.691419	1.9	1.9
4	A4E2001-CCV 8:32	5/19/14	Y (1st internal standard)	2.249227	2.272189	2.272189	1.0	1.0
			CC (2nd internal standard)	0.8824947	0.8799403	0.8799403	0.3	0.3
			EE (3rd internal standard)	1.746678	1.721519	1.721519	1.4	1.4
			BB (4th internal standard)	0.7416472	0.7865304	0.7865304	6.1	6.1

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 31923A1

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
 Reviewer: FT
 2nd reviewer: J

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
 SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	25.0	26.3	105	105	0
1,2-Dichloroethane-d4					
Toluene-d8	25.0	24.9	99.4	99.4	0
Bromofluorobenzene	25.0	25.2	101	101	0

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 31923A /

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
 Reviewer: FT
 2nd Reviewer: OL

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration
 SA = Spike added

SC = Sample concentration

RPD = |MSC - MSC| * 2 / (MSC + MSDC)

MSC = Matrix spike concentration

MSDC = Matrix spike duplicate concentration

MS/MSD sample: 63 + 64

Compound	Spike Added (ug/l)		Sample Concentration (ug/l)	Spiked Sample Concentration (ug/l)		Matrix Spike		Matrix Spike Duplicate		MS/MSD	
	MS	MSD		MS	MSD	Percent Recovery		Percent Recovery		RPD	
						Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	5.0	5.0	ND	4.85	5.06	97.0	97.0	101	101	4.24	4.24
Trichloroethene			ND	4.96	5.18	99.2	99.2	104	104	4.34	4.34
Benzene			0.480	5.51	5.57	101	101	102	102	1.19	1.19
Toluene			0.0900	5.03	5.30	98.8	98.8	104	104	5.32	5.32
Chlorobenzene	↓	↓	ND	5.01	5.14	100	100	103	103	2.56	2.56

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 31923A 1

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
 Reviewer: FT
 2nd Reviewer: CR

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA

Where: SSC = Spiked sample concentration
 SA = Spike added

RPD = |LCSC - LCSDC| * 2 / (LCSC + LCSDC)

LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS ID: A405065 LCS

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene	5.0	5.0 NA	5.04	NA	101	101				
Trichloroethene			5.12		102	102				
Benzene			5.12		102	102				
Toluene			5.16		103	103				
Chlorobenzene	↓	↓	5.09	↓	102	102	NA			

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 31923A)

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: O'

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = (Ax)(Is)(Df) / (As)(RRF)(V0)(%S)

- Ax = Area of the characteristic ion (EICP) for the compound to be measured
As = Area of the characteristic ion (EICP) for the specific internal standard
Is = Amount of internal standard added in nanograms (ng)
RRF = Relative response factor of the calibration standard.
V0 = Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df = Dilution factor.
%S = Percent solids, applicable to soils and solid matrices only.

Example: Sample I.D. # 1, v:

Conc. = (33939) (25) (500) (20) / (584962) (2.24927) (0.9032) (10.72) = 660 mg/kg

Table with columns: #, Sample ID, Compound, Reported Concentration, Calculated Concentration, Qualification. Handwritten entry for Sample ID #1 EE shows calculations for Reported and Calculated concentrations.

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Wedron Community Groundwater

Collection Date: May 8 through May 9, 2014

LDC Report Date: June 12, 2014

Matrix: Soil

Parameters: Lead

Validation Level: EPA Level III & IV

Laboratory: Environmental Chemistry Consulting Services, Inc./
Pace Analytical Services, Inc.

Sample Delivery Group (SDG): A141916/4096232

Sample Identification

WS-SB-GP14 (3.3-5.0)**	WS-SB-GP18 (1.7-3.3')	WS-SB-GP17 (6.7-8.3')MSD
WS-SB-GP14 (5.0-6.6')	Duplicate #2	
WS-SB-GP14 (11.7-13.3')	WS-SB-GP18 (6.7-8.3')	
WS-SB-GP14 (18.3-20')	WS-SB-GP18 (13.3-15')	
WS-SB-GP14 (23.3-25')	WS-SB-GP18 (16.7-18.3')	
WS-SB-GP14 (28.3-30')	WS-SB-GP18 (23.3-25)**	
WS-SB-GP14 (31.7-33.3')	WS-SB-GP18 (28.3-30')	
WS-SB-GP15 (1.7-3.3')	WS-SB-GP18 (31.7-33.3')	
WS-SB-GP15 (6.7-8.3')	WS-SB-GP17 (3.3-5')	
WS-SB-GP15 (11.7-13.3')	WS-SB-GP17 (6.7-8.3')	
WS-SB-GP15 (16.7-18.3)**	WS-SB-GP17 (13.3-15')	
Duplicate #1	WS-SB-GP17 (18.3-20')	
WS-SB-GP15 (23.3-25')	WS-SB-GP17 (21.7-23)**	
WS-SB-GP15 (26.7-28.3')	WS-SB-GP17 (26.7-28.3')	
WS-SB-GP16 (3.3-5.0')	WS-SB-GP17 (31.7-33.3')	
WS-SB-GP16 (5.0-6.7')	WS-SB-GP14 (3.3-5.0')MS	
WS-SB-GP16 (10-11.6')	WS-SB-GP14 (3.3-5.0')MSD	
WS-SB-GP16 (15-16.7')	WS-SB-GP15 (11.7-13.3')MS	
WS-SB-GP16 (21.7-23.3')	WS-SB-GP15 (11.7-13.3')MSD	
WS-SB-GP16 (28.3-30')	WS-SB-GP17 (6.7-8.3')MS	

**Indicates sample underwent EPA Level IV review

Introduction

This data review covers 41 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010 for Lead.

This review follows the Quality Assurance Project Plan for EPA Docket No. RCRA 05-2013-0011, Wedron, Illinois (November 2013) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent an EPA Level IV review. An EPA Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by EPA Level III criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

The initial and continuing calibrations were performed at the required frequency.

The calibration standards criteria were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No lead was found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XI. Sample Result Verification

All sample result verifications were acceptable for samples on which an EPA Level IV review was performed. Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

Samples WS-SB-GP15 (16.7-18.3')** and Duplicate #1 and samples WS-SB-GP18 (1.7-3.3') and Duplicate #2 were identified as field duplicates. No lead was detected greater than 5x the reporting limit in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)
	WS-SB-GP15 (16.7-18.3')**	Duplicate #1	
Lead	9.2	11.7	24 (≤50)

Analyte	Concentration (mg/Kg)		RPD (Limits)
	WS-SB-GP18 (1.7-3.3')	Duplicate #2	
Lead	8.3	9.0	8 (≤50)

**Wedron Community Groundwater
Lead - Data Qualification Summary - SDG A141916/4096232**

No Sample Data Qualified in this SDG

**Wedron Community Groundwater
Lead - Laboratory Blank Data Qualification Summary - SDG A141916/4096232**

No Sample Data Qualified in this SDG

**Wedron Community Groundwater
Lead - Field Blank Data Qualification Summary - SDG A141916/4096232**

No Sample Data Qualified in this SDG

LDC #: 31923A4
 SDG #: A14916/4096232
 Laboratory: Environmental Chemistry Consulting Services, Inc./Pace Analytical Services, Inc.

VALIDATION COMPLETENESS WORKSHEET
 Level III/IV

Date: 6/6/14
 Page: 1 of 1
 Reviewer: [Signature]
 2nd Reviewer: [Signature]

METHOD: Lead (EPA SW 846 Method 6010)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 5/8/14 - 5/9/14
II.	ICP/MS Tune	N	
III.	Calibration	A	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	A	
VI.	Matrix Spike Analysis	A	
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	A	
IX.	Internal Standard (ICP-MS)	N	
X.	ICP Serial Dilution	A	
XI.	Sample Result Verification	A	Not reviewed for Level III validation.
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	SW	(11, 12) (21, 22)
XIV.	Field Blanks	N	

Note: A = Acceptable ND = No compounds detected D = Duplicate
 N = Not provided/applicable R = Rinsate TB = Trip blank
 SW = See worksheet FB = Field blank EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

1	WS-SB-GP14 (3.3-5.0)**	11 ✓	WS-SB-GP15 (16.7-18.3)**	21	WS-SB-GP18 (1.7-3.3')	31	WS-SB-GP17 (13.3-15')
2	WS-SB-GP14 (5.0-6.6')	12	Duplicate #1	22	Duplicate #2	32	WS-SB-GP17 (18.3-20')
3	WS-SB-GP14 (11.7-13.3')	13	WS-SB-GP15 (23.3-25')	23	WS-SB-GP18 (6.7-8.3')	33	WS-SB-GP17 (21.7-23)**
4	WS-SB-GP14 (18.3-20')	14	WS-SB-GP15 (26.7-28.3')	24	WS-SB-GP18 (13.3-15')	34	WS-SB-GP17 (26.7-28.3')
5	WS-SB-GP14 (23.3-25')	15	WS-SB-GP16 (3.3-5.0')	25	WS-SB-GP18 (16.7-18.3')	35	WS-SB-GP17 (31.7-33.3')
6	WS-SB-GP14 (28.3-30')	16	WS-SB-GP16 (5.0-6.7')	26	WS-SB-GP18 (23.3-25)**	36	WS-SB-GP14 (3.3-5.0')MS
7	WS-SB-GP14 (31.7-33.3')	17	WS-SB-GP16 (10-11.6')	27	WS-SB-GP18 (28.3-30')	37	WS-SB-GP14 (3.3-5.0')MSD
8	WS-SB-GP15 (1.7-3.3')	18	WS-SB-GP16 (15-16.7')	28	WS-SB-GP18 (31.7-33.3')	38	WS-SB-GP15 (11.7-13.3')MS
9	WS-SB-GP15 (6.7-8.3')	19	WS-SB-GP16 (21.7-23.3')	29	WS-SB-GP17 (3.3-5')	39	WS-SB-GP15 (11.7-13.3')MSD
10	WS-SB-GP15 (11.7-13.3')	20	WS-SB-GP16 (28.3-30')	30	WS-SB-GP17 (6.7-8.3')	40	WS-SB-GP17 (6.7-8.3')MS

Notes: _____

LDC #: 31923A4

VALIDATION COMPLETENESS WORKSHEET

Date: 6/6/14

SDG #: A14916/4096232

Level III/IV

Page: 2 of 2

Laboratory: Environmental Chemistry Consulting Services, Inc./Pace Analytical Services, Inc.

Reviewer: [Signature]
2nd Reviewer: [Signature]

METHOD: Lead (EPA SW 846 Method 6010)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times		Sampling dates:
II.	ICP/MS Tune		
III.	Calibration		
IV.	Blanks		
V.	ICP Interference Check Sample (ICS) Analysis		
VI.	Matrix Spike Analysis		
VII.	Duplicate Sample Analysis		See page 1
VIII.	Laboratory Control Samples (LCS)		
IX.	Internal Standard (ICP-MS)		
X.	ICP Serial Dilution		
XI.	Sample Result Verification		Not reviewed for Level III validation.
XII.	Overall Assessment of Data		
XIII.	Field Duplicates		
XIV.	Field Blanks		

Note: A = Acceptable ND = No compounds detected D = Duplicate
 N = Not provided/applicable R = Rinsate TB = Trip blank
 SW = See worksheet FB = Field blank EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

41	WS-SB-GP17 (6.7-8.3')MSD	51	MS	61	71
42	WS-SB-GP-19 (12-14')DUP	52		62	72
43		53		63	73
44		54		64	74
45		55		65	75
46		56		66	76
47		57		67	77
48		58		68	78
49		59		69	79
50		60		70	80

Notes: _____

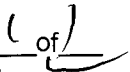
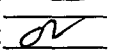
Method:Metals (EPA SW 846 Method 6010B/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	/			
Cooler temperature criteria was met.	/			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?			/	
Were %RSD of isotopes in the tuning solution $\leq 5\%$?			/	
III. Calibration				
Were all instruments calibrated daily, each set-up time?	/			
Were the proper number of standards used?	/			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	/			
Were all initial calibration correlation coefficients ≥ 0.995 ?	/			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	/			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		/		
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	/			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	/			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	/			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	/			
Were the MS/MSD or duplicate relative percent differences (RPD) $\leq 20\%$ for waters and $\leq 35\%$ for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were $\leq 5X$ the RL, including when only one of the duplicate sample values were $\leq 5X$ the RL.	/			
VII. Laboratory control samples				
Was an LCS analyzed for this SDG?	/			
Was an LCS analyzed per extraction batch?	/			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	/			

Validation Area	Yes	No	NA	Findings/Comments
VIII. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?			/	
If the %Rs were outside the criteria, was a reanalysis performed?			/	
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?	/			
Were all percent differences (%Ds) < 10%?	/			
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.			/	
X. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	/			
XI. Overall assessment of data				
Overall assessment of data was found to be acceptable.	/			
XII. Field duplicates				
Field duplicate pairs were identified in this SDG.	/	/		
Target analytes were detected in the field duplicates.	/	/		
XIII. Field blanks				
Field blanks were identified in this SDG.		/		
Target analytes were detected in the field blanks.		/	/	

LDC#: 31923A4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 6 of 7
Reviewer: 
2nd Reviewer: 

METHOD: Metals (EPA Method 6010)

Analyte	Concentration (mg/Kg)		RPD (≤50)	
	11	12		
Lead	9.2	11.7	24	

Analyte	Concentration (mg/Kg)		RPD (≤50)	
	21	22		
Lead	8.3	9.0	8	

V:\FIELD DUPLICATES\FD_inorganic\31923A4.wpd

LDC #: 319-3A4

VALIDATION FINDINGS WORKSHEET

Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
 Reviewer: [Signature]
 2nd Reviewer: [Signature]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$\%R = \frac{\text{Found}}{\text{True}} \times 100$ Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
 True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated	Reported	Acceptable (Y/N)
					%R	%R	
<u>ICV</u>	ICP (Initial calibration)	<u>Pb</u>	<u>495.2</u>	<u>500</u>	<u>99</u>	<u>99.0</u>	<u>Y</u>
	ICP/MS (Initial calibration)						
	CVAA (Initial calibration)						
<u>CCV</u>	ICP (Continuing calibration)	<u>Pb</u>	<u>522.9</u>	<u>500</u>	<u>104.6</u>	<u>104.6</u>	<u>Y</u>
	ICP/MS (Continuing calibration)						
	CVAA (Continuing calibration)						
	GFAA (Initial calibration)						
	GFAA (Continuing calibration)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 3192384

VALIDATION FINDINGS WORKSHEET Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: [Signature]
2nd Reviewer: [Signature]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$$\%R = \frac{\text{Found}}{\text{True}} \times 100$$
 Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
 True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$$RPD = \frac{|S-D|}{(S+D)/2} \times 100$$
 Where, S = Original sample concentration
 D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$$\%D = \frac{|I-SDR|}{I} \times 100$$
 Where, I = Initial Sample Result (mg/L)
 SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated	Reported	Acceptable (Y/N)
					%R / RPD / %D	%R / RPD / %D	
<u>25AB</u>	ICP interference check	<u>Pb</u>	<u>482.1</u>	<u>500</u>	<u>96.4</u>	<u>96.4</u>	<u>Y</u>
<u>265</u>	Laboratory control sample	<u>Pb</u>	<u>52.2</u>	<u>50</u>	<u>104</u>	<u>104</u>	<u>Y</u>
<u>36</u>	Matrix spike	<u>Pb</u>	(SSR-SR) <u>54.86</u>	<u>58.1</u>	<u>94</u>	<u>94</u>	<u>Y</u>
<u>38/39</u>	Duplicate	<u>Pb</u>	<u>56.78</u>	<u>56.95</u>	<u>0</u>	<u>0</u>	<u>Y</u>
<u>41</u>	ICP serial dilution	<u>Pb</u>	<u>83.1</u>	<u>84.62</u>	<u>1.8</u>	<u>1.8</u>	<u>Y</u>

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 31923A

VALIDATION FINDINGS WORKSHEET

Sample Calculation Verification

Page: 1 of 1
 Reviewer: [Signature]
 2nd reviewer: [Signature]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- Y/N/N/A Have results been reported and calculated correctly?
 Y/N/N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
 Y/N/N/A Are all detection limits below the CRDL?

Detected analyte results for _____ were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In. Vol.)}$

Recalculation:

- RD = Raw data concentration
 FV = Final volume (ml)
 In. Vol. = Initial volume (ml) or weight (G)
 Dil = Dilution factor

#1 Pb = $\frac{73.430 \mu\text{g/L} \times 0.05 \text{ L}}{0.503 \text{ g} \times 0.858} = 8.507 \text{ mg/kg}$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
1	1	Pb	8.5	8.5	Y
2	11	Pb	9.2	9.2	Y
3	26	Pb	2.6	2.6	Y
4	3.3	Pb	5.5	5.5	Y

Note: _____

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Wedron Community Groundwater
Collection Date: May 8 through May 14, 2014
LDC Report Date: June 12, 2014
Matrix: Soil
Parameters: Wet Chemistry
Validation Level: EPA Level III & IV
Laboratory: Environmental Chemistry Consulting Services, Inc./
Pace Analytical Services, Inc.

Sample Delivery Group (SDG): A141916/A142008/4096232/4096417

Sample Identification

WS-SB-GP14 (3.3-5.0)**	WS-SB-GP18 (1.7-3.3')	WS-SB-GP-19 (12-14')DUP
WS-SB-GP14 (5.0-6.6')	Duplicate #2	WS-SB-GP16 (28.3-30')DUP
WS-SB-GP14 (11.7-13.3')	WS-SB-GP18 (6.7-8.3')	
WS-SB-GP14 (18.3-20')	WS-SB-GP18 (13.3-15')	
WS-SB-GP14 (23.3-25')	WS-SB-GP18 (16.7-18.3')	
WS-SB-GP14 (28.3-30')	WS-SB-GP18 (23.3-25)**	
WS-SB-GP14 (31.7-33.3')	WS-SB-GP18 (28.3-30')	
WS-SB-GP15 (1.7-3.3')	WS-SB-GP18 (31.7-33.3')	
WS-SB-GP15 (6.7-8.3')	WS-SB-GP17 (3.3-5')	
WS-SB-GP15 (11.7-13.3')	WS-SB-GP17 (6.7-8.3')	
WS-SB-GP15 (16.7-18.3)**	WS-SB-GP17 (13.3-15')	
Duplicate #1	WS-SB-GP17 (18.3-20')	
WS-SB-GP15 (23.3-25')	WS-SB-GP17 (21.7-23)**	
WS-SB-GP15 (26.7-28.3')	WS-SB-GP17 (26.7-28.3')	
WS-SB-GP16 (3.3-5.0')	WS-SB-GP17 (31.7-33.3')	
WS-SB-GP16 (5.0-6.7')	WS-SB-GP-19 (12-14')	
WS-SB-GP16 (10-11.6')	WS-SB-GP-19 (18-20')	
WS-SB-GP16 (15-16.7')	WS-SB-GP15 (1.7-3.3')DUP	
WS-SB-GP16 (21.7-23.3')	WS-SB-GP-21 (12-14')	
WS-SB-GP16 (28.3-30')	WS-SB-GP-21 (8-10')	

**Indicates sample underwent EPA Level IV review

Introduction

This data review covers 42 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per ASTM D2974-87 for Fractional Organic Carbon and EPA SW 846 Method 9045 for pH.

This review follows the Quality Assurance Project Plan for EPA Docket No. RCRA 05-2013-0011, Wedron, Illinois (November 2013) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Samples indicated by a double asterisk on the front cover underwent an EPA Level IV review. An EPA Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by EPA Level III criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the preparation blanks.

No field blanks were identified in this SDG.

V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analysis was not required by the method.

VI. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits with the following exceptions:

DUP ID (Associated Samples)	Analyte	RPD (Limits)	Difference (Limits)	Flag	A or P
WS-SB-GP15 (1.7-3.3')DUP (WS-SB-GP15 (1.7-3.3')) WS-SB-GP15 (16.7-18.3')** WS-SB-GP15 (23.3-25') WS-SB-GP15 (26.7-28.3')	Fractional organic carbon	11 (≤10)	-	J (all detects) UJ (all non-detects)	A

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Sample Result Verification

All sample result verifications were acceptable for samples on which an EPA Level IV review was performed. Raw data were not evaluated for the samples reviewed by EPA Level III criteria.

IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

Samples WS-SB-GP15 (16.7-18.3')** and Duplicate #1 and samples WS-SB-GP18 (1.7-3.3') and Duplicate #2 were identified as field duplicates. No contaminant concentrations were detected greater than 5x the reporting limit in any of the samples with the following exceptions:

Analyte	Concentration (SU)		RPD (Limits)
	WS-SB-GP15 (16.7-18.3')**	Duplicate #1	
pH	8.2	8.3	1 (≤50)

Analyte	Concentration (SU)		RPD (Limits)
	WS-SB-GP18 (1.7-3.3')	Duplicate #2	
pH	8.5	8.4	1 (≤50)

**Wedron Community Groundwater
Wet Chemistry - Data Qualification Summary - SDG
A141916/A142008/4096232/4096417**

SDG	Sample	Analyte	Flag	A or P	Reason
A141916/ A142008/ 4096232/ 4096417	WS-SB-GP15 (1.7-3.3') WS-SB-GP15 (16.7-18.3')** WS-SB-GP15 (23.3-25') WS-SB-GP15 (26.7-28.3')	Fractional organic carbon	J (all detects) UJ (all non-detects)	A	Duplicate sample analysis (RPD)

**Wedron Community Groundwater
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG
A141916/A142008/4096232/4096417**

No Sample Data Qualified in this SDG

**Wedron Community Groundwater
Wet Chemistry - Field Blank Data Qualification Summary - SDG
A141916/A142008/4096232/4096417**

No Sample Data Qualified in this SDG

METHOD: (Analyte) Fractional Organic Carbon (ASTM D2974-87), pH (EPA SW846 Method 9045)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 5/8/14 - 5/14/14
II.	Initial calibration	A	
III.	Calibration verification	A	
IV.	Blanks	A	
V.	Matrix Spike/Matrix Spike Duplicates	N	Not required
VI.	Duplicates	SW	
VII.	Laboratory control samples	A	LCG
VIII.	Sample result verification	A	Not reviewed for Level III validation.
IX.	Overall assessment of data	A	
X.	Field duplicates	SW (11, 12), (21, 22)	
XI.	Field blanks	N	

Note: A = Acceptable ND = No compounds detected D = Duplicate
 N = Not provided/applicable R = Rinsate TB = Trip blank
 SW = See worksheet FB = Field blank EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

1	WS-SB-GP14 (3.3-5.0)**	11	WS-SB-GP15 (16.7-18.3)**	21	WS-SB-GP18 (1.7-3.3')	31	WS-SB-GP17 (13.3-15')
2	WS-SB-GP14 (5.0-6.6')	12	Duplicate #1	22	Duplicate #2	32	WS-SB-GP17 (18.3-20')
3	WS-SB-GP14 (11.7-13.3')	13	WS-SB-GP15 (23.3-25')	23	WS-SB-GP18 (6.7-8.3')	33	WS-SB-GP17 (21.7-23)**
4	WS-SB-GP14 (18.3-20')	14	WS-SB-GP15 (26.7-28.3')	24	WS-SB-GP18 (13.3-15')	34	WS-SB-GP17 (26.7-28.3')
5	WS-SB-GP14 (23.3-25')	15	WS-SB-GP16 (3.3-5.0')	25	WS-SB-GP18 (16.7-18.3')	35	WS-SB-GP17 (31.7-33.3')
6	WS-SB-GP14 (28.3-30')	16	WS-SB-GP16 (5.0-6.7')	26	WS-SB-GP18 (23.3-25)**	36	WS-SB-GP-19 (12-14')
7	WS-SB-GP14 (31.7-33.3')	17	WS-SB-GP16 (10-11.6')	27	WS-SB-GP18 (28.3-30')	37	WS-SB-GP-19 (18-20')
8	WS-SB-GP15 (1.7-3.3')	18	WS-SB-GP16 (15-16.7')	28	WS-SB-GP18 (31.7-33.3')	38	WS-SB-GP15 (1.7-3.3') DUP
9	WS-SB-GP15 (6.7-8.3')	19	WS-SB-GP16 (21.7-23.3')	29	WS-SB-GP17 (3.3-5')	39	WS-SB-GP-21 (12-14')
10	WS-SB-GP15 (11.7-13.3')	20	WS-SB-GP16 (28.3-30')	30	WS-SB-GP17 (6.7-8.3')	40	WS-SB-GP-21 (8-10')

Notes: # 36 Dup
 # 20 Dup

Method: Inorganics (EPA Method See below)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	/			
Cooler temperature criteria was met.	/			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	/			
Were the proper number of standards used?	/			
Were all initial calibration correlation coefficients ≥ 0.995 ?			/	
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?			/	
Were titrant checks performed as required? (Level IV only)			/	
Were balance checks performed as required? (Level IV only)	/		X	✓
III. Blanks				
Was a method blank associated with every sample in this SDG?	/			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		/		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	/			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.			/	n.t. required
Were the MS/MSD or duplicate relative percent differences (RPD) $\leq 20\%$ for waters and $\leq 35\%$ for soil samples? A control limit of $\leq \text{CRDL}$ ($\leq 2\text{X CRDL}$ for soil) was used for samples that were $\leq 5\text{X}$ the CRDL, including when only one of the duplicate sample values were $\leq 5\text{X}$ the CRDL.		/		
V. Laboratory control samples				
Was an LCS analyzed for this SDG?	/			
Was an LCS analyzed per extraction batch?	/			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	/			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			/	
Were the performance evaluation (PE) samples within the acceptance limits?			/	

VALIDATION FINDINGS CHECKLIST

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	/			
Were detection limits < RL?	/			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	/			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.	/			
Target analytes were detected in the field duplicates.	/			
X. Field blanks				
Field blanks were identified in this SDG.		/		
Target analytes were detected in the field blanks.			/	

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1-35	Soil	pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
8, 11, 13, 14, 36, 38	Soil	pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄ Foc
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
m 36 38		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄ Foc
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
20		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄
		pH TDS Cl F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ ClO ₄

Comments: _____

VALIDATION FINDINGS WORKSHEET

Duplicate Analysis

METHOD: Inorganics, Method See Cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a duplicate sample analyzed for each matrix in this SDG?
Y N N/A Were all duplicate sample relative percent differences (RPD) \leq 20% for water and \leq 35% for soil samples (\leq 10% for Method 300.0)? If no, see qualification below. A control limit of \pm CRDL (\pm 2X CRDL for soil) was used for samples that were \leq 5X the CRDL, including when only one of the duplicate sample values were \leq 5X the CRDL. If field blanks were used for laboratory duplicates, see overall assessment.

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Duplicate ID	Matrix	Analyte	RPD (\leq 10)	Associated Samples	Qualifications
1		38		Fractional Organic Carbon	11	8,11,13,14	J/UJ/A

Comments: _____

LDC# 31923A6

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: [Signature]
2nd Reviewer: [Signature]

Inorganics: Method See Cover

Analyte	Concentration (SU)		RPD (≤ 50)	
	11	12		
pH	8.2	8.3	1	

Analyte	Concentration (SU)		RPD (≤ 50)	
	21	22		
pH	8.5	8.4	1	

V:\FIELD DUPLICATES\FD_inorganic\31923A6.wpd

LDC #: 31923AL

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: [Signature]
2nd Reviewer: [Signature]

METHOD: Inorganics, Method See com

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$$\%R = \frac{\text{Found}}{\text{True}} \times 100$$
 Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$$RPD = \frac{|S-D|}{(S+D)/2} \times 100$$
 Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated	Reported	Acceptable (Y/N)
					%R / RPD	%R / RPD	
LCS	Laboratory control sample	Foc	(68.1)	177	95	95	Y
MS	Matrix spike sample		(SSR-SR)				
20 Dup	Duplicate sample	pH	7.8	7.8	0	0	Y

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 319-13 Ab

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
 Reviewer: [Signature]
 2nd reviewer: [Signature]

METHOD: Inorganics, Method See com

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- Y/N/N/A Have results been reported and calculated correctly?
- Y/N/N/A Are results within the calibrated range of the instruments?
- Y/N/N/A Are all detection limits below the CRQL?

Compound (analyte) results for _____ reported with a positive detect were recalculated and verified using the following equation:

Concentration =

Recalculation:

$$\# 11 \text{ Toc} = \frac{(C1 - (53.5038 - 52.2065)) \times 0.58 \times 100}{(53.5172 - 52.2065)} = 0.5930\%$$

#	Sample ID	Analyte	Reported Concentration ()	Calculated Concentration ()	Acceptable (Y/N)
1	1	pH (unit)	8.0	8.0	Y
2	11	pH (unit)	8.2	8.2	↓
		Toc (g/g)	0.59	0.59	
3	26	pH (unit)	8.0	8.0	
4	33	pH (unit)	7.7	7.7	↓

Note: _____



ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
 Pace Project No.: 4096232

Sample: A141916-01 Lab ID: 4096232001 Collected: 05/08/14 10:30 Received: 05/13/14 07:40 Matrix: Solid
 Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	8.5	mg/kg	1.2	0.50	1	05/14/14 10:37	05/15/14 10:33	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	14.2	%	0.10	0.10	1		05/23/14 08:13		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.0	Std. Units	0.10	0.010	1		05/27/14 12:15		H6

CE 6/1/14

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
 Pace Project No.: 4096232

Sample: A141916-02 Lab ID: 4096232002 Collected: 05/08/14 10:50 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	7.2	mg/kg	1.0	0.45	1	05/14/14 10:37	05/15/14 10:42	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	7.6	%	0.10	0.10	1		05/23/14 08:13		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.1	Std. Units	0.10	0.010	1		05/27/14 12:15		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
 Pace Project No.: 4096232

Sample: A141916-03 Lab ID: 4096232003 Collected: 05/08/14 11:10 Received: 05/13/14 07:40 Matrix: Solid
 Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	5.2	mg/kg	1.0	0.44	1	05/14/14 10:37	05/15/14 10:47	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	12.1	%	0.10	0.10	1		05/23/14 08:13		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.2	Std. Units	0.10	0.010	1		05/27/14 12:15		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
 Pace Project No.: 4096232

Sample: A141916-04 Lab ID: 4096232004 Collected: 05/08/14 11:20 Received: 05/13/14 07:40 Matrix: Solid
 Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	4.0	mg/kg	0.94	0.41	1	05/14/14 10:37	05/15/14 10:49	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	9.5	%	0.10	0.10	1		05/23/14 08:13		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.2	Std. Units	0.10	0.010	1		05/27/14 12:15		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-05 Lab ID: 4096232005 Collected: 05/08/14 11:40 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	6.2	mg/kg	1.0	0.44	1	05/14/14 10:37	05/15/14 10:55	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	8.8	%	0.10	0.10	1		05/23/14 08:13		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	7.7	Std. Units	0.10	0.010	1		05/27/14 12:15		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: **A141916-07** Lab ID: **4096232006** Collected: 05/08/14 11:58 Received: 05/13/14 07:40 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	10.1	mg/kg	0.97	0.42	1	05/14/14 10:37	05/15/14 10:58	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	10.6	%	0.10	0.10	1		05/23/14 08:13		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	7.6	Std. Units	0.10	0.010	1		05/27/14 12:30		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-08 Lab ID: 4096232007 Collected: 05/08/14 12:15 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	6.7	mg/kg	0.96	0.41	1	05/14/14 10:37	05/15/14 11:00	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	11.0	%	0.10	0.10	1		05/23/14 08:22		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.3	Std. Units	0.10	0.010	1		05/27/14 12:30		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-09 Lab ID: 4096232008 Collected: 05/08/14 12:31 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	6.5	mg/kg	1.1	0.46	1	05/14/14 10:37	05/15/14 11:02	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	11.6	%	0.10	0.10	1		05/23/14 08:23		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.3	Std. Units	0.10	0.010	1		05/27/14 12:30		H6
Fractional Organic Carbon	Analytical Method: ASTM D2974-87								
Fractional Organic Carbon	0.70	% (w/w)	5	0.058	0.058	1	05/15/14 11:47		FOC,R1

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-10 Lab ID: 4096232009 Collected: 05/08/14 12:41 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	4.9	mg/kg	1.0	0.43	1	05/14/14 10:37	05/15/14 11:04	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	10.8	%	0.10	0.10	1		05/23/14 08:23		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.5	Std. Units	0.10	0.010	1		05/27/14 12:30		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-11 Lab ID: 4096232010 Collected: 05/08/14 13:00 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	2.4	mg/kg	1.1	0.47	1	05/19/14 15:47	05/20/14 12:39	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	9.3	%	0.10	0.10	1		05/23/14 08:23		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.4	Std. Units	0.10	0.010	1		05/27/14 12:30		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-13 Lab ID: 4096232011 Collected: 05/08/14 13:15 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	9.2	mg/kg	1.1	0.47	1	05/19/14 15:47	05/20/14 12:47	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	13.0	%	0.10	0.10	1		05/23/14 08:23		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.2	Std. Units	0.10	0.010	1		05/27/14 12:30		H6
Fractional Organic Carbon	Analytical Method: ASTM D2974-87								
Fractional Organic Carbon	0.59	% (w/w)	0.058	0.058	1		05/15/14 11:49		FOC

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-14 **Lab ID: 4096232012** Collected: 05/08/14 00:00 Received: 05/13/14 07:40 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	11.7	mg/kg	1.0	0.45	1	05/19/14 15:47	05/20/14 12:52	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	17.4	%	0.10	0.10	1		05/23/14 08:23		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.3	Std. Units	0.10	0.010	1		05/27/14 12:30		H6

05/28/14

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-15 Lab ID: 4096232013 Collected: 05/08/14 13:30 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	3.8	mg/kg	0.91	0.39	1	05/19/14 15:47	05/20/14 12:58	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	6.3	%	0.10	0.10	1		05/23/14 08:23		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.2	Std. Units	0.10	0.010	1		05/27/14 12:30		H6
Fractional Organic Carbon	Analytical Method: ASTM D2974-87								
Fractional Organic Carbon	0.18	% (w/w) <i>5</i>	0.058	0.058	1		05/15/14 11:50		FOC

026/12/14

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-16 Lab ID: 4096232014 Collected: 05/08/14 13:45 Received: 05/13/14 07:40 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	16.5	mg/kg	1.1	0.46	1	05/19/14 15:47	05/20/14 13:00	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	9.2	%	0.10	0.10	1		05/23/14 08:23		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	7.8	Std. Units	0.10	0.010	1		05/27/14 12:30		H6
Fractional Organic Carbon	Analytical Method: ASTM D2974-87								
Fractional Organic Carbon	0.68	% (w/w)	5	0.058	0.058	1	05/15/14 11:50		FOC



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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-17 Lab ID: 4096232015 Collected: 05/08/14 14:20 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	6.3	mg/kg	1.0	0.44	1	05/19/14 15:47	05/20/14 13:03	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	8.1	%	0.10	0.10	1		05/23/14 08:23		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.2	Std. Units	0.10	0.010	1		05/27/14 12:30		H6

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05/28/14



ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
 Pace Project No.: 4096232

Sample: A141916-18 Lab ID: 4096232016 Collected: 05/08/14 14:39 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	4.1	mg/kg	0.95	0.41	1	05/19/14 15:47	05/20/14 13:05	7439-92-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	8.3	%	0.10	0.10	1		05/23/14 08:24		
9045 pH Soil									
Analytical Method: EPA 9045									
pH at 25 Degrees C	7.9	Std. Units	0.10	0.010	1		05/27/14 12:50		H6

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026/12/14

ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-19 Lab ID: 4096232017 Collected: 05/08/14 15:15 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	5.7 mg/kg		1.1	0.47	1	05/19/14 15:47	05/20/14 13:07	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	10.5 %		0.10	0.10	1		05/23/14 08:24		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.0 Std. Units		0.10	0.010	1		05/27/14 12:50		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-20 **Lab ID: 4096232018** Collected: 05/08/14 15:36 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	7.3	mg/kg	1.1	0.46	1	05/19/14 15:47	05/20/14 13:09	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	10.8	%	0.10	0.10	1		05/23/14 08:24		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	7.8	Std. Units	0.10	0.010	1		05/27/14 12:50		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-21 Lab ID: 4096232019 Collected: 05/08/14 15:50 Received: 05/13/14 07:40 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	6.4	mg/kg	1.0	0.44	1	05/19/14 15:47	05/20/14 13:11	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	12.3	%	0.10	0.10	1		05/23/14 08:24		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	7.9	Std. Units	0.10	0.010	1		05/27/14 12:55		H6

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CEG/12/14

ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL

Pace Project No.: 4096232

Sample: A141916-22 Lab ID: 4096232020 Collected: 05/08/14 16:05 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	6.0	mg/kg	0.97	0.42	1	05/19/14 15:47	05/20/14 13:14	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	9.8	%	0.10	0.10	1		05/23/14 08:24		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	7.8	Std. Units	0.10	0.010	1		05/27/14 12:55		H6

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CE 6/12/14

ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: **A141916-23** Lab ID: **4096232021** Collected: 05/09/14 09:15 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	8.3	mg/kg	1.1	0.47	1	05/19/14 15:47	05/20/14 13:16	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	9.4	%	0.10	0.10	1		05/23/14 09:00		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.5	Std. Units	0.10	0.010	1		05/27/14 12:55		H6

05/27/14

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: **A141916-24** Lab ID: **4096232022** Collected: 05/09/14 00:00 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	9.0	mg/kg	0.99	0.43	1	05/19/14 15:47	05/20/14 13:18	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	9.4	%	0.10	0.10	1		05/23/14 09:00		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.4	Std. Units	0.10	0.010	1		05/27/14 12:55		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-25 Lab ID: 4096232023 Collected: 05/09/14 09:30 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	5.6	mg/kg	1.0	0.44	1	05/19/14 15:47	05/20/14 13:25	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	10	%	0.10	0.10	1		05/23/14 09:00		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.3	Std. Units	0.10	0.010	1		05/27/14 12:55		H6

CEB/2/14

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-26 Lab ID: 4096232024 Collected: 05/09/14 09:45 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	6.3	mg/kg	1.0	0.43	1	05/19/14 15:47	05/20/14 13:27	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	9.2	%	0.10	0.10	1		05/23/14 09:00		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	7.9	Std. Units	0.10	0.010	1		05/27/14 12:55		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-27 Lab ID: 4096232025 Collected: 05/09/14 10:05 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	2.6	mg/kg	1.0	0.43	1	05/19/14 15:47	05/20/14 13:29	7439-92-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	4.8	%	0.10	0.10	1		05/23/14 09:01		
9045 pH Soil									
Analytical Method: EPA 9045									
pH at 25 Degrees C	8.2	Std. Units	0.10	0.010	1		05/27/14 13:10		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: **A141916-28** Lab ID: **4096232026** Collected: 05/09/14 10:14 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	2.6	mg/kg	1.0	0.43	1	05/19/14 15:47	05/20/14 13:31	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	3.9	%	0.10	0.10	1		05/23/14 09:01		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.0	Std. Units	0.10	0.010	1		05/27/14 13:10		H6

05/28/14

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-29 **Lab ID: 4096232027** Collected: 05/09/14 10:26 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	10.2	mg/kg	0.95	0.41	1	05/19/14 15:47	05/20/14 13:34	7439-92-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	11.2	%	0.10	0.10	1		05/23/14 09:01		
9045 pH Soil									
Analytical Method: EPA 9045									
pH at 25 Degrees C	7.7	Std. Units	0.10	0.010	1		05/27/14 13:10		H6

CSG/14

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-30 **Lab ID: 4096232028** Collected: 05/09/14 10:36 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	6.4	mg/kg	1.1	0.47	1	05/19/14 15:47	05/20/14 13:36	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	10.9	%	0.10	0.10	1		05/23/14 09:01		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.0	Std. Units	0.10	0.010	1		05/27/14 13:10		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-33 **Lab ID: 4096232029** Collected: 05/09/14 10:50 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	7.7 mg/kg		1.0	0.44	1	05/19/14 15:47	05/20/14 13:38	7439-92-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	11.5 %		0.10	0.10	1		05/23/14 09:01		
9045 pH Soil									
Analytical Method: EPA 9045									
pH at 25 Degrees C	8.1 Std. Units		0.10	0.010	1		05/27/14 13:10		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-34 Lab ID: 4096232030 Collected: 05/09/14 11:05 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	7.4 mg/kg		1.1	0.46	1	05/19/14 15:46	05/20/14 11:31	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	7.8 %		0.10	0.10	1		05/23/14 09:01		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.1 Std. Units		0.10	0.010	1		05/27/14 13:10		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-35 Lab ID: 4096232031 Collected: 05/09/14 11:12 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	5.5	mg/kg	0.96	0.41	1	05/19/14 15:46	05/20/14 11:44	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	10.3	%	0.10	0.10	1		05/23/14 09:01		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.1	Std. Units	0.10	0.010	1		05/27/14 13:10		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-36 Lab ID: 4096232032 Collected: 05/09/14 11:28 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	5.3	mg/kg	1.0	0.45	1	05/19/14 15:46	05/20/14 11:49	7439-92-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	9.8	%	0.10	0.10	1		05/23/14 09:02		
9045 pH Soil									
Analytical Method: EPA 9045									
pH at 25 Degrees C	8.2	Std. Units	0.10	0.010	1		05/27/14 13:10		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-38 Lab ID: 4096232033 Collected: 05/09/14 11:41 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	5.5	mg/kg	0.90	0.39	1	05/19/14 15:46	05/20/14 11:51	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	5.1	%	0.10	0.10	1		05/23/14 09:02		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	7.7	Std. Units	0.10	0.010	1		05/27/14 13:10		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
Pace Project No.: 4096232

Sample: A141916-39 Lab ID: 4096232034 Collected: 05/09/14 11:46 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	4.5	mg/kg	0.95	0.41	1	05/19/14 15:46	05/20/14 11:53	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	2.9	%	0.10	0.10	1		05/23/14 09:02		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	8.2	Std. Units	0.10	0.010	1		05/27/14 13:10		H6

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ANALYTICAL RESULTS

Project: A141916 WEDRON SILICA, IL
 Pace Project No.: 4096232

Sample: A141916-40 Lab ID: 4096232035 Collected: 05/09/14 12:00 Received: 05/13/14 07:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	5.1	mg/kg	1.0	0.44	1	05/19/14 15:46	05/20/14 11:55	7439-92-1	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	8.6	%	0.10	0.10	1		05/23/14 09:02		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	7.8	Std. Units	0.10	0.010	1		05/27/14 13:30		H6

REPORT OF LABORATORY ANALYSIS

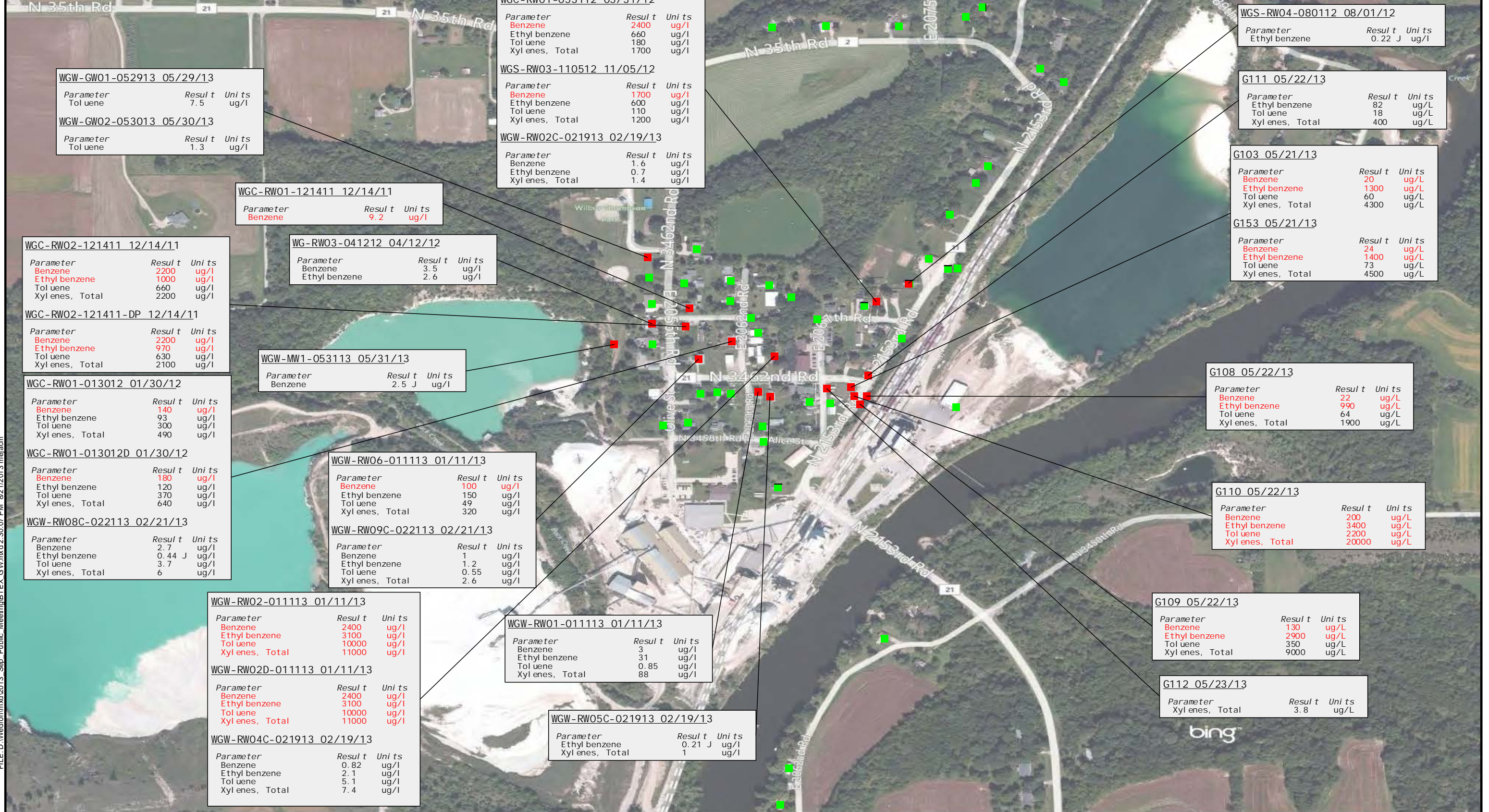
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APPENDIX D

BTEX Groundwater Sampling Detection Map from September 2013 Public Meeting



FILE: D:\Wedron\mxd\2013_Sep_Public_Meeting\BTEX_GW.mxd 2:30:07 PM 8/21/2013 mgfiam

- Legend**
- Groundwater Sampling Location with BTEX Compound Detected
 - Groundwater Sampling Location with No BTEX Compound Detected

Note: Analytical results in **Red** exceed MCL criteria. MCL Criteria:
 Benzene = 5 ug/L
 Ethylbenzene = 700 ug/L
 Toluene = 1,000 ug/L
 Xylene = 10,000 ug/L



Prepared for:
U.S. EPA REGION V
 Contract No.: EP-S5-06-04
 TDD: S05-0001-1112-004
 DCN:

Prepared By:
WESTON SOLUTIONS, INC
 750 E Bunker Ct
 Suite 500
 Vemon Hills, IL 60061

BTEX Groundwater Sampling Detection Map
 Wedron Ground Water
 Wedron, Lasalle County, Illinois



APPENDIX E

February 14, 1987 USEPA Form Documenting Wedron Silica USTs

Stamp Date Not Legible On Original

46614

Federal Register / Vol. 50, No. 217 / Friday, November 8, 1985 / Rules and Regulations

APPENDIX I to §280.3

Notification for Underground Storage Tanks

FORM APPROVED
OMB NO. 2050-0048
APPROVAL EXPIRES 6-30-88

STATE USE ONLY
I.D. Number 1002029
Date Received

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1984. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended.

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or, in the absence of such records, your knowledge, belief, or recollection.

Who Must Notify? Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means:

(a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and

(b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Some examples are underground tanks storing: 1. gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:

- 1. farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
- 2. tanks used for storing heating oil for consumptive use on the premises where stored;
- 3. septic tanks;

4. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;

5. surface impoundments, pits, ponds, or lagoons;

6. storm water or waste water collection systems;

7. flow-through process tanks;

8. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;

9. storage tanks situated in an underground area (such as a basement, cellar, mine-working, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

Where To Notify? Completed notification forms should be sent to the address given at the top of this page.

When To Notify? 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed \$10,000 for each tank for which notification is not given or for which false information is submitted.

INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. This form must be completed for each location containing underground storage tanks. If more than 5 tanks are owned at this location, photocopy the reverse side, and staple continuation sheets to this form.

Indicate number of continuation sheets attached

I. OWNERSHIP OF TANK(S)
Owner Name (Corporation, Individual, Public Agency, or Other Entity)
Wedron Silica Company
Street Address
P.O. Box 119, South Olive Street
County
LaSalle
City
Wedron
State
Illinois
ZIP Code
60557
Area Code
(815)
Phone Number
433-2449
Type of Owner (Mark all that apply)
 Current
 Former
 State or Local Gov't
 Federal Gov't (GSA facility I.D. no.)
 Private or Corporate
 Ownership uncertain

II. LOCATION OF TANK(S)
(If same as Section I, mark box here)
Facility Name or Company Site Identifier, as applicable
Street Address or State Road, as applicable
County
City (nearest)
State
ZIP Code
Indicate number of tanks at this location
Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands

III. CONTACT PERSON AT TANK LOCATION
Name (If same as Section I, mark box here)
Spencer Zitka
Job Title
Engineering Manager
Area Code
(815)
Phone Number
433-3696

IV. TYPE OF NOTIFICATION
 Mark box here only if this is an amended or subsequent notification for this location.

V. CERTIFICATION (Read and sign after completing Section VI.)

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

Name and official title of owner or owner's authorized representative
Spencer Zitka, Engineering Manager
Signature
Spencer Zitka
Date Signed
2-14-87

CONTINUE ON REVERSE SIDE

Owner Name (from Section I) Wedron Silica Co. Location (from Section II) Wedron, IL Page No. 2 of 2 Pages

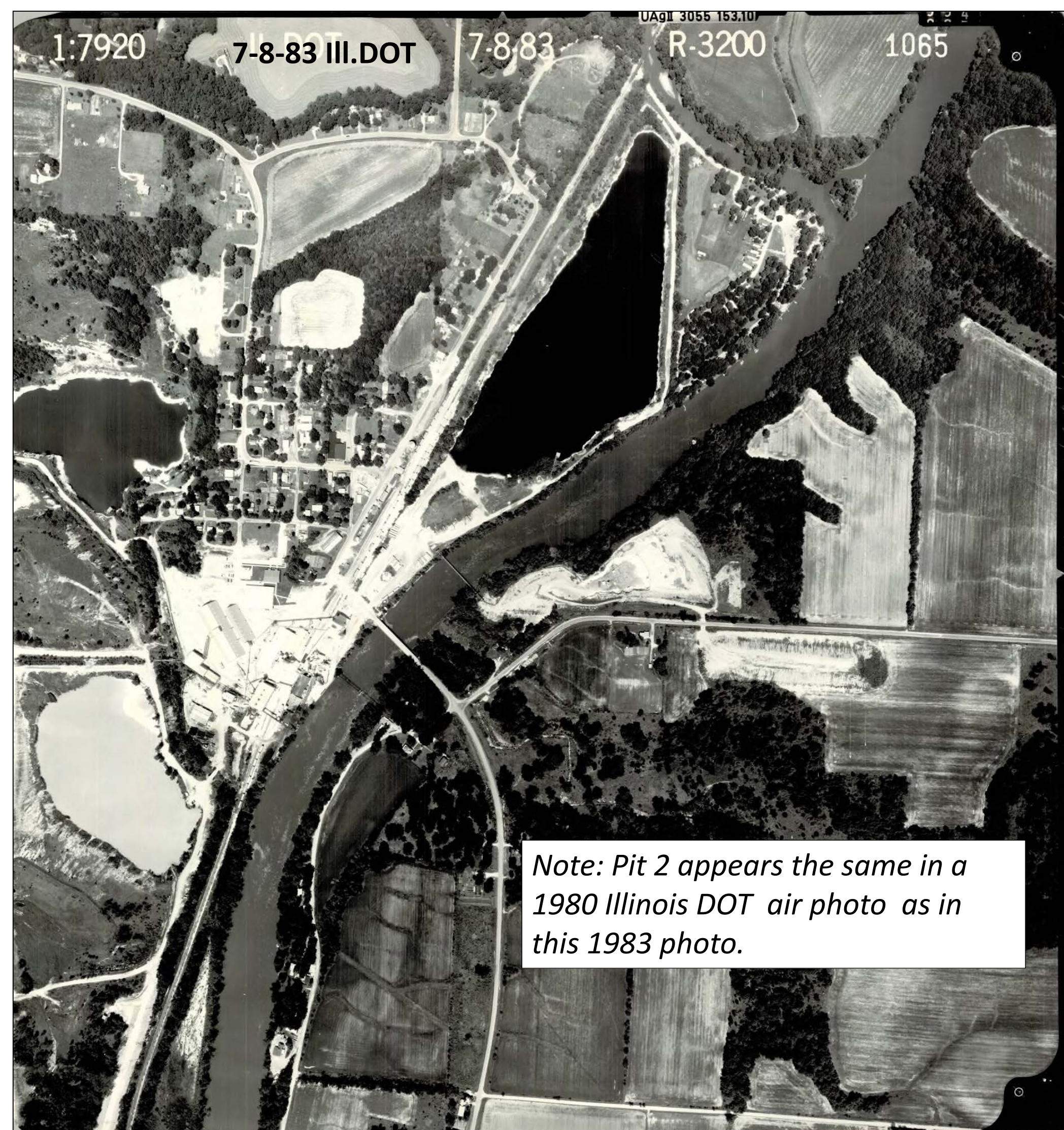
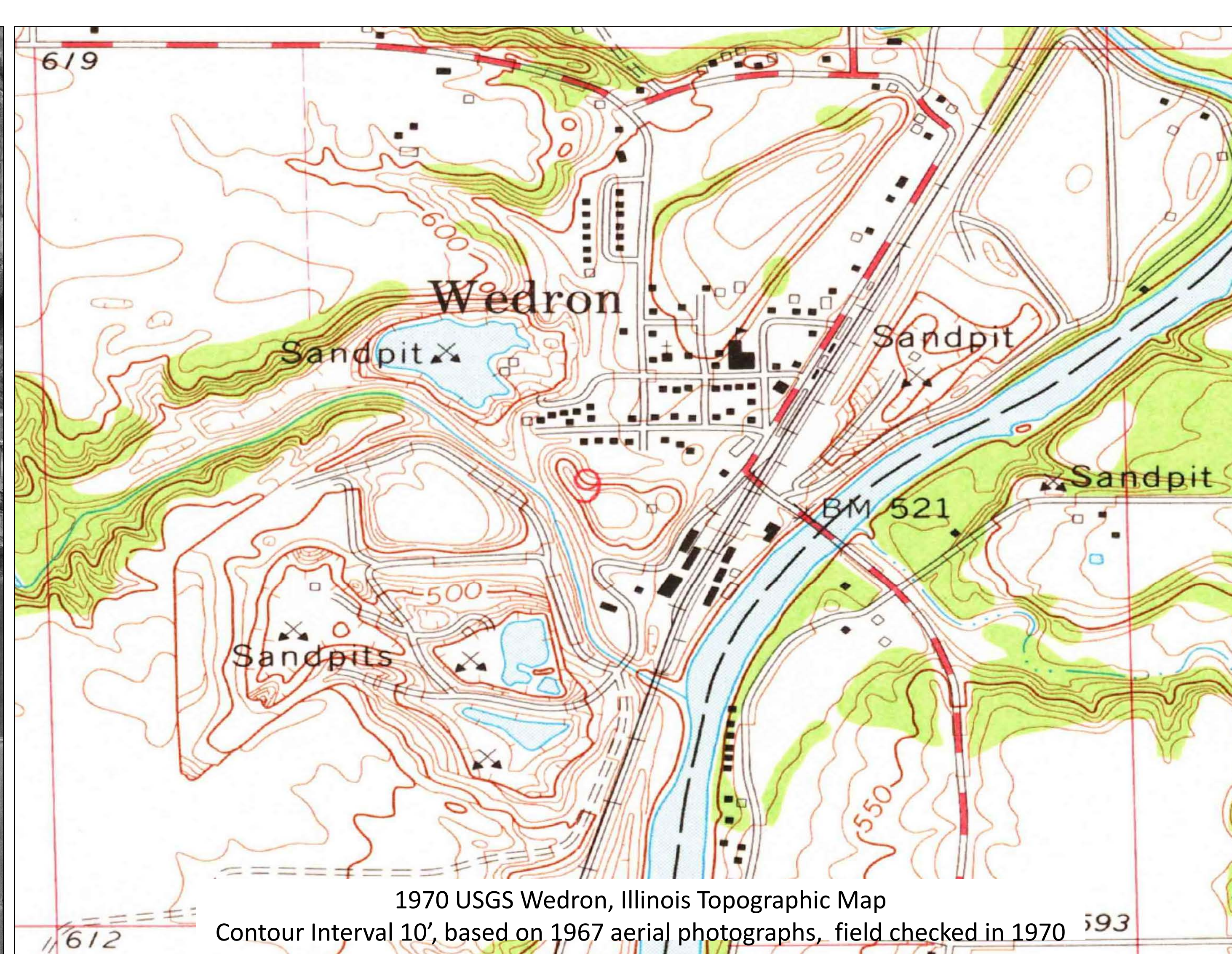
VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location)

Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)	Tank No. 1	Tank No. 2	Tank No. 3	Tank No.	Tank No.
1. Status of Tank (Mark all that apply <input checked="" type="checkbox"/>) Currently in Use Temporarily Out of Use Permanently Out of Use Brought into Use after 5/8/86	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2. Estimated Age (Years)	3	3	10		
3. Estimated Total Capacity (Gallons)	4,000	4,000	20,000		
4. Material of Construction (Mark one <input checked="" type="checkbox"/>) Steel Concrete Fiberglass Reinforced Plastic Unknown Other, Please Specify	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____
5. Internal Protection (Mark all that apply <input checked="" type="checkbox"/>) Cathodic Protection Interior Lining (e.g., epoxy resins) None Unknown Other, Please Specify	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____
6. External Protection (Mark all that apply <input checked="" type="checkbox"/>) Cathodic Protection Painted (e.g., asphaltic) Fiberglass Reinforced Plastic Coated None Unknown Other, Please Specify	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____
7. Piping (Mark all that apply <input checked="" type="checkbox"/>) Bare Steel Galvanized Steel Fiberglass Reinforced Plastic Cathodically Protected Unknown Other, Please Specify	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____
8. Substance Currently or Last Stored in Greatest Quantity by Volume (Mark all that apply <input checked="" type="checkbox"/>) a. Empty b. Petroleum Diesel Kerosene Gasoline (including alcohol blends) Used Oil Other, Please Specify c. Hazardous Substance Please Indicate Name of Principal CERCLA Substance OR Chemical Abstract Service (CAS) No. Mark box <input checked="" type="checkbox"/> if tank stores a mixture of substances d. Unknown	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____ <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____ <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____ <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____ <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____ <input type="checkbox"/> <input type="checkbox"/>
9. Additional Information (for tanks permanently taken out of service) a. Estimated date last used (mo/yr) b. Estimated quantity of substance remaining (gal.) c. Mark box <input checked="" type="checkbox"/> if tank was filled with inert material (e.g., sand, concrete)	 <input checked="" type="checkbox"/>	 <input checked="" type="checkbox"/>	 <input checked="" type="checkbox"/>	 <input checked="" type="checkbox"/>	 <input checked="" type="checkbox"/>



APPENDIX F

**1967, 1974, 1983 1999 and 2011 Aerial Photographs and 1970 USGS Topographic
Map of Pit 3 Area and
1968 Wedron Silica Aerial Photograph of the Pit 3 Area**



November 12, 1968
Aerial Photograph
(From Wedron Silica Files)





APPENDIX G

Explanation of Figures G-1 through G-4

Figure G-1 - BTEX ($\mu\text{g/l}$) in Groundwater

Figure G-2 - Locations of Cross Sections A-A', B-B', C-C' and D-D'

Figure G-3 - Cross Sections A-A' and B-B'

Figure G-4 - Cross Sections C-C' and D-D'

APPENDIX G – Regional Chemical Distribution

Although the Work Plan focused on Wedron Silica and Technisand properties, it is helpful to consider the regional chemical distribution shown in Figure G-1, which displays the regional BTEX detections and non-detections (NDs) superimposed on the 17 April 2014 water table. Based on this figure, the following observations are made:

1. The BTEX plot shows monitoring and residential wells with non-detections separating the former 4,000-gallon gasoline USTs to the south from the Wedron community residential wells with petroleum impacts.
2. Consistent with the groundwater flow direction toward the west-northwest, the BTEX distribution generally trends southeast to northwest through the Wedron community.
3. At the up-gradient (southeast) end of the BTEX distribution through the Wedron community are known petroleum sources with demonstrated releases.
4. Consistent with the groundwater divide near the railroad corridor, there also are components of groundwater flow toward the east and southeast. These groundwater flow components have resulted in BTEX migrating in these additional directions from the known petroleum sources.

Figure G-2 displays the locations of four cross sections, which are shown in Figures G-3 and G-4. Reviewing these cross sections, the following observations are made:

1. The cross sections show shallow soil petroleum impacts and elevated groundwater BTEX concentrations (see e.g., GP-110) in an area of known UST petroleum sources. These observations in the vadose zone above the water table are characteristic of petroleum releases that have impacted groundwater.
2. The above observations at GP-110, where “Strong odor and slight sheen on water sample” was noted in the field boring log, can be contrasted to the WGS-GP-10 area, where no shallow impacts were observed and only slight impacts occurred at depth near the water table.
3. These slight petroleum impacts near the water table (e.g., at GP-10) are hydraulically down gradient from RRMW-15, a monitoring well in the railroad corridor where BTEX was reported.
4. Consistent with soil chemistry data, groundwater chemistry data, and groundwater flow data, these cross sections help demonstrate a groundwater migration pathway from an area of known petroleum sources to the WGS-GP-10 area, where no known petroleum sources exist.



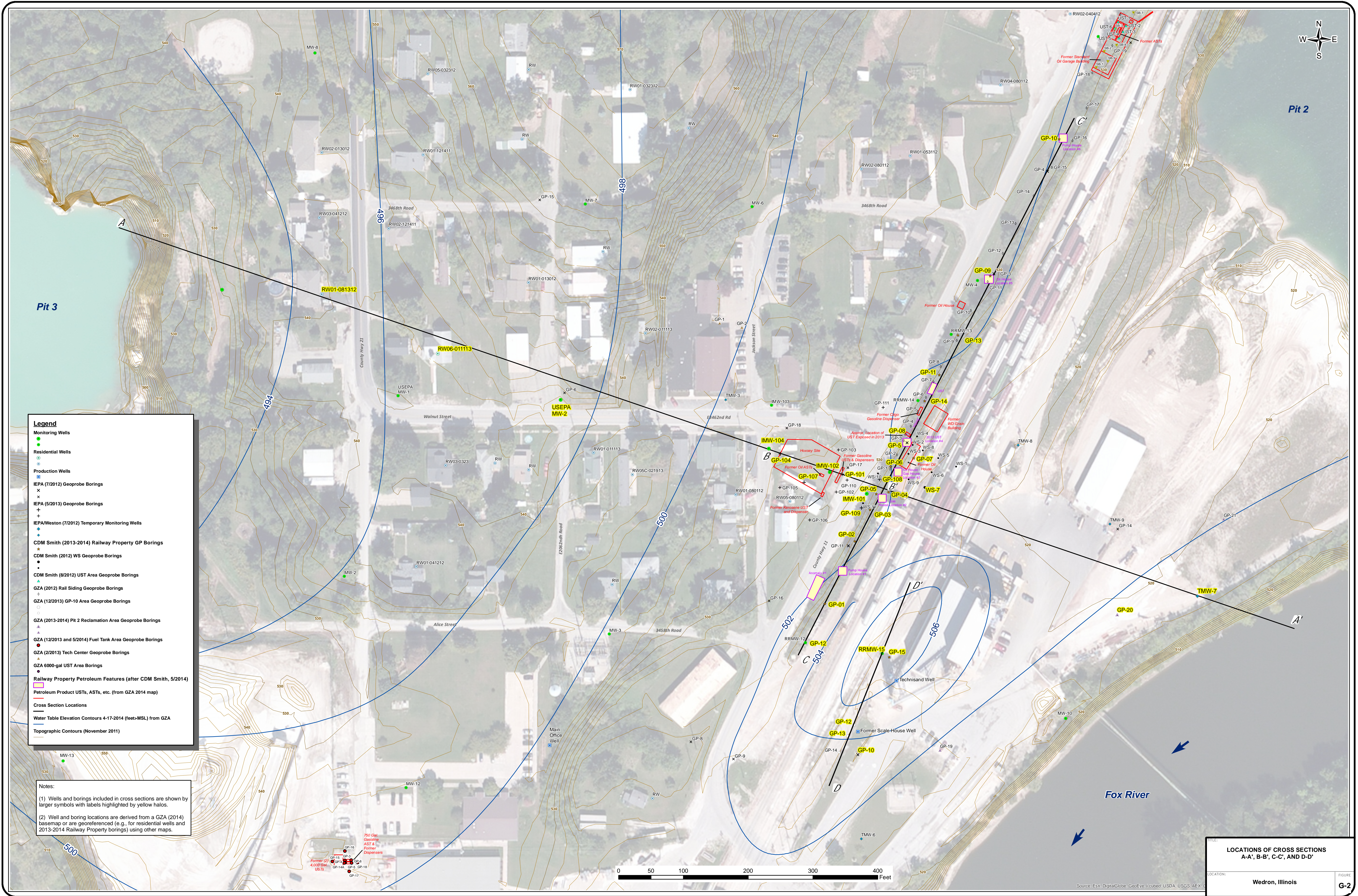
Legend

- Monitoring Wells
- Residential Wells
- Production Wells
- EPA (7/2012) Geoprobe Borings
- EPA (5/2013) Geoprobe Borings
- EPA/Weston (7/2012) Temporary Monitoring Wells
- CDM Smith (2013-2014) Railway Property GP Borings
- CDM Smith (2012) WS Geoprobe Borings
- CDM Smith (8/2012) UST Area Geoprobe Borings
- GZA (2012) Rail Siding Geoprobe Borings
- GZA (12/2013) GP-10 Area Geoprobe Borings
- GZA (2013-2014) Pit 2 Reclamation Area Geoprobe Borings
- GZA (12/2013 and 5/2014) Fuel Tank Area Geoprobe Borings
- GZA (2/2013) Tech Center Geoprobe Borings
- GZA 6000-gal UST Area Borings
- Railway Property Petroleum Features (after CDM Smith, 5/2014)
- Petroleum Product USTs, ASTs, etc. (from GZA 2014 map)
- Cross Section Locations
- Water Table Elevation Contours 4-17-2014 (feet-MSL) from GZA
- Topographic Contours (November 2011)

Notes:

(1) Wells and borings included in cross sections are shown by larger symbols with labels highlighted by yellow halos.

(2) Well and boring locations are derived from a GZA (2014) basemap or are georeferenced (e.g., for residential wells and 2013-2014 Railway Property borings) using other maps.

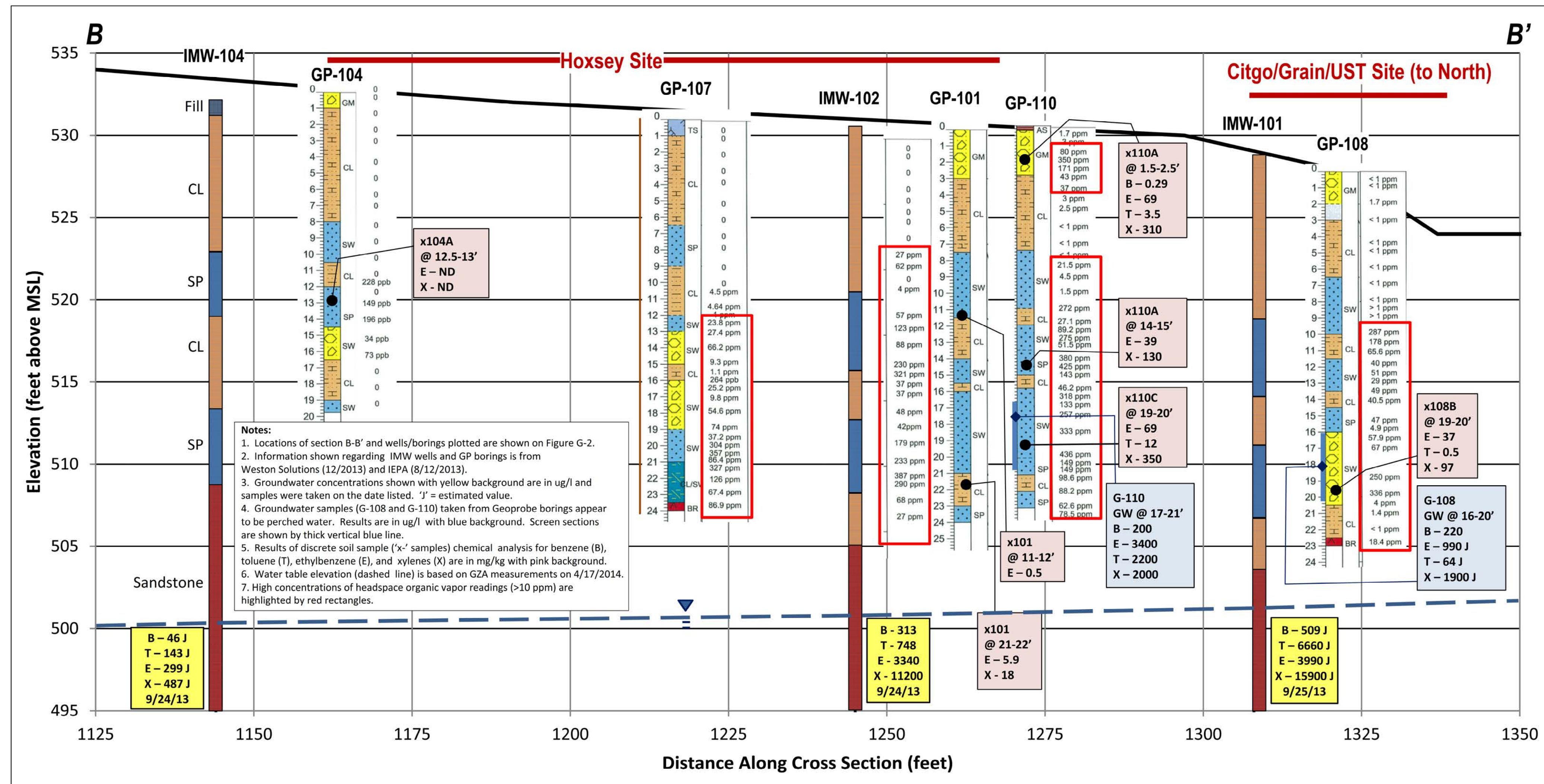
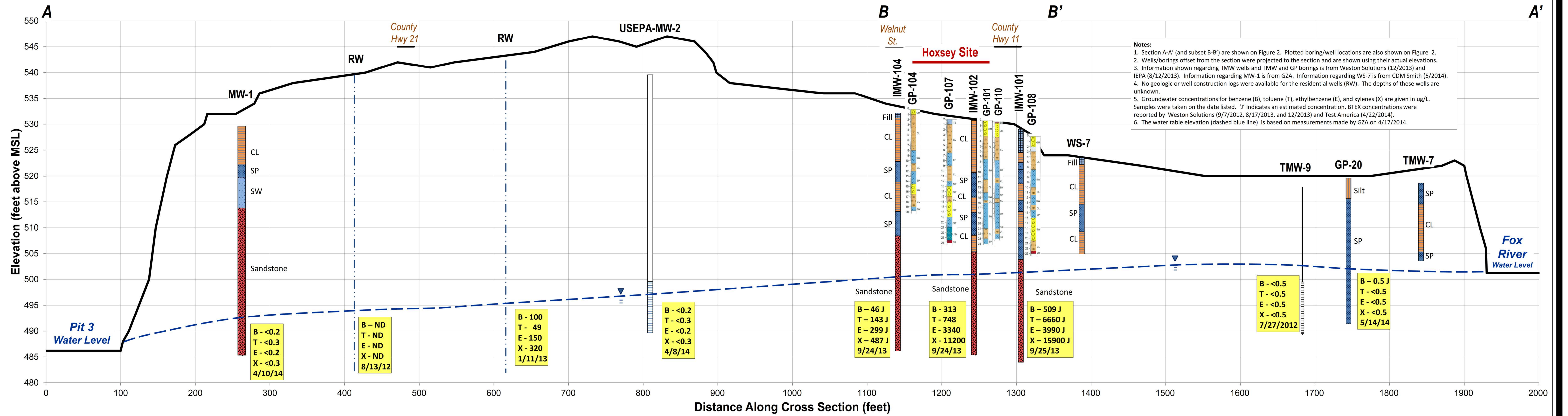


LOCATIONS OF CROSS SECTIONS
A-A', B-B', C-C', AND D-D'

LOCATION: Wedron, Illinois

FIGURE: G-2

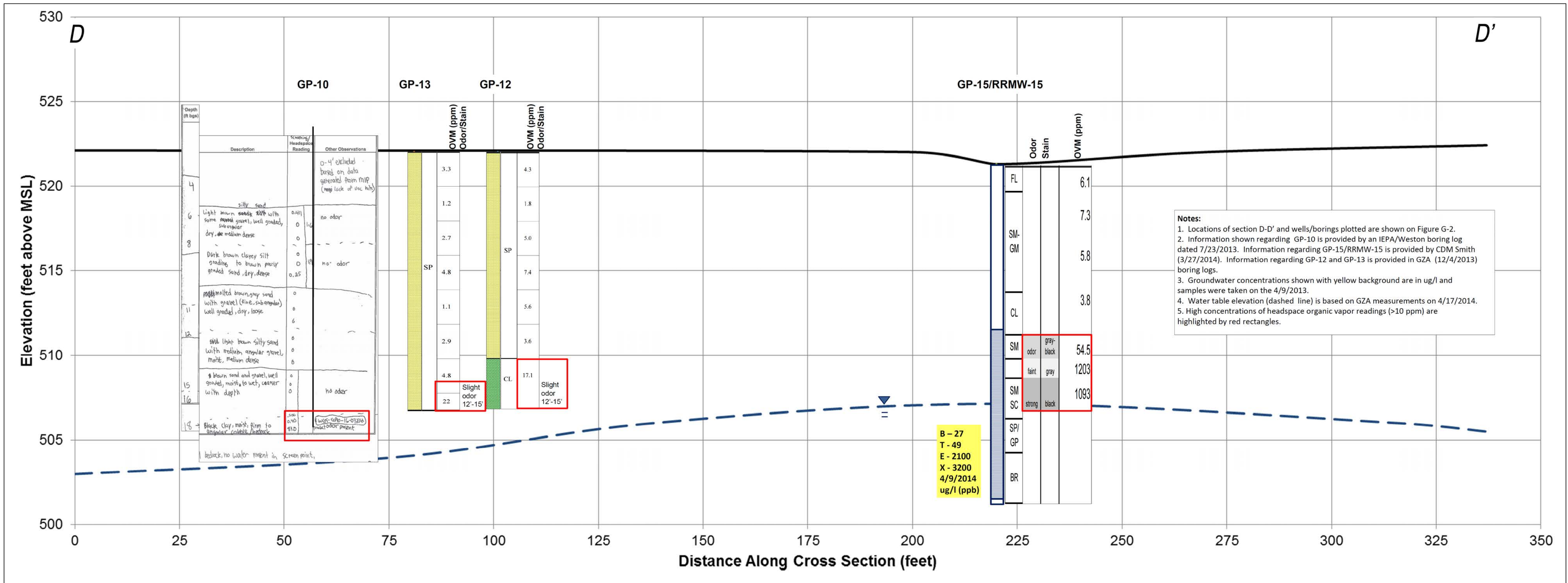
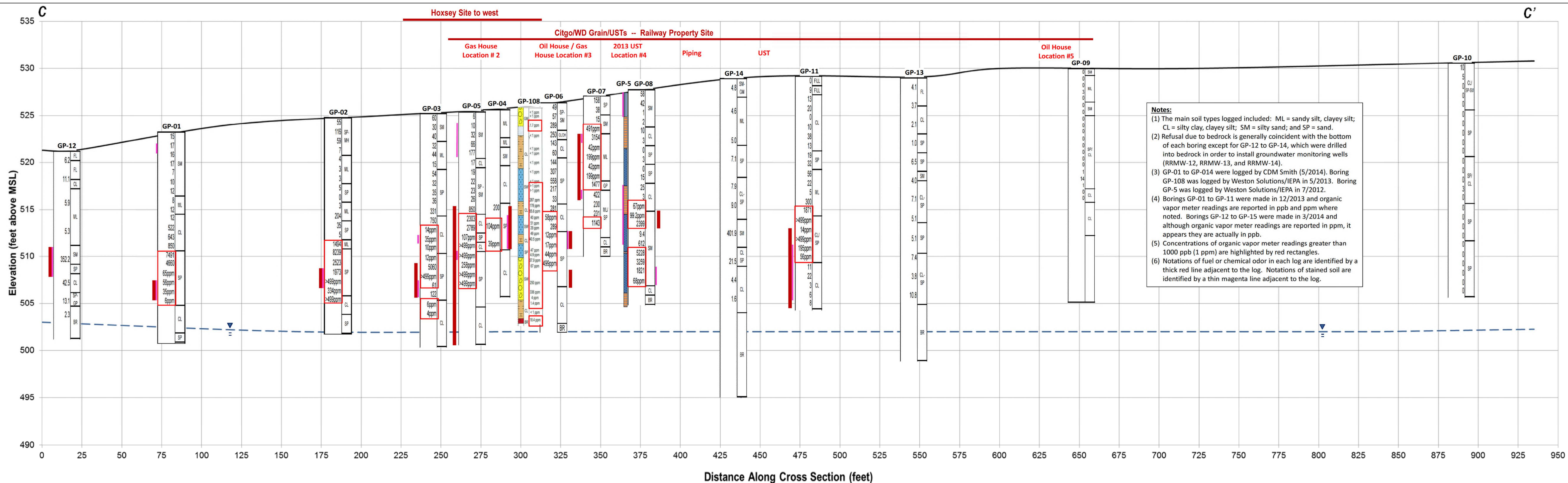
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, G



TITLE:
CROSS SECTIONS A-A' AND B-B'

LOCATION:
WEDRON, ILLINOIS

FIGURE:
G-3



TITLE:
CROSS SECTIONS C-C' AND D-D'

LOCATION:
WEDRON, ILLINOIS

FIGURE:
G-4